RECAPP Facility Evaluation Report

Alberta Health Services-Edmonton



Capital Care - Norwood - North Pavilion B0205A Edmonton

Report run on: March 12, 2014 12:41 PM

Facility Details		Evaluation Details		
Building Name:	Capital Care - Norwood - No	Evaluation Company:	Bacz Engineering Ltd.	
Address:	10410 - 111 Avenue	Evaluation Date:	December 11 2013	
Location:	Edmonton	Evaluator Name:		
Building Id:	B0205A			
Gross Area (sq. m):	5,363.00			
Replacement Cost:	\$18,398,442			
Construction Year:	1965		ce Events Next 5 years:	\$7,844,200
		5 year Facility Co	ondition Index (FCI):	42.64%

General Summary:

The 3 storey North Pavilion at the Norwood Extended Care Centre was constructed in 1965. It currently accommodates a second floor 12 person residential brain injury unit which was renovated in 2006, a third floor 50 bed unit consisting of 10 continuing care beds and 40 beds for persons waiting for placement in a continuing care facility. Other programs include resident rehabilitation as well as food services and maintenance for the Norwood site. The pedestrian link from the west end of the North Pavilion to the Angus MacGuggan Continuing Care Centre was constructed in 1974. The link connects to an addition to the food services area which was also constructed at that time to provide as new wash up area and storage.

Structural Summary:

The foundations consist of concrete bell piles carrying cast in place concrete grade beams. The building frame consists of reinforced cast in place concrete beams and columns with ribbed concrete floor slabs and a flat slab and beam system in the centre section.

The structural condition of the building is acceptable.

Envelope Summary:

The building envelope consists of a brick facing on inner wythe walls of concrete block or poured concrete. 50mm of rigid insulation has been added to the inside face of the exterior walls. There is a built up roof over all the building. Aluminum windows with opening lights.

The building envelope performance is generally acceptable.

Interior Summary:

Resilient sheet flooring, terrazzo bases in corridors, plaster walls and ceilings. The second floor brain injury unit was renovated in 2006. There are ceramic tile floors in wash rooms and tub rooms. T-Bar ceilings are located in corridors.

Overall the interiors are acceptable.

Mechanical Summary:

125lb. high pressure steam is supplied to the building from the Energy Centre which also serves the Royal Alexandra Hospital and the Glenrose Rehabilitation Hospital via a buried steam line that enters the lower floor mechanical room at the north west corner.

This main enters into a 100mm header to pressure reducing valves for the various building services.

25lb. steam is provided to the penthouse equipment room to serve the steam heating coils.

Heating system was upgraded in 2006 and 2013. Last upgrade included new primary circulation pumps, expansion tank, heat exchanger and condensate return system. Upgrade from 2006 included circulation pumps and steam to glycol heat exchanger serving common fresh air intake.

The remaining components of heating system, including heating piping distribution and accessories are original.

10lb. steam is provided to a steam to hot water converter in the lower mechanical room to provide hot water heating to the building through a perimeter radiation system .

Ventilation is provided via three indoor air handling units located in Penthouse. Two units are multi-zone and serve Basement and upper floors. One unit is a constant volume make-up air unit for the Kitchen.

Air conditioning system is provided by one central air cooled chiller serving air handling units. Designated air cooled condensing units are provided for kitchen make-up air system and split AC system serving 2nd floor common area.

Domestic hot water is heated via a steam to water converter in the mechanical room. Domestic hot water distribution throughout the building complete with recirculation system.

Fire protection is provided in form of wet sprinkler system, standpipe system, dry chemical fire extinguishing system and hand held fire extinguishers located throughout the building.

Controls are combination of pneumatic and DDC. Building management system is functional, however obsolete and

require upgrade / replacement.

Some asbestos may exist in insulation of older piping in the ceiling spaces. Also, there are some other hazardous materials in the mechanical systems such as mercury in mercury switches and thermostats, and R22 refrigerant in the refrigeration systems.

All is contained at this time, but proper identification and removal procedures need to be observed during any future renovations to the facility.

Main heating components have been recently replaced and are in good condition. The remaining components of mechanical systems (AHUs, piping etc.) are original and require excessive maintenance.

Electrical Summary:

The normal power service is 1200A, 120/208V Service fed from site pad mounted transformer; the emergency power is 600A 120/208V fed from emergency distribution in emergency generator shed.

Fluorescent lights are the major lighting source for the interior of the building, T-8 lamp with electronic ballast fixtures are used in basement and first floors and T-12 lamp with magnetic ballast fixtures are used on second floor. Exterior lighting is high pressure sodium, except some pot lights in the first floor patio.

The fire alarm, nurse call and security system meet current facility operation requirements; telephone, data and PA system tied to main systems in Angus McGugan Pavilion.

The overall rating for electrical systems is "Acceptable".

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* - Link

The foundations for the link are concrete foundation walls on strip footings.

<u>Rating</u>	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1974	0	MAR-14

A1010 Standard Foundations* - North Pavilion

The foundation system consists of poured concrete bell piles supporting reinforced concrete grade beams.

<u>Rating</u>	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-14

A1030 Slab on Grade* - Link

There is a slab on grade in the link.

Rating	Installed	Design Life	Updated
3 - Marginal	1974	0	MAR-14

Event: Mud jack slab.- (B.O.E. sum)

Concern:

The slab on grade has settled and separated from the adjacent block walls. **Recommendation:** Mud jack slab to original elevation. **Consequences of Deferral:** Slab will continue to settle.

Туре	Year	Cost	Priority
Repair	2014	\$20,000	Medium

Updated: MAR-14

A1030 Slab on Grade* - North Pavilion

There is a concrete slab on grade on a compacted gravel base.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-14

A2020 Basement Walls (& Crawl Space)*

The first floor is a partial basement with cast in place concrete walls.

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1965	0	MAR-14

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

The single storey link structure consists of cast in place concrete walls supporting precast hollow concrete planks.

<u>Rating</u>	Installed	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1974	0	MAR-14

B1010.01 Floor Structural Frame (Building Frame)* - North Pavilion

Cast in place reinforced concrete columns carrying ribbed poured concrete floor slabs and flat slab and beams in the central section.

<u>Rating</u>	Installed	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1965	0	MAR-14

B1010.03 Floor Decks, Slabs, and Toppings* - North Pavilion

Floor decks are poured concrete slabs with a concrete topping.

<u>Rating</u>	Installed	Design Life	<u>Updated</u>
4 - Acceptable	1965	0	MAR-14

B1010.06 Ramps: Exterior*

There is a concrete ramp in the loading dock area with steel pipe handrails. Concrete ramp from the east side of the building to access the loading dock.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-14

B1010.07 Exterior Stairs*

There are exterior stairs at the front of the pavilion consisting of pre-cast concrete treads with non-slip nosing carried on precast concrete stringers. The top hand rail is aluminum, the posts and middle rail are wrought iron. There are also exterior stairs at grade for egress from the stairs at each end of the building.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-14

B1010.09 Floor Construction Fireproofing*

The cast in place concrete floor slabs provide fireproofing.

<u>Rating</u>	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1965	0	MAR-14

B1020.03 Roof Decks, Slabs, and Sheathing* - North Pavilion

The roof deck is a 100mm poured concrete slab with 50mm rigid insulation.

<u>Rating</u>	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1965	0	MAR-14

B1020.04 Canopies*

There are canopies over the outdoor decks on the main level and second floor. They consist of stucco on metal lath fixed to the concrete structure. These canopies have been extended by means of metal roofed canopies on a steel frame.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-14

B1020.06 Roof Construction Fireproofing*

The roof construction fire proofing is integral to the concrete roof structure.

<u>Rating</u>	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1965	0	MAR-14

S2 ENVELOPE

B2010.01.02.01 Brick Masonry: Ext. Wall Skin*
There is an exterior brick veneer on all elevations of the pavilion.
RatingInstalledDesign LifeUpdated4 - Acceptable19650MAR-14
B2010.01.08 Cement Plaster (Stucco): Ext. Wall*
There are stucco spandrel panels between floors on the stairs.
RatingInstalledDesign LifeUpdated4 - Acceptable19650MAR-14
B2010.01.11 Joint Sealers (caulking): Ext. Wall**
Caulking at all door and window frames.
RatingInstalledDesign LifeUpdated4 - Acceptable196520MAR-14
Event: Replace caulking (B.O.E. 1022 m) Type Year Cost Priority Lifecycle Replacement 2017 \$30,000 Unassigned
Updated: MAR-14
B2010.03 Exterior Wall Vapour Retarders, Air Barriers, and Insulation*
Exterior walls have no vapour barrier and have had 50mm rigid insulation retro-fitted to the inside face of the exterior wa
RatingInstalledDesign LifeUpdated4 - Acceptable19650MAR-14
B2010.05 Parapets*
Parapets have galvanized cap flashings.
RatingInstalledDesign LifeUpdated4 - Acceptable19650MAR-14

B2020.01.01.01 Steel Windows (Glass & Frame)**

Windows are steel vertical sliders. Windows in the first floor brain injury unit have an inner polycarbonate protective screen.

Rating	Installed	Design Life	Updated
2 - Poor	1965	40	MAR-14

Event: Replace steel windows:- (B.O.E. 302 sq.m).

Concern:

Original windows from 1965. The seals on the windows have failed. **Recommendation:** Replace Exterior Windows

Туре	Year	Cost	Priority
Failure Replacement	2014	\$277,000	High

Updated: MAR-14

B2020.02 Storefronts: Windows**

There are aluminum store front windows at the front entrance and balcony areas.

Rating	Installed	Design Life	<u>Updated</u>
4 - Acceptable	1965	40	MAR-14

Event: Replace aluminum storefronts.- (B.O.E. 60 sq.m.)

Туре	Year	Cost	Priority
Lifecycle Replacement	2017	\$59,000	Unassigned

Updated: MAR-14

B2030.01.01 Aluminum-Framed Storefronts: Doors**

There are storefront doors at the main and ground floor levels.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	30	MAR-14

Event: Replace aluminum storefront doors.- (B.O.E. 3

<u>sets)</u>

Туре	<u>Y</u>
Lifecycle Replacement	2

<u>Year</u> <u>Cost</u> 2017 \$28,000 Priority Unassigned

B2030.01.06 Automatic Entrance Doors**

There are two sets of automatic aluminum entrance doors at ground floor level.

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1965	30	MAR-14

Event: Replace automatic entrance doors. - (B.O.E. 2 sets)

TypeYearCostPriorityLifecycle Replacement2017\$28,000Unassigned

Updated: MAR-14

B2030.02 Exterior Utility Doors**

Exterior utility doors are wood solid core in pressed steel or aluminum frames.

Rating	Installed	Design Life	Updated
3 - Marginal	1965	40	MAR-14

Event: Replace exterior utility doors.- (B.O.E. 4 doors)

Concern:

The solid core wood utility doors have deteriorated and require replacement. **Recommendation:** Replace utility doors. **Consequences of Deferral:** Doors will continue to deteriorate.

Туре	Year	Cost	Priority
Failure Replacement	2014	\$4,000	Medium

Updated: MAR-14

B2030.03 Large Exterior Special Doors (Overhead)*

There is an overhead insulated steel door at the loading dock.

<u>Rating</u>	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1999	0	MAR-14

B3010.01 Deck Vapour Retarder and Insulation*

Roof decks have 50mm rigid insulation and no vapour barrier.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-14

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

SBS roofing.

Rating	Installed	Design Life	Updated
4 - Acceptable	2008	25	MAR-14

Event: Replace SBS roofing.- (B.O.E. 1475 sq.m.)

Туре	Year	<u>Cost</u>	Priority
Lifecycle Replacement	2033	\$269,000	Unassigned

Updated: MAR-14

B3010.07 Sheet Metal Roofing**

There is metal roofing over the deck areas on the second and third floors.

Rating	Installed	Design Life	Updated
4 - Acceptable	1985	40	MAR-14

Event: Replace metal roofing.- (B.O.E. 80 sq.m.)

Туре	Year	Cost	Priority
Lifecycle Replacement	2025	\$21,000	Unassigned

Updated: MAR-14

B3010.08.02 Metal Gutters and Downspouts**

The metal roofs are drained with concealed metal gutters and down spouts.

<u>Rating</u>	Installed	Design Life	Updated
4 - Acceptable	1985	30	MAR-14

Event: Replace metal gutter and down spouts.- (B.O.E. 25m)

<u>Type</u>	Year	<u>Cost</u>	Priority
Lifecycle Replacement	2017	\$1,000	Unassigned

Updated: MAR-14

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

There are roof penetrations with cast iron cages over roof drains and metal flashings for vent pipes. Roof access is by means of a door from the mechanical penthouse.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-14

S3 INTERIOR

C1010.01 Interior Fixed Partitions*

Fixed interior partitions are gypsum plaster on hollow tile walls. There are also walls to closets consisting of plaster on metal lath on metal studs. More recent renovations have used gypsum board on metal studs.

<u>Rating</u>	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-14

C1010.04 Interior Balustrades and Screens, Interior Railings*

There is an open painted steel screen at first floor level to enclose a outside resident patio area.

Rating	Installed	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1997	0	MAR-14

C1010.05 Interior Windows*

The interior windows in the food services office is clear glass in a pressed steel frame.

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1965	0	MAR-14

C1010.06 Interior Glazed Partitions and Storefronts*

There are aluminum storefronts to offices at the basement level.

<u>Rating</u>	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-14

C1020.01 Interior Swinging Doors (& Hardware)*

Interior doors are solid core with plastic laminate finish in pressed steel frames.

<u>Rating</u>	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-14

C1020.03 Interior Fire Doors*

Interior fire doors are glazed and have magnetic hold open devices.

<u>Rating</u>	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1965	0	MAR-14

C1020.07 Other Interior Doors*

Other interior doors are steel into mechanical, oxygen store and loading dock and other service rooms.

<u>Rating</u>	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1965	0	MAR-14

C1030.01 Visual Display Boards**

There are tack boards and white boards in offices and staff areas throughout the facility.

<u>Rating</u>	Installed	Design Life	Updated
4 - Acceptable	1965	20	MAR-14

Event: Replace vsiual display boards.- (B.O.E. 40 units)

Type
Lifecycle ReplacementYear
2017Cost
\$27,000Priority
Unassigned

Updated: MAR-14

C1030.05 Wall and Corner Guards*

There are both stainless steel and vinyl corner guards throughout the facility.

<u>Rating</u>	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-14

C1030.06 Handrails*

Wood handrails throughout the facility.

<u>Rating</u>	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1965	0	MAR-14

C1030.08 Interior Identifying Devices*

Some rooms are identified with room numbers and designations on plastic and metal signs.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-14

C1030.10 Lockers**

There are	steel	lockers	in	staff	change	rooms
There are	01001	1001013		Jun	onunge	1001110.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	30	MAR-14

Event: Replace lockers. - (B.O.E. 98 half height lockers)

Туре	<u>Year</u>	Cost	<u>Priority</u>
Lifecycle Replacement	2017	\$48,000	Unassigned

C1030.12 Storage Shelving*

There is a mix of painted wood and steel shelving throughout the facility.

<u>Rating</u>	Installed	<u>Design Life</u>	Updated
3 - Marginal	1965	0	MAR-14

Event: Replace storage shelving.- (B.O.E. 20m)

Concern: There are sections of original 1965 wood shelving which have deteriorated. Recommendation: Replace shelving. Consequences of Deferral: Shelving will deteriorate further.

Туре	<u>Year</u>	Cost	Priority
Failure Replacement	2014	\$16,000	Low

Updated: MAR-14

C1030.14 Toilet, Bath, and Laundry Accessories*

Staff and resident wash rooms have mirrors, paper towel and soap dispensers, toilet roll holders and waste receptacles.

<u>Rating</u>	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1965	0	MAR-14

C2010 Stair Construction*

The three main stairs are cast in place concrete.

Rating	Installed	Design Life	<u>Updated</u>
4 - Acceptable	1965	0	MAR-14

C2020.02 Terrazzo Stair Finishes*

The stairs have a terrazzo finish with non-slip nosing inserts.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-14

C2020.08 Stair Railings and Balustrades*

Stair railings and balustrades are painted steel pipe.

<u>Rating</u>	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1965	0	MAR-14

C3010.02 Wall Paneling**

There are veneer plywood panels in the basement best practices office.

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1965	30	MAR-14

Event: Replace wood panelling.- (B.O.E. 24 sq.m.)

Туре	Year	<u>Cost</u>	Priority
Lifecycle Replacement	2017	\$4,000	Unassigned

Updated: MAR-14

C3010.06 Tile Wall Finishes**

There are glazed tiles in janitors room, wash rooms, kitchen and tub rooms throughout the facility.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	40	MAR-14

Event: Replace wall tiles. - (B.O.E. 2277 sq.m.)

Туре	Year	Cost	Priority
Lifecycle Replacement	2017	\$581,000	Unassigned

Updated: MAR-14

C3010.11 Interior Wall Painting*

There are gypsum board and plaster walls throughout the facility which are painted.

Rating	Installed	Design Life	Updated
3 - Marginal	1965	0	MAR-14

Event: Repaint walls .- (B.O.E. 1000 sq.m.)

Concern:

There are sections of walls in patient and public areas which have deteriorated and require repainting. **Recommendation:** Repaint walls. **Consequences of Deferral:** Walls will deteriorate further.

Туре	Year	Cost	Priority
Repair	2014	\$30,000	Low

C3020.01.01 Epoxy Concrete Floor Finishes*
The first floor resident tub room has epoxy finish.
RatingInstalledDesign LifeUpdated4 - Acceptable20000MAR-14
C3020.01.02 Painted Concrete Floor Finishes*
There are painted concrete floors in the maintenance shops and stores, loading dock, elevator machine room, patient patio areas, mechanical room an other service areas.
RatingInstalledDesign LifeUpdated2 - Poor19650MAR-14
Event: Repaint concrete floor (B.O.E. 1000 sq.m.) Concern: The painted concrete floors have deteriorated and require repainting. Recommendation: Repaint floors. Repaint floors. Consequences of Deferral: Floors will deteriorate further.
TypeYearCostPriorityRepair2014\$30,000Low
Updated: MAR-14 C3020.02 Tile Floor Finishes**
There are ceramic mosaic tiles in wash rooms and non-slip quarry tiles in the kitchen areas.
RatingInstalledDesign LifeUpdated4 - Acceptable196550MAR-14
Event: Replace ceramic and quarry tile flooring (B.O.E. 564 sq.m.)
TypeYearCostPriorityLifecycle Replacement2017\$156,000Unassigned
Updated: MAR-14
C3020.03 Terrazzo Floor Finishes*
There are terrazzo bases to vinyl floors in the corridors. The is also terrazzo floor finishes in some service rooms such as electrical rooms.
RatingInstalledDesign LifeUpdated4 - Acceptable19650MAR-14

C3020.07 Resilient Flooring**

There is a mix of linoleum, vinyl asbestos tiles and sheet vinyl throughout the facility including corridors and resident rooms.

Rating	Installed	<u>Design Life</u>	Updated
3 - Marginal	1965	20	MAR-14

Event: Replace resilient flooring.- (B.O.E. 1550 sq.m.)

Concern:

The resilient flooring is damaged and appears unsightly in corridors and other rooms throughout the Pavilion. A 1993 consultant's report prepared for Alberta Infrastructure

identified asbestos in floor tiles and sheet flooring throughout the facility.

Recommendation:

Replace flooring.

Consequences of Deferral:

Flooring will further deteriorate further.

Asbestos in the flooring may become a risk for residents and staff.

Туре	Year	Cost	Priority
Failure Replacement	2014	\$124,000	Low

Updated: MAR-14

C3020.07 Resilient Flooring** - Link

There is sheet vinyl in the link.

Rating	Installed	Design Life	Updated
4 - Acceptable	1974	20	MAR-14

Event: Replace resilient flooring.- (B.O.E. 200 sq.m.)

Туре	Year	Cost	Priority
Lifecycle Replacement	2017	\$16,000	Unassigned

Updated: MAR-14

C3020.08 Carpet Flooring**

There is carpet in ground floor offices.

Rating	Installed	Design Life	Updated
4 - Acceptable	1999	15	MAR-14

Event: Replace carpet.- (B.O.E. 150 sq.m.)

Туре	<u>Year</u>	Cost	Priority
Lifecycle Replacement	2017	\$11,000	Unassigned

C3030.06 Acoustic Ceiling Treatment (Susp. T-Bar)** - 1965

There are T-bar ceilings in the kitchen areas, lounge areas and corridors.

Rating	Installed	<u>Design Life</u>	Updated
2 - Poor	1965	25	MAR-14

Event: Replace T-bar ceilings.- (B.O.E. 1517 sq.m.)

Concern:

The acoustic tile ceilings are damaged and appear unsightly. The tiles also contain asbestos according to a 1993 consultant's report prepared for Alberta Infrastructure. **Recommendation:**

Replace ceiling tiles in existing T-Bar grid.

Consequences of Deferral:

Ceiling tiles will deteriorate further and the asbestos may become a risk to the health of residents and staff.

Туре	Year	Cost	Priority
Failure Replacement	2014	\$71,000	Medium

Updated: MAR-14

C3030.06 Acoustic Ceiling Treatment (Susp. T-Bar)** - 2006

There are new T-bar ceilings and corridors and lounge areas of the first floor.

Rating	Installed	Design Life	Updated
4 - Acceptable	2006	25	MAR-14

Event: Replace T-bar ceilings.- (B.O.E. 230 sq.m.)

Туре	Year	Cost	Priority
Lifecycle Replacement	2031	\$11,000	Unassigned

C3030.07 Interior Ceiling Painting*

There are painted original gypsum plaster ceilings and gypsum board ceilings throughout the facility.

Rating	Installed	<u>Design Life</u>	<u>Updated</u>
3 - Marginal	1965	0	MAR-14

Event: Repaint ceilings.- (B.O.E. 979 sq.m).

Concern:

There are sections of ceilings throughout the facility including maintenance shops and service rooms which are soiled, appear unsightly and require repainting. **Recommendation:** Repaint ceilings. **Consequences of Deferral:**

Ceilings will deteriorate further.

Туре	Year	<u>Cost</u>	Priority
Repair	2014	\$22,000	Low

Updated: MAR-14

C3030.09 Other Ceiling Finishes*

There are textured and stipple ceiling finishes in the learning centre and cafeteria.

<u>Rating</u>	Installed	<u>Design Life</u>	Updated
3 - Marginal	1965	0	MAR-14

Event: Replace stipple finish ceilings.- (B.O.E. 2800 sq.m.)

Concern:

A 1993 consultant's report prepared for Alberta Infrastructure identified asbestos in ceiling textures throughout the facility. **Recommendation:**

Remove ceiling textures and replace with asbestos free textured finish.

Consequences of Deferral:

Asbestos will continue to be a health risk to residents and staff.

Туре	Year	Cost	Priority
Hazardous Materials Abatement	2014	\$90,000	High

D1010.01.02 Hydraulic Passenger Elevators**

There are the 2 original hydraulic elevators rated at 4000lbs. They have exceeded their design life.

Rating	Installed	Design Life	Updated
3 - Marginal	1965	30	MAR-14

Event: Refurbish 2 Elevators.

Concern:

The hydraulic elevators have low lighting levels and worn finishes. The elevator machinery is original and the elevators are unreliable. **Recommendation:** Upgrade elevators. **Consequences of Deferral:**

Elevators will deteriorate further.

Туре	Year	Cost	Priority
Failure Replacement	2015	\$175,000	Medium

Updated: MAR-14

D1090 Other Conveying Systems*

There is an electric lift rated at 340kg operating between the second floor and first floor large enough for a resident and a care giver. This lift is by Garaventa (Canada).

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	2000	0	MAR-14

S4 MECHANICAL

D2010.04 Sinks**

Variety of single compartment, double compartment and triple compartment stainless steel sinks in kitchenettes and service rooms in the facility.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	30	MAR-14

Event: Replace 13 Sinks

Туре	Year	Cost	Priority
Lifecycle Replacement	2017	\$27,000	Unassigned

Updated: MAR-14

D2010.05 Showers**

Handicap shower stalls on the main and 2nd floor with chrome grab bars. Thermostatic mixing valve, pressure balanced. Shower stalls have architectural finishes.

<u>Rating</u>	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1965	30	MAR-14

Event: Replace 2 Showers

Туре	Year	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2017	\$5,000	Unassigned

Updated: MAR-14

D2010.06 Bathtubs** - 2006

Assisted bath tubs located in Bathing Rooms, complete with thermoscopic mixing valve.

Rating	Installed	Design Life	Updated
4 - Acceptable	2006	30	MAR-14

Event: Replace 1 Assisted Bathtub.

Туре	Year	Cost	Priority
Lifecycle Replacement	2036	\$25,000	Unassigned

D2010.06 Bathtubs** - 2013

Assisted bath tubs located in Bathing Rooms, complete with thermoscopic mixing valve.

<u>Rating</u>	Installed	Design Life	Updated
5 - Good	2013	30	MAR-14

Event: Replace 1 Bathtub

TypeYearCostPriorityLifecycle Replacement2043\$25,000Unassigned

Updated: MAR-14

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

WC - wall mounted, vitreous china, flush valve. LV - combination of wall mounted and countertop lavatories. Vitreous china or enameled steel, lever blades faucets.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	35	MAR-14

Event: Replace 68 Washroom Fixtures

Туре	Year	Cost	Priority
Lifecycle Replacement	2017	\$132,000	Unassigned

Updated: MAR-14

D2020.01.01 Pipes and Tubes: Domestic Water*

A 150mm cast iron water main enters the mechanical room east face and provides domestic, process and fire water service. A 75mm domestic cold water main, 50mm domestic hot water main, and a 25mm hot water recirculation main in the basement ceiling space provides service to a series of riser stacks throughout the building. Copper piping.

<u>Rating</u>	Installed	<u>Design Life</u>	Updated
3 - Marginal	1965	0	MAR-14

Event: Replace Domestic Water Piping. : 5363 sqm. GFA.

Concern:

The existing plumbing in Norwood North was installed when the building was built in 1963 and is quickly deteriorating. There have been several recent incidents of failure resulting in flooding.

Recommendation:

Replace deteriorating plumbing pipes in Norwood North.

Туре	Year	Cost	Priority
Failure Replacement	2015	\$225,000	Medium

D2020.01.02 Valves: Domestic Water**

The domestic water distribution system piping includes isolation valves for fixtures and piping branches. Isolation valves are typically brass or bronze gate type valves.

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1965	40	MAR-14

Event: Replace 200 Valves,

Туре	Year	Cost	Priority
Lifecycle Replacement	2017	\$40,000	Unassigned

Updated: MAR-14

D2020.01.03 Piping Specialties (Backflow Preventers)**

Backflow preventor on the domestic water line connection to the fire line and boiler make-up water.

Rating	Installed	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1997	20	MAR-14

Event: Replace 2 Backflow Preventors.

Туре	Year	<u>Cost</u>	Priority
Lifecycle Replacement	2017	\$10,000	Unassigned

Updated: MAR-14

D2020.02.02 Plumbing Pumps: Domestic Water**

There is one domestic hot water recirculation pump in the mechanical room, Grundfos model UP 15-42.

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1997	20	MAR-14

Event: Replace 1 Recirculation Pump.

Туре	Year	<u>Cost</u>	Priority
Lifecycle Replacement	2017	\$2,000	Unassigned

D2020.02.04 Domestic Water Conditioning Equipment**

There is a Water Group Company Model FAF 210 1.5050 water softener installed in the mechanical room.

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1997	20	MAR-14

Event:	Replace 1 Water Softner	-					
	Type Lifecycle Replacement	<u>Year</u> 2017	<u>Cost</u> \$12,000	<u>Priority</u> Unassigned			
	Updated: MAR-14						
D2020.0	02.06 Domestic Water Hea	ters**					
Hot wate For the	Domestic hot water is heated via a steam to water converter in the mechanical room. Hot water storage is provided with a 6700 liters holding tank located in the mechanical room. For the kitchen, 180 F hot water is provided by a Leslie Constant Temperature Model E-600 steam injector to hot water heat exchanger.						
Rating 4 - Accep	otable 200		20 MAR				
Event:	Replace 2 bDomestic Wa	ater He	aters				
	<u>Type</u> Lifecycle Replacement	<u>Year</u> 2024	<u>Cost</u> \$30,000	<u>Priority</u> Unassigned			

Updated: MAR-14

D2020.03 Water Supply Insulation: Domestic*

Insulation, where exposed for domestic hot and cold water is fiberglass with a canvas jacket. Pipe insulation will contain asbestos.

Refer to architectural evaluation for an asbestos management plan.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-14

D2030.01 Waste and Vent Piping*

150mm sanitary sewer main leaves the north face of the building and connects to the municipal system north of the facility. Cast iron waste and vent piping.

Rating	Installed	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1965	0	MAR-14

D2030.02.04 Floor Drains*

Cast iron floor and hub drains located throughout the the building.

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1965	0	MAR-14

D2040.01 Rain Water Drainage Piping Systems*

Roof drainage is provided from 50mm and 100mm cast iron risers to a buried cast iron drainage main under the basement slab.

This main connects to an 200mm storm main exiting the north face of the building. Cast iron piping distribution.

<u>Rating</u>	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1965	0	MAR-14

D2040.02.04 Roof Drains*

Open flow, cast iron roof drains located on roof levels.

<u>Rating</u>	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-14

D2040.02.06 Area Drains*

Ramp drain connects into the storm drainage system.

<u>Rating</u>	Installed	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1965	0	MAR-14

D3010.01 Oil Supply Systems (Fuel, Diesel)*

The original 200 gallon buried fuel tank has been replaced with an above ground unit, circa 1990. There is a 20 gallon day tank for the emergency generator in the generator room.

<u>Rating</u>	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-14

D3010.02 Gas Supply Systems*

50mm elevated pressure natural gas service enters the mechanical room from the east wall and serves gas-fired kitchen equipment in the kitchen area. Schedule 40 black piping distribution.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-14

D3020.01.02 Feedwater Equipment*

Condensate return pumps and condensate tank located in the mechanical room. These pumps return condensate to the main boiler plant.

Rating	Installed	<u>Design Life</u>	Updated
5 - Good	2013	0	MAR-14

D3030.04 Rotary-Screw Water Chillers**

York YCAL0061EC17 packaged air-cooled HCFC-22, 61 Ton nominal capacity, 53.7 Ton rated capacity scroll chiller located on the roof adjacent to the Penthouse to provide chilled water to the main air handling units.

Rating	Installed	Design Life	Updated
3 - Marginal	2006	25	MAR-14

Event: Replace 1 Chiller.

Concern:

Existing cooling system is not sufficient for the designated areas. Lack of cooling would significantly impact resident health and site operations. **Recommendation:**

Replace existing chiller with new larger capacity unit.

Туре	Year	Cost	Priority
Failure Replacement	2015	\$95,000	Low

Updated: MAR-14

D3030.06.02 Refrigerant Condensing Units**

There is condensing unit for the cooling coil for the kitchen air handling unit. Carrier 38AE-012-500, rated at 33 kW at 85 F ambient temperature, 208/3/60. R-22 refrigerant used.

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1993	25	MAR-14

Replace 1 Condensing Unit. Event:

Туре	Year	<u>Cost</u>	<u>Priority</u>
Lifecycle Replacement	2018	\$30,000	Unassigned

D3040.01.01 Air Handling Units: Air Distribution**

There are three Carrier built-up air handling units in the Penthouse:

AHU#1 provides 100% outside air to the main and second floor areas of the building. It is rated for 9400 lps. Multizone unit.

AHU#2 provides 100% outside air to the basement area of the building. It is rated for 3250 lps. Multizone unit.

AHU #3 provides 100% outside air to the kitchen area of the building. It is rated for 1650 lps.

All three units are supplied with 100% outside air from a common intake plenum with a preheat coil and filter bank and 75lb/hr steam grid humidifier.

Rating	Installed	Design Life	<u>Updated</u>
3 - Marginal	1965	30	MAR-14

Event: Replace 3 Air Handling Units.

Concern:

Air handling units deteriorate with no replacement parts available. There are areas of the building with inadequate heating and cooling from the air handling system. **Recommendation:**

Replace air handling units.

Туре	Year	<u>Cost</u>	Priority
Failure Replacement	2015	\$395,000	Low

Updated: MAR-14

D3040.01.03 Air Cleaning Devices: Air Distribution*

There are main and secondary filter units in the outside air intake plenum for the Penthouse air handling units.

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1965	0	MAR-14

D3040.01.04 Ducts: Air Distribution*

Air is supplied to the various zones of the three floors of the building via a corridor distribution system of galvanized ducts located in the ceiling space.

Air is exhausted from the various areas via galvanized exhaust ducts in the ceiling space and ducted to the exhaust air fans in the Penthouse area.

Rating	Installed	Design Life	<u>Updated</u>
4 - Acceptable	1965	0	MAR-14

D3040.01.07 Air Outlets & Inlets: Air Distribution*

High sidewall extruded aluminum aerofoil or round cone ceiling diffusers for supply air, and high sidewall or ceiling mounted aluminum grid return air grilles are provided throughout.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-14

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

150psi high pressure steam is supplied to the building from the external main boiler plant via a buried steam line that enters the lower floor mechanical room at the north west corner. This main enters into a 100mm header to pressure reducing valves for the various building services as follows:

PRV #1 - Provides 100#/hour of 60 psig steam for sterilizers - currently abandoned.

PRV #2 - Provides 150#/hour of 40 psig steam to the kitchen area.

PRV #3 - Provides 3100#/hour of 25 psig steam to a header for the Penthouse area.

PRV #4 - Provides 1800#/hour of 25 psig steam to a header for the Penthouse area. A 100mm 25 psig steam main is provided from the mechanical room to the penthouse area.

PRV #5 - Provides 900#/hour of 10 psig steam to a header for the building heating system.

PRV #6 - Provides 1800#/hour of 10 psig steam to a header for the building heating system. From the header, a 25mm steam line provides heat to the mechanical room unit heater, a 50mm line provides, through a motorized control valve, heat to the steam to hot water converter in the mechanical room to serve the perimeter heating system, and a 50mm steam line provides, through a motorized control valve, heat to the steam to domestic hot water converter in the mechanical room.

<u>Rating</u>	Installed	Design Life	Updated
4 - Acceptable	1963	0	MAR-14

Event: Replace Steam Piping Distribution. BOE: 5363

sq.m. GFA.

Туре	Year	<u>Cost</u>	Priority
Lifecycle Replacement	2017	\$460,000	Unassigned

Updated: MAR-14

D3040.03.01 Hot Water Distribution Systems** - 1965

Reverse return system of steel piping has been supplied to the two zones and hot water is circulated through the perimeter radiation, entranceway force flows, and unit heaters as required. Heated water to the air handling unit coils in the Penthouse is provided by a second steam to hot water converter with separate pumps in the Penthouse area.

Rating	Installed	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1965	40	MAR-14

Event: Replace hot water distribution system. BOE: 5363 sq.m. GFA.

Туре	Year	Cost	Priority
Lifecycle Replacement	2017	\$550,000	Unassigned

D3040.03.01 Hot Water Distribution Systems** - 2006

Glycol hot water mixture distributed to pre-heat coil serving common fresh air intake. Fluid is circulated through two Taco pumps, each rated at16.4 lps.

Rating	Installed	Design Life	Updated
4 - Acceptable	2006	40	MAR-14

Event: Replace 2 Pumps and Associated Componenets.

Туре	Year	Cost	Priority
Lifecycle Replacement	2046	\$25,000	Unassigned

Updated: MAR-14

D3040.03.01 Hot Water Distribution Systems** - 2013

There are two Armstrong heating pumps, one for the north zone of the building and one for the south zone, located in the basement mechanical room. Each pump circulates water through a steam to hot water converter to provide heating water to the distribution system.

Main heating circulation pumps, header and associated equipment have been replaced in 2013.

Rating	Installed	Design Life	<u>Updated</u>
5 - Good	2013	40	MAR-14

Event: Replace 2 Main Heating Circulation Pumps and Accessories.

Туре	<u>Year</u>	Cost	Priority
Lifecycle Replacement	2053	\$55,000	Unassigned

D3040.03.02 Chilled Water Distribution Systems**

Chilled water is supplied from the York air-cooled chiller on the roof adjacent to the Penthouse to the cooling coil in the main air handling unit via two Taco pumps, each has capacity of 16.4 lps.

Rating	Installed	Design Life	Updated
4 - Acceptable	2006	40	MAR-14

Event: Install 3 Cooling Coils Serving AHU.

Concern:

There is one central coil serving common fresh air intake to all air handling units, acting as a heating coil ant winter time and cooling coil at summer. This results in inefficient operation of cooling system.

Recommendation:

It is recommended to install designated cooling coils serving each air handling unit.

Туре	Year	Cost	Priority
Indoor Air Quality Upgrade	2015	\$120,000	Medium

Updated: MAR-14

I

Event: Replace Chilled Water Distribution System. BOE: 5363 sq.m. GFA.

Туре	Year	Cost	Priority
Lifecycle Replacement	2046	\$316,000	Unassigned

Updated: MAR-14

D3040.04.01 Fans: Exhaust**

There is variety of exhaust fans provided in building. Two main exhaust fans are located in Penthouse Mechanical Room and they serve washroom exhaust system and common exhaust system. Both fans are manufactured by Trane, ARR3 series and have capacities of 3250 and 7400 lps. Kitchen exhaust fan is located in mechanical shaft above servery area. There are wall mounted propeller exhaust fan in dishwashing areas.

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1965	30	MAR-14

Event: Replace 6 Exhaust Fans.

Туре	<u>Year</u>	Cost	Priority
Lifecycle Replacement	2017	\$30,000	Unassigned

D3040.04.03 Ducts: Exhaust*

Air is exhausted from the various areas via galvanized exhaust ducts in the ceiling space and ducted to the exhaust air handlers in the Penthouse area.

<u>Rating</u>	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-14

D3040.04.05 Air Outlets and Inlets: Exhaust*

High sidewall or ceiling mounted aluminum grid return air grilles are provided throughout as required.

<u>Rating</u>	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-14

D3040.05 Heat Exchangers** - 2006

Steam to glycol heat exchanger located in Penthouse Mechanical Room provides hot water/glycol for the building air handlings preheating coil.

<u>Rating</u>	Installed	Design Life	Updated
4 - Acceptable	2006	30	MAR-14

Event: Replace 1 Heat Exchanger.

Туре	Year	Cost	Priority
Lifecycle Replacement	2036	\$15,000	Unassigned

Updated: MAR-14

D3040.05 Heat Exchangers** - 2013

Steam to hot water heat exchanger located in Basement Mechanical Room provides hot for the building heating system.

Rating	Installed	Design Life	<u>Updated</u>
5 - Good	2013	30	MAR-14

Event: Replace 1 Heat Exchanger.

Туре	Year	Cost	Priority
Lifecycle Replacement	2043	\$15,000	Unassigned

D3050.01.04 Unit Air Conditioners**

LG condensing unit serving split AC system serving 2nd Floor common area.

Rating	Installed	Design Life	Updated
5 - Good	2010	30	MAR-14

Event: Replace 1 Split AC System.

Туре	Year	<u>Cost</u>	Priority
Lifecycle Replacement	2035	\$8,000	Unassigned

Updated: MAR-14

D3050.03 Humidifiers**

There is one 750lb/hr steam grid humidifier located in the main outside air supply air plenum for the three main air handling units.

Rating	Installed	Design Life	<u>Updated</u>
4 - Acceptable	1965	25	MAR-14

Event: Replace 1 steam grid humidifier.

Туре	Year	<u>Cost</u>	Priority
Lifecycle Replacement	2017	\$16,000	Unassigned

Updated: MAR-14

D3050.05.02 Fan Coil Units**

Force flow unit heaters are located at the entries and stairwells of the building. Units are manufactured by Dunham Bush and are rated at approximately 9 kW. Each is controlled by a line voltage thermostat that cycles the fan to maintain the desired temperature.

<u>Rating</u>	Installed	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1965	30	MAR-14

Event: Replace 7 Force Flow Heaters.

Туре	Year	Cost	Priority
Lifecycle Replacement	2017	\$35,000	Unassigned

D3050.05.03 Finned Tube Radiation**

Perimeter hot water wall-fin radiation is provided throughout, the majority of cabinets being sloped top exposed steel, wall-hung.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	40	MAR-14

Event: Replace Finned Tube Radiation. BOE: 5363 sq.m.

<u>GFA.</u>

Туре	Year	<u>Cost</u>	Priority
Lifecycle Replacement	2017	\$300,000	Unassigned

Updated: MAR-14

D3050.05.06 Unit Heaters**

Horizontal projection unit heaters are located in the basement area receiving and mechanical room areas and in the Penthouse. Each is controlled by a line voltage thermostat that cycles the fan to maintain the desired temperature.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	30	MAR-14

Event: Replace 5 Unit Heaters.

Туре	Year	<u>Cost</u>	Priority
Lifecycle Replacement	2017	\$24,000	Unassigned

Updated: MAR-14

D3060.02.02 Pneumatic Controls**

Pneumatic controllers are used throughout, either directly controlling valves such as wall-fin radiation or controlling dampers through I/P transducers in the BMCS system station panels.

Rating	Installed	Design Life	<u>Updated</u>
4 - Acceptable	1965	40	MAR-14

Event: Replace Pneumatic Controls. BOE: 5363 sq.m.

<u>GFA.</u>

Туре	<u>Year</u>	<u>Cost</u>	Priority
Lifecycle Replacement	2017	\$120,000	Unassigned

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

Automatic Controls system interfaces with the original pneumatic controllers through I/P transducers.

Rating	Installed	<u>Design Life</u>	Updated
3 - Marginal	1990	20	MAR-14

Event: Replace BMS. BOE: 5363 sq.m. GFA.

Concern:

Obsolete controls with no replacement parts available. **Recommendation:** Replace BMS.

Туре	Year	Cost	<u>Priority</u>
Failure Replacement	2015	\$165,000	Medium

Updated: MAR-14

D4010 Sprinklers: Fire Protection*

The building is sprinkled throughout. The main water connection and zone valves are located in the mechanical room adjacent to the water meter.

<u>Rating</u>	Installed	Design Life	<u>Updated</u>
4 - Acceptable	1965	0	MAR-14

D4020 Standpipes*

A wet standpipe system is provided throughout the building. There are nine fire hose cabinets with three per floor (one on the end of each wing and one located in the central core area).

Rating	Installed	Design Life	<u>Updated</u>
4 - Acceptable	1965	0	MAR-14

D4030.01 Fire Extinguisher, Cabinets and Accessories*

ABC and water tank type fire extinguishers are located throughout the facility.

<u>Rating</u>	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1965	0	MAR-14

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

Dry chemical fire extinguishing system is installed for the kitchen range hood.

Rating	Installed	<u>Design Life</u>	Updated
5 - Good	2013	40	MAR-14

Event: Replace 1 Range Hood Extinguishing System.

Туре	Year	Cost	Priority
Lifecycle Replacement	2053	\$25,000	Unassigned

S5 ELECTRICAL

D5010.01.02 Main Electrical Transformers (Utility Owned)*

The pad mounted transformer is installed to provide power to the facility.

<u>Rating</u>	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1965	0	MAR-14

D5010.03 Main Electrical Switchboards (Main Distribution)** - 1965

The main service to the building is 120/208V, 3 phase, 4 wire and rated 1200A and is fed from site pad mounted transformer. The main incoming switchboards consists 1200A main circuit breaker, CT cabinet and distribution sections. The distribution section consist both fuse disconnects and circuit breakers for branch panelboards.

Rating	Installed	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1965	40	MAR-14
	Capacity 1200A 120/208	., <u> </u>	:ity Unit N/A

Event: Replace 1 Main Electrical Switchboard

Туре	Year	Cost	Priority
Lifecycle Replacement	2017	\$64,000	Unassigned

Updated: MAR-14

D5010.03 Main Electrical Switchboards (Main Distribution)** - 1985

The 800A 120/208V central distribution panelboard is connected to 600A transfer switch which fed from both normal power main electrical switchboard and emergency power from emergency generator shed.

<u>Rating</u>	Installed	<u>Design Life</u>	Updated
5 - Good	1985	40	MAR-14
	Capacity	<u>Size</u> <u>Capac</u>	ity Unit
	600A, 120/	208V N	I/A

Event: <u>Replace Emergency Power Distribution Equipment</u> - (1 Transfer Switch & 1 Distribution Panel)

Туре	Year	Cost	Priority
Lifecycle Replacement	2025	\$25,000	Unassigned

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

The panels are installed through entire building and most of them are in full capacity.

Rati	na
nau	nu

4 - Acceptable

Installed
1965Design Life
30Updated
MAR-14Capacity SizeCapacity Unit

N/A N/A

Event: Replace 14 Branch Circuit Panelboards

Туре	Year	Cost	Priority
Lifecycle Replacement	2017	\$70,000	Unassigned

Updated: MAR-14

D5010.05 Electrical Branch Circuit Panelboards (Secondary Distribution)** - 1985

The panels were installed for emergency power distribution through entire building and panels have 10% spare capacity,

<u>Rating</u>	Installed	Design Life	Updated
4 - Acceptable	1985	30	MAR-14

Event: Replace 6 Electrical Branch Circuit Panelboards

Туре	Year	Cost	Priority
Lifecycle Replacement	2017	\$30,000	Unassigned

Updated: MAR-14

D5010.05 Electrical Branch Circuit Panelboards (Secondary Distribution)** - 2006

The panels were installed during 2006 renovation and most of panel have at least 30% spare capacity

Rating			
5	- Good		

Installed	<u>Design Life</u>	Updated
2006	30	MAR-14
Conceltur	0: Comos	4

Capacity SizeCapacity UnitN/AN/A

Event: Replace 5 Branch Circuit Panelboards

Туре	<u>Year</u>	Cost	Priority
Lifecycle Replacement	2036	\$25,000	Unassigned

D5010.07.02 Motor Starters and Accessories**

Stand alone motor magnetic starters and load switches are used for mechanical ventilation and pump of	

Rating	Installed	<u>Design Life</u>	Updated
4 - Acceptable	1965	30	MAR-14
	Capacity S	<u>Size Capaci</u>	ity Unit
	N/A	N	I/A

Replace 12 Magnetic Motor Starters Event:

Туре	<u>Year</u>	Cost	Priority
Lifecycle Replacement	2017	\$7,200	Unassigned

Updated: MAR-14

D5010.07.03 Variable Frequency Drives**

The VFD's are used for water circulation pump controls

<u>Rating</u>	Installed	Design Life	Updated
5 - Good	2006	30	MAR-14

Event: Replace 2 Variable Frequency Drives

Туре	Year	Cost	Priority
Lifecycle Replacement	2036	\$12,000	Unassigned

Updated: MAR-14

D5020.01 Electrical Branch Wiring*

All the wires are copper and installed in the conduits

Rating	Installed	<u>Design Life</u>	<u>Updated</u>
4 - Acceptable	1965	0	MAR-14
	Capacity S	ize <u>Capaci</u>	ty Unit
	N/A	N	/A

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

Lighting is locally controlled using line voltage switches.

<u>Rating</u>	Installed	Design Life	Updated
4 - Acceptable	1965	0	FEB-09
	Capacity Si	ize <u>Capaci</u>	ity Unit
	N/A	N	I/A

D5020.02.02.01 Interior Incandescent Fixtures*

The fixtures are installed in the patient rooms; the pot lights in the Sitting Room are all replaced with compact fluorescent lamps.

Rating	Installed	Design Life	<u>Updated</u>
4 - Acceptable	1965	0	MAR-14
	Capacity S	Size Capaci	ity Unit
	N/A	Ν	I/A

D5020.02.02.02 Interior Fluorescent Fixtures** - 1965

The fixtures are T-12 lamps with magnetic ballasts; some of the fixtures have been retrofit with T-8 lamps and electronic ballast.

ballast.	
Rating	Installed Design Life Updated
4 - Acceptable	1965 30 MAR-14
	Capacity Size Capacity Unit N/A N/A
Event: Replace	260 Interior Fluorescent Fixtures
<u>Type</u> Lifecycle	YearCostPriorityReplacement2017\$104,000Unassigned
Updated	d: MAR-14
	nterior Fluorescent Fixtures** - 2006
	ectronic ballast fixtures are used on First Floor Patient Wing and the Basement Rehab Centre.
Rating	Installed Design Life Updated
5 - Good	2006 30 MAR-14
	Capacity Size Capacity Unit
	N/A N/A
Event: Replace	240 Fluorescent Fixtures
<u>Type</u> Lifecycle	YearCostPriorityReplacement2036\$96,000Unassigned
Updated]: MAR-14
D5020.02.03.03 E	Exit Signs* - 1965
Exit signs are the	internally illuminated type with incandescent lamps and located on second floor
Rating	Installed Design Life Updated
4 - Acceptable	1965 0 MAR-14
	Capacity Size Capacity Unit N/A N/A
D5020 02 03 03 F	Exit Signs* - 2006_
	e LED lamp type fixtures
<u>Rating</u> 5 - Good	InstalledDesign LifeUpdated20060MAR-14
	Capacity Size Capacity Unit
	N/A N/A
D5020.03.01.01 E	Exterior Incandescent Fixtures*
The lights are loc	ated in the patio areas
Rating	Installed Design Life Updated
4 - Acceptable	1965 0 MAR-14
	Capacity Size Capacity Unit

N/A

D5020.03.01.04 Exterior H.P. Sodium Fixtures*

The wall packs are installed around the perimeter of the building.

Rating	Installed	Design Life	Updated
4 - Acceptable	1985	0	MAR-14
	Capacity S	<u>Size</u> <u>Capac</u>	ity Unit
	N/A	Ν	I/A

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

Exterior lighting is controlled by both photo cell and timer

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-14
	Capacity	<u>Size</u> <u>Capac</u>	ity Unit
	N/A	Ν	J/A

D5030.01 Detection and Fire Alarm**

The fully addressable 2 stage Norifier control panel is used for entire building fire alarm system and have annunciate panels and graphic located are nurse stations.

Rating		Installed	<u>Design Life</u>	<u>Updated</u>
5 - Good		2008	25	MAR-14
		Capacity	<u>Size Capac</u>	ity Unit
		N/A	١	I/A
Event	Poplaco Fira	Alarm System	(DOE: 5262 -	2 CEA)

Event: Replace Fire Alarm System.- (BOE: 5363 m2. GFA).

<u>Type</u>	Year	<u>Cost</u>	Priority
Lifecycle Replacement	2033	\$106,000	Unassigned

Updated: MAR-14

D5030.02.03 Security Access**

The Altronix control panel is used for resident floor security system have key pad, magnetic locks and position switches at Exit doors.

Rating		Installed	Design Life	Updated
5 - Good		1995	25	MAR-14
		Capacity N/A		i ty Unit I/A
Event:	<u>Replace Door Sec</u> GFA).	urity Syste	m (BOE: 53	<u>63 m2.</u>
		Ve	or Cost	Drierity
	<u>Type</u> Lifecycle Replacemer	nt 202		<u>Priority</u> Unassigned

Updated: MAR-14

D5030.02.04 Video Surveillance**

A localized closed circuit television (CCTV) with 4 cameras (2 outdoors, elevator lobby & Rec. Room), the images are displayed at the Nurses' Station on first floor on a split screen.

Rating	Installed	Design Life	Updated
5 - Good	2006	25	MAR-14
	Capacity S	Size Capaci	ity Unit
	N/A	Ν	I/A

Event: Replace Video Surveillance Equipment - (Headend equipment, Screen & 4 cameras)

Туре	Year	Cost	Priority
Lifecycle Replacement	2031	\$12,000	Unassigned

Updated: MAR-14

D5030.04.01 Telephone Systems*

The office Telephone service is tied to Nortel Meridian located in Angus McGugan Pavilion. The residents obtain their telephones from Telus.

Rating	Installed	Design Life	Updated
4 - Acceptable	1985	0	MAR-14
	Capacity N/A		i ty Unit I/A

D5030.04.03 Call Systems** - 1965

The nurse call system used on the second floor patient wing is a Dukane visual indicating system with an annuciator at the Nurses' Station which buzzes and lights up the room indicator when activated. Push call buttons are used in the rooms and pull chain stations are used in the washrooms. There is an indicating light in the corridor for each patient room.

Rating	Installed	Design Life	<u>Updated</u>
4 - Acceptable	1965	25	MAR-14
	Capacity :	<u>Size</u> <u>Capac</u>	ty Unit
	N/A		N/A

Event: Replace Nurse Call System.- (BOE: 1788 m2 GFA.)

Туре	Year	Cost	Priority
Lifecycle Replacement	2017	\$30,000	Unassigned

Updated: MAR-14

D5030.04.03 Call Systems** - 2006

The Responder IV Nurse Call System by Rauland serves the Brain Injury Unit by using vandalproof push buttons as stations. As well as having the corridor indicating lights, room numbers are displayed on the master station located at the Nurses' Station. Hands-free two-way communications is available from the master station to any room whenever a speaker is provided.

<u>Rating</u> 5 - Good		Installed 2006	Design Life 25	Updated MAR-14
		Capacity N/A		ity Unit ∜A
Event:	Replace Nurse Cal	II System	(3575 m2. GF	- A.)

Type Year Cost Priority

Туре	Teal	COSL	FIIOIILy
Lifecycle Replacement	2031	\$30,000	Unassigned

Updated: MAR-14

D5030.04.04 Data Systems*

The data switch and hub rack is tied to Angus McGugan Pavilion by fiber and data outlets are installed in the offices and nurse stations.

<u>Rating</u>	Installed	Design Life	Updated
5 - Good	1995	0	MAR-14
	Capacity N/A		ity Unit I/A

D5030.05 Public Address and Music Systems**

The public address speakers are installed through building hallways and tied to main amplifier in Angus McGugan Pavilion to serve the North Pavilion; paging is accessible from McGugan and the North Pavilion at nurses stations through the telephone sets.

Rating	Installed	Design Life	<u>Updated</u>
4 - Acceptable	1965	20	MAR-14
	Capacity S	Size Capac	ity Unit

N/A

Event: Replace Public Address Ceiling Loudspeakers.-(BOE: 5363 m2. GFA.)

Туре	Year	Cost	Priority
Lifecycle Replacement	2017	\$25,000	Unassigned

Updated: MAR-14

D5030.06 Television Systems*

Cable television outlets are installed in resident rooms and common lounges.

Rating	Installed	Design Life	Updated
4 - Acceptable	1985	0	MAR-14
	Capacity N/A		ity Unit I∕A

D5030.07 Other Communications and Security Systems*

A "Roam Alert" system is incorporated to monitor the movement of selected residents, who are provided with electronic devices in the form of pendants. Individual electromagnetic locks with keypad override are provided to rooms of residents with special needs. The system only covers first floor areas.

Rating 5 - Good Installed
2006Design Life
0Updated
MAR-14Capacity Size
N/ACapacity Unit
N/A

S6 EQUIPMENT, FURNISHINGS AND SPECIAL CONSTRUCTION

E1090.03 Food Service Equipment*

The kitchen serves the Norwood site as well as the staff cafeteria and the 50 bed resident unit on the third floor and the 12 bed brain injury unit on the second floor. Equipment includes the following: 2 Coldmatic fridges, hot table with 4 compartments, 2 deep fryers, griddle with oven, 4 burner stove with oven, steam kettles and steamer ovens. There is also a support service area for food preparation which is equipped with Foster fridge and Coldmatic fridge and other freezer.

Rating	Installed	Design Life	Updated
3 - Marginal	1965	0	MAR-14

Event: Kitchen Renovations & Equipment Replacement.-

(B.O.E. sum)

Concern:

Most of the equipment in the kitchen and dishroom were originally installed in 1965. Frequent breakdowns are causing food service disruption. Also the room finishes are worn and causing concern for Health Inspectors.

Recommendation:

Replace equipment and upgrade room layout and finishes **Consequences of Deferral:**

Equipment failure would require immediate emergency replacement. Citations from Public Health

Туре	Year	Cost	<u>Priority</u>
Failure Replacement	2014	\$400,000	High

Updated: MAR-14

Event: Replace Coolers & Freezers.- (B.O.E.sum)

Concern:

Most refrigerators and coolers are 30 years old and must be replace as per Environmental legislation for ozone depleting refrigerants. They are also energy inefficient and hard to clean.

Recommendation:

Replace old coolers and freezer in kitchens

Consequences of Deferral:

Failure of the refrigerators and coolers would have a significant impact on food service delivery.

Туре	Year	Cost	<u>Priority</u>
Failure Replacement	2014	\$170,000	High

Updated: MAR-14

Event: Replace kitchen equipment.- (B.O.E. sum)

Concern:

There are items of kitchen equipment which require replacement including: deep fryers, fridge, ranges, dish washing.

Recommendation:

Replace kitchen equipment.

TypeYearCostPriorityFailure Replacement2014\$2,000,000High
Updated: MAR-14
E1090.07 Athletic, Recreational, and Therapeutic Equipment*
The first floor rehabilitation area equipment includes: parallel bars, wood steps, hydrocolator, plinth, overhead metal grid.
RatingInstalledDesign LifeUpdated4 - Acceptable19650MAR-14
E2010.02 Fixed Casework**
There is fixed casework throughout the facility in work areas, patient areas, store rooms, utility rooms.
RatingInstalledDesign LifeUpdated4 - Acceptable196535MAR-14
Event: Replace millwork (B.O.E. 200m)
TypeYearCostPriorityLifecycle Replacement2017\$220,000Unassigned
Updated: MAR-14
E2010.03.01 Blinds**
There is a mix of Venetian, roller and vertical blinds throughout the facility.
RatingInstalledDesign LifeUpdated4 - Acceptable198030MAR-14
Event: Replace window blinds (B.O.E. 302 sq.m.)
TypeYearCostPriorityLifecycle Replacement2017\$33,000Unassigned
Updated: MAR-14
F1040.06 Other Special Facilities*
There are central assisted bathing rooms on the resident met care units with jetted tubs. The brain injury unit has a side entry tub and the resident unit has a tub with a lift.
RatingInstalledDesign LifeUpdated4 - Acceptable19650MAR-14

S8 SPECIAL ASSESSMENT

K4010.01 Barrier Free	Route: Parking	to Entrance*	
The route from the parki	ng to the Pavilio	on is barrier fre	e.
Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-14
K4010.02 Barrier Free	Entrances*		
Entrances are accessed	by concrete sta	airs.	
Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-14

K4010.03 Barrier Free Interior Circulation*

Interior circulation is barrier free.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-14

K4010.04 Barrier Free Washrooms*

There are barrier free wash rooms with grab bars for residents.

<u>Rating</u>	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-14

K4030.01 Asbestos*

There was a 2006 asbestos removal and abatement program on the second floor in preparation for renovations for the brain injury unit.

A 1993 consultant's report for Alberta Infrastructure indicated the presence of asbestos throughout the facility in duct insulation, pipe insulation, textured ceilings, ceiling tiles and floor tiles.

Rating	Installed	Design Life	Updated
3 - Marginal	1965	0	MAR-14

Event: Asbestos management -.(B.O.E. sum)

Concern:

The 1993 consultants report indicates asbestos throughout the facility which requires proper management during routine building maintenance and renovation projects.

Recommendation:

Asbestos contained in the various building components should be monitored to ensure that fibres from friable asbestos are not released into the air. An ongoing program of asbestos management during routine building maintenance and renovation projects is required.

Consequences of Deferral:

Asbestos may become a health risk to staff and residents.

Туре	Year	Cost	Priority
Hazardous Material Management Upgrade	2014	\$10,000	High

Updated: MAR-14

Event: Asbestos piping insulation removal in mechanical room.- (B.O.E. sum)

Concern:

Mechanical room still has pipes insulated with asbestos. Any disturbance of the pipe releases asbestos and endangers staff health.

Recommendation:

Remove asbestos insulation in mechanical room

Туре	Year	Cost	<u>Priority</u>
Hazardous Materials	2014	\$200,000	Medium
Abatement			

Updated: MAR-14

K4030.02 PCBs*

PCBs were not observed nor reported during the building audit.

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-14

K4030.04 Mould*

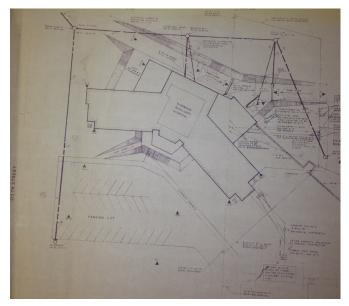
Mould was not observed nor reported during the building audit. There is a ventilation issue to the tub room on the first floor which was reported by staff as a mould concern

Rating	Installed	Design Life	Updated
4 - Acceptable	1965	0	MAR-14

K5010.01 Site Documentation*

Prime Consultant: Bacz Engineering Ltd. Year of Evaluation: 2013 Building Area Evaluated: 1219 m2

Rating	Installed	Design Life	Updated
4 - Acceptable	2013	0	MAR-14



Site Plan

K5010.02 Building Documentation*

North Pavilion at the Norwood Extended Care Centre is a 3 storey, concrete construction building.

MAR-14

Rating	
4 - Acceptab	le

Installed Design Life Updated 2013 0



Basement