2.3 MECHANICAL SYSTEMS

2.3.1. Plumbing Systems

PLUMBING, HEATING & CHILLED RECIRCULATION LINES

Estimated Cost of Project (per Phase): $129,000
Assumed Repair/Replacement Years: 2026, 2031, 2036, 2041, 2046 and 2051
Priority Classification: Essential

Plumbing risers and recirculation lines are concealed within the finished wall spaces and run both vertically and horizontally on each floor. The lines are subject to continuous abrasion from the movement of the water and will require replacement from time to time. The Corporation has a program in place for the replacement of the lines.

A phased cost is provided for the replacement of the lines as required.

VICTAULIC COUPLINGS

Estimated Cost of Project (per Phase): $220,000
Assumed Repair/Replacement Years: 2023 and 2048
Priority Classification: Essential

Victaulic couplings are provided throughout the building. The couplings have reached the end of service life and require replacement.

A cost is provided for the replacement of the couplings and related components as required.

PUMPS

Estimated Cost of Project (per Phase): $25,333
Assumed Repair/Replacement Years: 2024, 2029, 2034, 2039, 2044 and 2049
Priority Classification: Essential

Various pumps are provided in both the 3rd Floor and Penthouse Mechanical Rooms that service plumbing risers, recirculation lines, booster pumps, and fire pump. The pumps are subject to continuous abrasion from the movement of the water and will require rebuild or replacement from time to



Pumps

time.

A phased cost is provided for the rebuild or replacement of the pumps as required.

2.3.2. Space Heating

Natural Gas Boiler Systems - Laars Pennant

Estimated Cost of Project (per Phase): $75,000
Assumed Repair/Replacement Years: 2035 and 2038
Priority Classification: Essential


Natural Gas Boiler Systems - Laars Pennant

The building features a series of three natural gas fired Laars Pennant PNCH natural gas boilers for the heating of the building and to provide potable hot water. Information plates for the boilers indicate manufacturing dates of 2009 and 2012. The additional boilers provide redundancy in the event of periods with high loads most often during times of colder than normal temperatures. The boilers appear to be in serviceable condition with no reports of functionality issues reported. It is recommended that a periodic third-party review be undertaken to determine pro-active repair, upgrade, or replacement requirements.

A phased cost is provided for the replacement of the boilers and the related components at the end of useful service life.

Natural Gas Boiler Systems - RBI Futura

Estimated Cost of Project (per Phase): $70,000
Assumed Repair/Replacement Year: 2040
Priority Classification: Essential


Natural Gas Boiler Systems - RBI Futura

The building features a pair of natural gas fired RBI Futura MB3000 natural gas boilers for the heating of the building and to provide potable hot water. Information plates for the boilers indicate manufacturing dates of 2014. The

additional boilers provide redundancy in the event of periods with high loads most often during times of colder than normal temperatures. The boilers appear to be in serviceable condition with no reports of functionality issues reported. It is recommended that a periodic third-party review be undertaken to determine pro-active repair, upgrade, or replacement requirements.

A cost is provided for the replacement of the boilers and the related components at the end of useful service life.

Expansion Tanks

Estimated Cost of Project (per Phase): $10,000
Assumed Repair/Replacement Year: 2042
Priority Classification: Essential

The boiler systems are provided with a pair of Amtrol 800L Expansion Tanks. The tanks are in new condition having been installed in 2021.

A cost is provided for replacement of the expansion tanks at the end of service life.


Expansion Tanks

Booster Coil Units

Estimated Cost of Project (per Phase): $54,000
Assumed Repair/Replacement Years: 2028, 2033, 2038, 2043 and 2048
Priority Classification: Essential

Booster Coil Units are provided throughout the building in ducts and ceiling areas. No reports of issues with functionality were provided.

A phased cost is provided for replacement of the booster coil units at the end of service life.

In Duct Coil Units

Estimated Cost of Project (per Phase): $69,600
Assumed Repair/Replacement Years: 2028, 2033, 2038, 2043 and 2048
Priority Classification: Essential

Induct Coil Units are provided throughout the building in ducts of ceiling areas. No reports of issues with functionality were provided.

A phased cost is provided for the replacement of the Induct Coil Units and the related components as required.

Fan Coil Units

Estimated Cost of Project (per Phase): $45,000
Assumed Repair/Replacement Years: 2026 and 2031
Priority Classification: Essential

Fan coil units are provided for the commercial floor common areas. No major concerns with their functionality were reported to us.

A phased cost is provided for the replacement of the fan coil units as required at the end of service life.



Fan Coil Units

Unit Heaters

Estimated Cost of Project (per Phase): $10,000
Assumed Repair/Replacement Years: 2033 and 2038
Priority Classification: Essential

Unit Heaters are located throughout the parkade levels, mechanical rooms, and garbage rooms for the heating of those



Unit Heaters

spaces. A new unit heater was recently installed on the lowest level of the parkade.

A phased cost is provided for the replacement of the unit heaters as required at the end of service life.

Baseboard Heaters

Estimated Cost of Project (per Phase): $15,000
Assumed Repair/Replacement Year: 2043
Priority Classification: Essential

Hydronic baseboard heaters are provided for the Pool Facilities and the lobby area for the heating of those spaces. The heaters appear to be in serviceable condition with no reported issues. The baseboard heaters were refinished as part of the pool facility remediation work.



Baseboard Heaters

A phased cost is provided for the replacement of the baseboard heaters as required at the end of service life.

Zone Valves

Estimated Cost of Project (per Phase): $3,250
Assumed Repair/Replacement Years: Yearly
Priority Classification: Essential

Zone Valves are provided in the hydronic heating lines of each unit to regulate the flow of hot water through the system. The zone valves are controlled by the thermostat within the Unit. Periodic replacement of the zone valves will be required

A yearly allowance is provided for the replacement of Zone Valves as required.

2.3.3. Space Cooling

Chiller Units

Estimated Cost of Project (per Phase): $350,000
Assumed Repair/Replacement Years: 2032 and 2043
Priority Classification: Essential

The building is provided with a JCI-York YKCSRQ4-CJGS Chiller to provide cooled air to the building. The system appears to be in serviceable condition with maintenance of the system provided by Johnson Controls. It is recommended that a periodic third-party review be undertaken to determine pro-active repair, upgrade, or replacement requirements.



Chiller Units

A cost is provided for repair or replacement of the system at the end of service life. Cost for a major overhaul is also provided mid-way through service life

Cooling Tower

Estimated Cost of Project (per Phase): $9,000
Assumed Repair/Replacement Years: 2033, 2038, 2043 and 2048
Priority Classification: Essential

Cooling towers and the tank for cooling liquids are located at the rooftop mechanical room. The equipment appears to be in serviceable condition with no reported issues. Replacement of the cooling towers will be problematic due to their location within the penthouse mechanical area.


Cooling Tower

A periodic allowance is provided for the repair or replacement of the components of the cooling towers.

Split Air Conditioners

Estimated Cost of Project (per Phase): $5,000
Assumed Repair/Replacement Year: 2043
Priority Classification: Essential

Each penthouse elevator control/machinery room is provided with a Fujitsu Halcyon Split Air Conditioner to keep the spaces cooled. The equipment appears to be in serviceable condition.

A cost is provided for the replacement of the air conditioners as required at the end of service life.



Split Air Conditioners

Heat Exchangers

Estimated Cost of Project (per Phase): $15,000
Assumed Repair/Replacement Years: 2036, 2041 and 2046
Priority Classification: Essential

The site is provided with heat exchangers on the Domestic Hot Water and Cooling Systems. Regular maintenance is undertaken with the equipment in serviceable condition.

A phased cost is provided for the replacement of the heat exchangers as required at the end of service life.



Heat Exchangers

2.3.4. Ventilation Systems

Corridor Make-Up Air Units

Estimated Cost of Project (per Phase): $96,667
Assumed Repair/Replacement Years: 2023, 2028 and 2033
Priority Classification: Essential


Corridor Make-Up Air Units

The building is provided with a natural gas fired Engineered Air HE100 Make-Up Air Unit on the 4th Level. A pair of Engineered Air HE600 Make-Up Air Units and a pair of Engineered Air 400TD Make-Up Air Units are provided in the Mechanical Penthouse. Regular maintenance including rebuild of the systems is undertaken as needed. The Make-Up Air Units provide ventilation and pressurization to the corridors. The equipment appears to be in serviceable condition with no reports of issues. Ongoing rebuilding of the systems will be required due to the difficulty in replacing the equipment. It is recommended that a periodic third-party review be undertaken to determine pro-active repair, upgrade, or replacement requirements.

A periodic allowance is provided to for the repair, overhaul, upgrade, and replacement of the Make-Up Air Units and related components as required.

Parkade Make-Up Air Unit

Estimated Cost of Project (per Phase): $16,667
Assumed Repair/Replacement Years: 2028, 2033, 2038, 2043 and 2048
Priority Classification: Essential


Parkade Make-Up Air Unit

The building features a pair of natural gas fired Engineered Air HE600 Make-Up Air Units located in the space over the main floor garbage/recycling room to provide conditioned air to the parkade levels. It is our understanding that the Make-Up Air Units were recently refurbished. The equipment appears to be in serviceable

condition with no reports of issues. Ongoing rebuilding of the systems will be required due to the difficulty in replacing the equipment. It is recommended that a periodic third-party review be undertaken to determine pro-active repair, upgrade, or replacement requirements.

A periodic allowance is provided to for the repair, overhaul, upgrade, and replacement of the Make-Up Air Units and related components
as required.

Parkade Exhaust Fans

Estimated Cost of Project (per Phase): $10,000
Assumed Repair/Replacement Years: 2028 and 2029
Priority Classification: Essential

The parkade is provided with a pair of Delhi 215 soffit-mounted exhaust fans. The system is controlled by a carbon monoxide detection system and appears to be in serviceable condition.

A cost is provided to replace the exhaust fans at the end of their useful service lives.


Parkade Exhaust Fans

Exhaust Fans

Estimated Cost of Project (per Phase): $7,000
Assumed Repair/Replacement Years: 2028, 2033 and 2038
Priority Classification: Essential

Exhaust fans of various sizes are utilized throughout the building including the parkade, storage areas, mechanical rooms, and the roof. Regular maintenance of the exhaust systems takes place with repair or replacement as needed.

A phased cost is provided to replace the


Exhaust Fans

Exhaust Fans as required.

Carbon Monoxide Detection System

Estimated Cost of Project (per Phase): $20,000
Assumed Repair/Replacement Years: 2025 and 2040
Priority Classification: Essential


Carbon Monoxide Detection System

The parkade exhaust fans are controlled by a carbon monoxide detection system. The system features detectors throughout the parkade. The system appears to be operational with regular calibration is undertaken as part of a maintenance contract. At the time of replacement consideration should be given for installing a dual carbon monoxide/nitrogen dioxide detection system.

A cost is provided to replace the carbon monoxide detectors as required at the end of their useful service lives.

Air Compressor and Air Dryer

Estimated Cost of Project (per Phase): $9,000
Assumed Repair/Replacement Year: 2052
Priority Classification: Essential

An Omega Air Compressor and a Hankinson SPX Flow Air Dryer is provided for the HVAC. The equipment is newly installed and in serviceable condition.

A periodic allowance is provided for repair or replacement to components of the system as required.

2.3.5. Waste Disposal Systems

Garbage Compactor

Estimated Cost of Project (per Phase): $7,500
Assumed Repair/Replacement Year: 2043
Priority Classification: Essential

The site features a Universal Handling Equipment garbage compactor on the main floor. The compactor and one bin belonging to the Corporation are in serviceable condition with regular maintenance performed by the service provider. The compactor was last overhauled in 2017.


Garbage Compactor

A cost is provided to replace the compactor and the bin as required at the end of service life.

Garbage Chute Doors

Estimated Cost of Project (per Phase): $3,333
Assumed Repair/Replacement Years: 2033, 2038 and 2043
Priority Classification: Desirable

Access to the garbage chute is provided by a chute door on each floor. The chute doors are in serviceable condition.



Garbage Chute Doors

A phased cost is provided to replace the garbage chute doors as required. Actual expenditures will vary in magnitude, depending upon the number of doors to be replaced.

2.4 PLUMBING SYSTEMS

2.4.1. Site Systems

WATER SUPPLY

Estimated Cost of Project (per Phase): $20,000
Assumed Repair/Replacement Years: 2033 and 2043
Priority Classification: Essential

The potable water supply is concealed below grade. These services will require repair/replacement from time to time.

A cost is provided for repair or replacement of the underground services as required.



Water Supply

2.4.2. Domestic Water Systems

DOMESTIC HOT WATER STORAGE TANKS

Estimated Cost of Project (per Phase): $60,000
Assumed Repair/Replacement Year: 2041
Priority Classification: Essential

The building is provided with a five A.O Smith TJV-120M domestic hot water storage tanks working in conjunction with the boilers to provide potable hot water to the Units. Three tanks are located in the Penthouse Mechanical Room with an additional two located in the 3rd Floor Mechanical Room. The storage tanks were replaced in 2020 and appear to be in serviceable condition with no reported issue.



Domestic Hot Water Storage Tanks

A cost is provided for the replacement of the Domestic Hot Water Storage Tanks at the end of useful service life.

Water Softener System

Estimated Cost of Project (per Phase): $3,600
Assumed Repair/Replacement Years: 2033, 2038, 2043 and 2048
Priority Classification: Essential

The site is provided with a Water Softener System. The equipment appears to operate adequately through regular repair and maintenance.

A phased cost is provided for major repair and replacement of the components of the water softener system as required.


Water Softener System

Pool Mechanical & Chlorination Systems

Estimated Cost of Project (per Phase): $4,200
Assumed Repair/Replacement Years: 2043 and 2048
Priority Classification: Essential

The pool and hot tub areas are provided with filters, pumps, and a salt water chlorination system. At the time of the review the pool and hot tub were not in operation due to the pool area upgrades and COVID restrictions. Upgrades to the pool mechanical systems was also undertaken with the Pool Refurbishment Project. Repairs to the filtration systems may be required due to lack of use.


Pool Mechanical & Chlorination Systems

A phased cost is provided for major repair or replacements of the components of the pool mechanical and chlorination systems as required.

Pool Piping

Estimated Cost of Project (per Phase): $5,000
Assumed Repair/Replacement Years: 2028, 2033, 2038, 2043 and 2048
Priority Classification: Essential

Piping of the pool area appears to be original to the installation of the systems. Regular monitoring is required to address any minor repairs prior to becoming an issue. Upgrades to the pool mechanical systems will be undertaken with the Pool Refurbishment Project.

A phased cost is provided for major repair or replacements of the components of the pool piping systems as required.

Cross Connection Control Devices

Estimated Cost of Project (per Phase): $4,000
Assumed Repair/Replacement Years: 2026, 2030, 2034, 2038, 2042, 2046 and 2050
Priority Classification: Essential

Cross Connection Devices are required by the City of Calgary for protection of the municipal water supply on domestic water lines, irrigation lines, and sprinkler lines. Inspection is required on a regular basis resulting in periodic rebuild or replacement of the devices.


Cross Connection Control Devices

A phased cost is provided for the rebuild or replacement of the Cross Connection Devices.

2.4.3. Drainage Systems

Below/Above Grade Drainage Services

Estimated Cost of Project (per Phase): $60,000
Assumed Repair/Replacement Years: 2023, 2038 and 2048
Priority Classification: Essential

The site includes below grade sanitary and storm lines which will require periodic repair or replacement along with above grade drain lines throughout the building. Replacements of drain lines on the parkade level have been undertaken with drain lines replaced within the floor levels of the tower currently underway.


Below/Above Grade Drainage Services

A periodic allowance is provided for repairs to the below/above grade drainage services as required.

Sump System

Estimated Cost of Project (per Phase): $15,000
Assumed Repair/Replacement Years: 2026, 2031, 2036, 2041, 2046 and 2051
Priority Classification: Essential

The lowest level of the building and the elevators includes a sump system. Due to the high water table in the area the sump is in constant operation with regular repair and replacement required.

A phased cost is provided for replacement of components of the sump systems.


Sump System

Roof Drains

Estimated Cost of Project (per Phase): $2,500
Assumed Repair/Replacement Year: 2047
Priority Classification: Essential

Roof Drains are provided for the upper level and mechanical penthouse roofs. Maintenance of these items is critical to their long term viability.

A cost is provided for the replacement of the roof drains at the time of the roof replacement.


Roof Drains

Area Drains

Estimated Cost of Project (per Phase): $3,667
Assumed Repair/Replacement Years: 2028, 2031, 2034, 2038, 2041, 2044, 2048 and 2051
Priority Classification: Essential

Area Drains are located in the mechanical rooms and at each parkade level. Maintenance of these items is critical to their long term viability.

A cost is provided for auguring of the system as required.


Area Drains

2.5 CONVEYANCE SYSTEMS

2.5.1. Elevators

ELEVATOR CONTROLS - TRACTION


Elevator Controls - Traction

Estimated Cost of Project (per Phase): $750,000
Assumed Repair/Replacement Years: 2048 and 2049
Priority Classification: Essential

The site features two ThyssenKrupp 29 stop hoist elevators and one 31 stop elevator with the controls located at the roof level. Modernization of the elevator systems including fire safety, electrical, controls, and signage was completed in 2017/2018. It is recommended that a third party elevator consultant review the equipment on a periodic basis for any operational concerns. Over time, certain elevator components may become unavailable due to obsolescence. Additionally, as newer equipment designs become more prominent, the service personnel capable of performing necessary adjustments will become increasingly difficult to find. Thus, in order to ensure reliable elevator service, modernization will become necessary. Future modernization would involve replacing existing controllers, motor controls, emergency lighting, and door operators.

A phased cost is provided for the replacement of the elevators at the end of service life. Periodic upgrades of components to meet code requirements may be required prior to the end of service life.

HYDRAULIC ELEVATOR CONTROLS



Hydraulic Elevator Controls

Estimated Cost of Project (per Phase): $0
Assumed Repair/Replacement Years: Not Applicable
Priority Classification: Essential

The site also features a 4 stop shuttle elevator to service Level P1 to Level 3. The elevators have reached the end of their service life. The elevator modernization will

require all related systems to be brought to current code standards. Due to limited use of the elevator and redundancies with the three tractions elevators, the Corporation is planning to decommission the elevator. Over time, certain elevator components may become unavailable due to obsolescence. Additionally, as newer equipment designs become more prominent, the service personnel capable of performing necessary adjustments will become increasingly difficult to find. Thus, in order to ensure reliable elevator service, modernization will become necessary. Modernization would involve replacing existing controllers, motor controls, emergency lighting, and door operators. A periodic review of the elevator systems by a third-party consultant is recommended to determine proactive repair, upgrade, or replacement requirements.

As the Corporation intends to decommission the elevator no cost is provided for the replacement of the elevator. Should the Corporation wish to undertake a replacement costs will require adjustment.

Elevator Cab Interior Finishes - Traction

Estimated Cost of Project (per Phase): $45,000
Assumed Repair/Replacement Years: 2048 and 2049
Priority Classification: Desirable


Elevator Cab Interior Finishes - Traction

The Elevator Cabs are finished with carpeted floors, stainless steel front walls, paneled ceilings, and paneled walls with handrails. The cabs are illuminated by recessed strip lighting in the ceiling and illuminated wall panels. The finishes are generally new condition having been replaced in 2017/2018 as part of the elevator modernization project. The Corporation may wish to refurbish the cab interiors for aesthetic reasons prior to the next elevator modernization.

A phased cost is provided to refinish the Elevator Cabs when required to maintain the aesthetic appeal of the property.

ELEVATOR CAB INTERIOR FINISHES - HYDRAULIC

Estimated Cost of Project (per Phase): $0
Assumed Repair/Replacement Years: Not Applicable
Priority Classification: Desirable

The Elevator Cab are finished with tiled floors, stainless steel front wall, and paneled walls with handrails. The cab is illuminated by a reflective grid ceiling. The finishes are generally in serviceable condition. Due to limited use of the elevator and redundancies with the three tractions elevators, the Corporation is planning to decommission the elevator.


Elevator Cab Interior Finishes - Hydraulic

As the Corporation intends to decommission the elevator no cost is provided for the elevator cab interior finishes. Should the Corporation wish to undertake a replacement costs will require adjustment.

2.6 ELECTRICAL SYSTEMS

2.6.1. Power Supply and Distribution Systems

POWER DISTRIBUTION

Estimated Cost of Project (per Phase): $90,400
Assumed Repair/Replacement Years: 2033 and 2043
Priority Classification: Essential

Power is supplied to the main switchboard panels in electrical rooms at the parkade level. The main switchboard panels appear to be original to the construction of the building with periodic repairs or upgrades undertaken as needed. We have not received any reports of problems with the power distribution systems. Should the


Power Distribution

Corporation wish to install EV Charging Stations, upgrades to the distribution and metering may be required. Regular inspection including thermographic inspections should be undertaken.

A periodic allowance is provided for the repair, replacement, or upgrade of the components of the power distribution systems as required.

TRANSFORMER

Estimated Cost of Project (per Phase): $7,500
Assumed Repair/Replacement Year: 2052
Priority Classification: Essential

Transformers are provided to assist in the powering of the chiller systems, and for each elevator. The transformers appear to be in serviceable condition with no reported issues.

A phased cost is provided for the replacement of the transformers as required.


Transformer

2.6.2. Emergency Power

EMERGENCY GENERATOR SYSTEMS

Estimated Cost of Project (per Phase): $50,000
Assumed Repair/Replacement Years: 2028, 2033 and 2038
Priority Classification: Essential

Emergency power is provided by a Simpower diesel generator located in the generator room. The generator energizes the building's emergency lighting, exit signs, sump pumps, and life safety systems. The generator runs monthly at partial load and annually at full load by an independent service company. No issues with the emergency generator systems were noted.


Emergency Generator Systems

A cost is provided for the rebuild or replacement of the generator at the end of its useful service life.

EMERGENCY GENERATOR DIESEL FUEL TANK

Estimated Cost of Project (per Phase): $3,000
Assumed Repair/Replacement Year: 2033
Priority Classification: Essential

A Westeel Diesel Tank is located in the tank room located adjacent to the delivery entrance. The tank appears to be in serviceable condition with no reported issues. It should be noted that the switch and the light fixture for the diesel tank room must be changed to fire/spark proof devices.


Emergency Generator Diesel Fuel Tank

A cost is provided for the replacement of the diesel tank at the end of service life.

2.6.3. Lighting Systems

INTERIOR LIGHTING - COMMON AREAS

Estimated Cost of Project (per Phase): $53,000
Assumed Repair/Replacement Years: 2023 and 2043
Priority Classification: Desirable

Corridor lighting is provided by wall mounted sconces in the residential corridors and lobby area, decorative fixtures in the main floor elevator lobby area, and ceiling mounted recessed light fixtures in the commercial corridors. The lights are in serviceable condition. The Corporation anticipates replacing the residential corridor lights and lobby lights as part of the corridor remediations.


Interior Lighting - Common Areas

A cost is provided for the replacement of the lighting fixtures.

Interior Lighting - Service

Estimated Cost of Project (per Phase): $26,200
Assumed Repair/Replacement Years: 2028, 2033, 2038, 2043 and 2048
Priority Classification: Desirable

The parkade, mechanical and service rooms are illuminated with various designs of service lighting. The lighting is in serviceable condition but will require periodic replacement as required.

A phased cost is provided for the replacement of the lighting fixtures.


Interior Lighting - Service

Exterior Lighting - Units

Estimated Cost of Project (per Phase): $18,000
Assumed Repair/Replacement Year: 2028
Priority Classification: Desirable

Each Unit with a balcony or terrace is provided with a wall or soffit mounted exterior light at the balcony or terrace. The lights are in serviceable condition. The Corporation may wish to replace the lights for aesthetic reasons prior to the end of service life.

A cost is provided for the replacement of the lighting fixtures.


Exterior Lighting - Units

Exterior Lighting - Pole Lights

Estimated Cost of Project (per Phase): $8,000
Assumed Repair/Replacement Year: 2028
Priority Classification: Desirable

Pole lights are provided at the entrance driveway of the site. Although not in operation at the time of review the lights are believed to be in serviceable condition.

A cost is provided for the replacement of the lighting fixtures and poles as required.



Exterior Lighting - Pole Lights

Exterior Lighting - Common

Estimated Cost of Project (per Phase): $11,000
Assumed Repair/Replacement Year: 2033
Priority Classification: Desirable

Exterior lighting is by wall mounted lights are provided at service entrances, at the south elevation commercial entrance. Exposed bulb lights are provided in the soffit at the entrance. The lights are in serviceable condition.

A cost is provided for the replacement of the lighting fixtures.



Exterior Lighting - Common

2.6.4. Auxiliary Systems

Security/Access Control System

Estimated Cost of Project (per Phase): $50,000
Assumed Repair/Replacement Years: 2023, 2033, 2036, 2039, 2042, 2045, 2048 and 2051
Priority Classification: Desirable

Included as part of the entry phone system is a FOB system to provide residents with



Security/Access Control System

an increased level of security which was recently installed. The CCTV System is integrated with the Entry Phone System provided at the main entrance, at each parkade entrance and the entrances to the elevator lobby on the parkade level. Periodic upgrades to the system will be required with technological changes.

A phased cost is provided for the repair, replacement, and upgrade of the Security/Access Control System.

CCTV System

Estimated Cost of Project (per Phase): $12,800
Assumed Repair/Replacement Years: 2028, 2031, 2034, 2037, 2040, 2043, 2046, 2049 and 2052
Priority Classification: Desirable

A recordable CCTV system is provided throughout the building. The system will require periodic repairs, replacement, and upgrades as required.

A phased cost is provided for repair or replacement of the CCTV System equipment as required.



CCTV System

Package Control System

Estimated Cost of Project (per Phase): $18,000
Assumed Repair/Replacement Year: 2042
Priority Classification: Desirable

A contactless pickup and delivery package system is provided for the building located in the main floor commercial corridor. The system is new and in serviceable condition.

A cost has been provided the replacement of upgrade of the system as required.



Package Control System

2.7 LIFE SAFETY SYSTEMS

2.7.1. Fire Suppression Systems

STANDPIPE SYSTEM

Estimated Cost of Project (per Phase): $100,000
Assumed Repair/Replacement Years: 2033 and 2043
Priority Classification: Essential

The site includes a standpipe system which provides emergency water to the upper floors. The system requires regular inspection and testing with periodic repair or replacement of system components as required.



Standpipe System

A periodic allowance is provided for repair or replacement to components of the system as required.

SPRINKLER SYSTEM

Estimated Cost of Project (per Phase): $50,000
Assumed Repair/Replacement Years: 2033 and 2043
Priority Classification: Essential

Levels 1-4 and the parkade levels are protected with a sprinkler system. The system requires regular inspection and testing with periodic repair or replacement of system components as required.


Sprinkler System

A periodic allowance is provided for repair or replacement to components of the system as required.

FIRE HOSES & CABINETS

Estimated Cost of Project (per Phase): $47,000
Assumed Repair/Replacement Years: 2025, 2035 and 2045
Priority Classification: Essential

Fire hoses and cabinets are provided throughout the building on all levels including the parkade levels. The hoses must be inspected and tested on a regular basis with replacement taking place every ten years.

A cost is provided for the replacement of the fire hoses.


Fire Hoses & Cabinets

2.7.2. Fire Detection and Signaling Systems

ANNUNCIATOR PANEL

Estimated Cost of Project (per Phase): $60,000
Assumed Repair/Replacement Year: 2043
Priority Classification: Essential

The main Annunciator Panel is located on the main floor security and fire control room. The fire alarm system monitors the pull stations, heat detectors, smoke detectors, audible devices, and supervised valves for the fire suppression system. The annunciator panel must be inspected and tested on a regular basis. Periodic replacement of components such as battery backups may be required prior to the end of service life.

A cost is provided to replace the annunciator panel at the end service life.


Annunciator Panel

Fire Alarm Devices

Estimated Cost of Project (per Phase): $26,400
Assumed Repair/Replacement Years: 2043 and 2048
Priority Classification: Essential

The signal devices consist of piezos, pull stations and detectors. The equipment appears to be in serviceable condition with inspection and testing taking place on a regular basis. A majority of the system was upgrades at the same time as the annunciator panel.


Fire Alarm Devices

A phased cost is provided to replace the fire alarm devices as required.

Emergency Lighting

Estimated Cost of Project (per Phase): $8,000
Assumed Repair/Replacement Years: 2043 and 2048
Priority Classification: Essential

The Emergency Lighting consists of Exit Signs on all levels. The emergency lighting appears to be in serviceable condition with inspection and testing taking place on a regular basis.

A phased cost is provided to replace the lighting devices as required.



Emergency Lighting

FIRE FIGHTERS PHONES

Estimated Cost of Project (per Phase): $10,000
Assumed Repair/Replacement Year: 2043
Priority Classification: Essential

Fire Fighter Phones are provided on each floor of the building for use by emergency services. The phones must be inspected and tested on a regular basis with replacement taking place as required.

A phased cost is provided for repair or replacement of Fire Hydrant system components as required.


Fire Fighters Phones

2.7.3. Life Safety

ROOF ANCHOR SYSTEMS

Estimated Cost of Project (per Phase): $37,500
Assumed Repair/Replacement Year: 2050
Priority Classification: Essential

The building is provided with a Roof Anchor System for the use of suspended access equipment by service providers for the site. The anchors are located at the roof levels and various terrace levels. The roof anchors must be tested on a yearly basis to allow use.

A cost is provided for periodic repair or replacement of the roof anchors.


Roof Anchor Systems

2.8 INTERIOR FINISHES

2.8.1. Corridors Residential

CORRIDOR WALLS

Estimated Cost of Project (per Phase): $106,000
Assumed Repair/Replacement Years: 2023 and 2038
Priority Classification: Desirable

The corridors feature painted wall finishes. The finishes are in serviceable condition having been recently painted with high scuff resistant paint. A project is currently underway for the addition of decorative mouldings

A cost is provided for refinishing of the corridors walls.


Corridor Walls

CEILINGS

Estimated Cost of Project (per Phase): $22,000
Assumed Repair/Replacement Year: 2043
Priority Classification: Desirable

A conventional painted ceiling is provided on the main level vestibule, elevator lobby, and on each floor. The ceilings are in generally serviceable condition having been recently painted.

A cost is provided for refinishing of the ceilings.


Ceilings

Ceilings - Suspended

Estimated Cost of Project (per Phase): $7,000
Assumed Repair/Replacement Year: 2048
Priority Classification: Desirable

Suspended ceilings are provided for the main lobby area of the building. The ceiling has been removed to allow work to take place on the drain line project.

A cost is provided for replacement of the ceilings. Individual tile replacement is considered to be an operating expense.


Ceilings - Suspended

Carpeting

Estimated Cost of Project (per Phase): $61,000
Assumed Repair/Replacement Year: 2042
Priority Classification: Desirable

The corridors are typically finished with a low-pile carpet tiles. The carpets are in new and serviceable condition. Regular cleaning will prolong the life of the carpet. The Corporation has a supply of surplus tiles for replacement of individual sections or tiles.

A cost is provided for the replacement of the carpet.


Carpeting

Tile Flooring

Estimated Cost of Project (per Phase): $9,000
Assumed Repair/Replacement Year: 2029
Priority Classification: Desirable

Tile Flooring is provided at the entrance lobby and vestibule. The tile is in serviceable condition. The Corporation may


Tile Flooring

wish to replace the tile prior to end of service life for aesthetic reasons.

A cost is provided for the replacement of the tile flooring.

2.8.2. Corridors Commercial

Corridor Walls

Estimated Cost of Project (per Phase): $16,000
Assumed Repair/Replacement Years: 2025 and 2040
Priority Classification: Desirable

The corridors feature painted wall finishes. The finishes are in generally serviceable condition having been painted in 2020.

A cost is provided for refinishing of the corridor walls.



Corridor Walls

Ceilings - Suspended

Estimated Cost of Project (per Phase): $29,000
Assumed Repair/Replacement Years: 2025 and 2050
Priority Classification: Desirable

Suspended ceilings are provided for the common commercial areas of the building. The ceilings are in generally serviceable condition; however, some sections have been removed to allow work to take place on the drain line project.



Ceilings - Suspended

A cost is provided for replacement of the ceilings. Individual tile replacement is considered to be an operating expense.

Carpeting

Estimated Cost of Project (per Phase): $22,000
Assumed Repair/Replacement Year: 2042
Priority Classification: Desirable

The common commercial corridors are typically finished with a low-pile carpet tiles. The carpets are in serviceable condition having been recently replaced. Regular cleaning will prolong the life of the carpet.

A cost is provided for the replacement of the carpet.


Carpeting

Tile Flooring

Estimated Cost of Project (per Phase): $19,000
Assumed Repair/Replacement Year: 2028
Priority Classification: Desirable

Tile flooring is provided for the main floor commercial corridor. Although aging in style and appearance the tile is in serviceable condition.

A cost is provided for the replacement of the tile flooring.


Tile Flooring

2.8.3. Lobbies

Mailboxes

Estimated Cost of Project (per Phase): $15,000
Assumed Repair/Replacement Year: 2033
Priority Classification: Desirable

Mailboxes for both residential and commercial Units are provided off the


Mailboxes

commercial corridor. The mailboxes are generally in serviceable condition.

A cost is provided to replace the mailboxes at the end of their useful service lives.

Parcel Lockers And Delivery Management System

Estimated Cost of Project (per Phase): $10,000
Assumed Repair/Replacement Year: 2042
Priority Classification: Desirable

A Luxer Parcel Lockers And Delivery Management Systems is provided in the corridor adjacent to the main floor elevator lobby. The system provides a secure parcel pickup and delivery system for the residents. The system appears to be in serviceable condition.



Parcel Lockers And Delivery Management System

A cost is provided to replace the system at the end of their useful service life.

Ground Floor Lobby Finishes

Estimated Cost of Project (per Phase): $300,000
Assumed Repair/Replacement Years: 2023 and 2043
Priority Classification: Desirable

The main entrance lobby is finished with attractive furnishings, tiled floor, and large mirrors. The Corporation may wish to refurbish the lobby finishes prior to end of service life for aesthetic reasons. At the time of review the ceiling had been dismantled to allow for drain line replacements to take place.


Ground Floor Lobby Finishes

An allowance has been provided to upgrade the lobby finishes as required from time to time to maintain the aesthetic appeal of the property.

2.8.4. Amenities

Concierge Desk

Estimated Cost of Project (per Phase): $10,000
Assumed Repair/Replacement Year: 2036
Priority Classification: Desirable

A Concierge Desk is located at the main entrance to the building. The Concierge Desk is in serviceable condition.

A cost is provided to upgrade the concierge desk as required from time to time. The exact cost of the work may differ depending upon the extent of the renovation undertaken.


Concierge Desk

Public Washrooms

Estimated Cost of Project (per Phase): $10,000
Assumed Repair/Replacement Years: 2025, 2035 and 2045
Priority Classification: Desirable

Male and female public washrooms are located on the main floor and the second floor common areas. The second floor washroom has been refurbished while the main floor washroom has aging finishes but remains in serviceable condition. Periodic upgrades to the finishes may be required to maintain the aesthetic appeal.


Public Washrooms

A phased cost is provided to upgrade the washroom finishes as required from time to time. The exact cost of the work may differ depending upon the extent of the renovation undertaken.

Meeting Room & Offices

Estimated Cost of Project (per Phase): $5,000
Assumed Repair/Replacement Years: 2025, 2030 and 2050
Priority Classification: Desirable

A Meeting Room and Offices for the Corporation's use are provided on the second level. The facilities are seldom used. Some deterioration is noted in the offices due to water damage. Replacement or repair is not anticipated.



Meeting Room & Offices

A cost is provided to upgrade the finishes as required from time to time in order to maintain the functionality of the space.

Fitness Room

Estimated Cost of Project (per Phase): $15,000
Assumed Repair/Replacement Years: 2032, 2037, 2047 and 2052
Priority Classification: Desirable

A well-equipped fitness room is provided for the residents with renovations to the room and equipment having been upgraded. The equipment requires regular maintenance to ensure proper operation.


Fitness Room

A phased cost is provided for the replacement of the exercise equipment and finishes as required to maintain the functionality of the space.

Billiard Room

Estimated Cost of Project (per Phase): $6,667
Assumed Repair/Replacement Years: 2025, 2035 and 2045
Priority Classification: Desirable

A Billiard/Games Room is provided for the residents. Features include a pool table and various furnishings. The pool table requires replacement of the felt surface to allow use.


Billiard Room

A phased cost is provided to upgrade the Billiard/Games Room finishes and equipment as required from time to time in order to maintain the aesthetic appeal of the room.

Racquet Courts

Estimated Cost of Project (per Phase): $30,000
Assumed Repair/Replacement Year: 2025
Priority Classification: Desirable

Squash and Racquetball Courts are provided for the residents. The courts are in serviceable condition but will require periodic maintenance to maintain the usability and aesthetic appeal of this amenity. At the time of review one court was being utilized as a work space for contractors working in the building with wood flooring and wall surfaces protected against damage

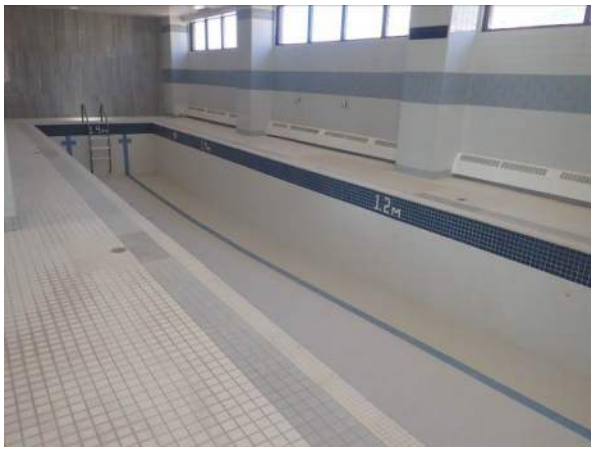

Racquet Courts

A cost is provided to upgrade the squash & racquetball court finishes as required from time to time in order to maintain the usability and aesthetic appeal of the room.

Pool Area

Estimated Cost of Project (per Phase): $250,000
Assumed Repair/Replacement Years: 2023 and 2051
Priority Classification: Desirable

The site is provided with a lap pool and hot tub for the use of the residents. At the time of the review the facilities were not in operation pending completion of the refurbishment of the related facilities and the repair or replacement of some pool systems. As part of the pool area refurbishment a wall at the of the lap pool required replacement.



Pool Area

A phased cost is provided for replacement of the finishes and equipment as required to maintain the functionality and aesthetic appeal of the spaces.

Locker Room/Saunas/Steam Rooms

Estimated Cost of Project (per Phase): $80,000
Assumed Repair/Replacement Years: 2025 and 2040
Priority Classification: Desirable

Saunas and Steam Rooms are provided for both the male and female locker rooms. At the time of review the locker rooms were undergoing a full refurbishment including new tile on wall areas in the steam rooms. Replacement of the sauna equipment and the lockers is not anticipated with equipment in serviceable condition.


Locker Room/Saunas/Steam Rooms

A phased cost is provided for replacement of the finishes and equipment as required to maintain the functionality and aesthetic appeal of the spaces.

2.8.5. Service Areas and Staircases

STAIRWELL FINISHES

Estimated Cost of Project (per Phase): $15,000
Assumed Repair/Replacement Years: 2028, 2029, 2048 and 2049
Priority Classification: Desirable

The stairwells feature concrete staircases and metal handrails with painted walls, ceilings, and stairs. The staircases generally appear to be in good condition.

A cost is provided for refinishing the stairwells as required.



Stairwell Finishes

2.9 SITE FINISHES

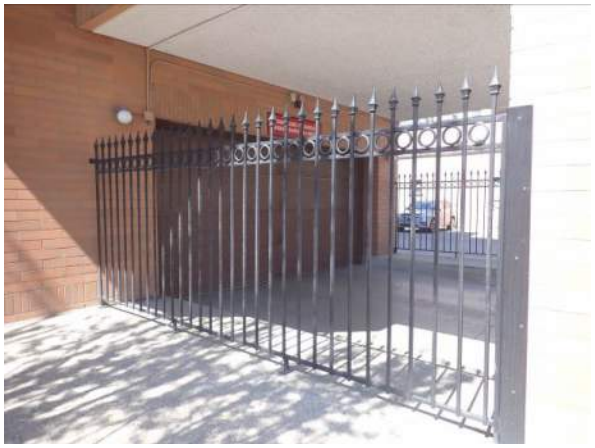
2.9.1. Site Finishes

METAL FENCING

Estimated Cost of Project (per Phase): $0
Assumed Repair/Replacement Years: Not Applicable
Priority Classification: Desirable

Metal fencing is provided in the area of the entrance to the parkade as well as between each parkade level. The fencing is in serviceable condition. Replacement of the parkade fencing is not anticipated.

No cost is provided for the replacement of the fencing at this is anticipated, if required, to be an Operating Expense.



Metal Fencing

SIGNAGE

Estimated Cost of Project (per Phase): $0
Assumed Repair/Replacement Years: Not Applicable
Priority Classification: Desirable

In addition to the building sign at the front entrance, various signage is provided throughout the site. The signage generally appears to be in generally serviceable condition.

No cost is provided for the replacement of the signage at this is anticipated to be an Operating Expense.



Signage

PARK BENCHES

Estimated Cost of Project (per Phase): $0
Assumed Repair/Replacement Years: Not Applicable
Priority Classification: Desirable

Park benches are provided near the entrance to the building. Regular maintenance will be required to maintain the aesthetic appeal.

No cost is provided for the replacement of the benches as eventual replacement is anticipated to be an Operating Expense.


Park Benches

2.9.2. Hard Landscaping Elements

Concrete Paving

Estimated Cost of Project (per Phase): $12,000
Assumed Repair/Replacement Year: 2028
Priority Classification: Desirable

Concrete Paving is provided for access from the alley to the garbage and service rooms. This area takes a lot of abrasion and are subject to impact damage from bins and equipment. The area is in generally serviceable condition, experiencing limited use.

A cost is provided for the replacement of the concrete paving as required.


Concrete Paving

Concrete Pedestrian Walks

Estimated Cost of Project (per Phase): $19,000
Assumed Repair/Replacement Year: 2051
Priority Classification: Desirable

Concrete pedestrian walks are provided at the front entrance, along the south elevation and adjacent to the City walkways. The concrete is in generally serviceable condition with localized repairs having been undertaken.

A phased cost is provided for the replacement of the concrete pedestrian walks as required.


Concrete Pedestrian Walks

BRICK MASONRY PLANTERS

Estimated Cost of Project (per Phase): $8,667
Assumed Repair/Replacement Years: 2033, 2038 and 2043
Priority Classification: Desirable

Masonry Brick planters are located at the south-east elevation of the site at the entrance area. The planters appeared to be in serviceable condition with some minor localized impact damage.

A phased cost is provided for the repair or replacement of the brick masonry planters as required.



Brick Masonry Planters

2.9.3. Soft Landscaping Elements

GENERAL LANDSCAPING

Estimated Cost of Project (per Phase): $2,667
Assumed Repair/Replacement Years: 2032, 2037, 2042, 2047 and 2052
Priority Classification: Desirable

Soft landscaping is provided near the entrance of the site in the planter including trees, shrubs, and flowers. The landscaping generally appears to be mature and healthy.

A phased cost is provided for storm damage, mortality, and for aesthetic reasons



General Landscaping