MORRISON HERSHFIELD

Depreciation Report

Katsura & Sequoia
Strata Plan BCS 1060

6233 Katsura Street & 9133 Hemlock Drive, Richmond BC.

Presented to:

The Owners of Strata Plan BCS 1060

c/o Jeremy Lim, Senior Strata Agent
Rancho Management Services (B.C.) Ltd
8th Floor – 1125 Howe Street
Vancouver, BC V6Z 2K8

Report No. 220357800 May 1, 2023

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1. INTRODUCTION

This letter report and appendices comprise your 2023 Depreciation Report. It is based on our proposal dated June 2, 2022. Approval was provided by the Senior Director Strata Agent, Jeremy Lim and dated June 16, 2022.

This document was prepared in general compliance with Section 6.2 (Depreciation Report) of the Strata Property Regulation B.C. Reg. 43/2000 with Amendments July 1, 2000, and December 13, 2011.

This report is subject to the limitations identified in Appendix C.

PROJECT TEAM AND QUALIFICATIONS

As per section 6.2 of the Act, clause 1d, the report must provide the name of the person from whom the depreciation report was obtained and a description of:

i) Their qualifications

ii) The error and omission insurance, if any, carried by that person

iii) The relationship between that person and the strata corporation

a. Morrison Hershfield Limited (MH) prepared this report. MH is a prominent, privately held, multi-disciplinary engineering and management firm. Our mandate is to provide services and solutions that will assist our clients in achieving their objectives in a cost effective, efficient, professional and friendly manner. The firm was established in 1946 and has a broad range of engineering, architectural and specialist skills that are used to serve clients in the public and private sectors.

This Depreciation Report has been prepared and/or reviewed by various personnel. They, along with their qualifications and areas of responsibility, are listed below:

- **Fred de Barros,** P.Eng. and M.A.Sc. in Building Science/Engineering, Building Science Consultant of MH, with experience in design and construction. Fred de Barros reviewed the report.

- **Diana Guerrero**, Building Engineer Consultant of MH, addressed the building and site elements and prepared the report including the Reserve Fund Tables, except for the sections noted below.

- **Francis Algoso,** Mechanical Engineer EIT of MH review the mechanical systems. and prepared those sections of this report.

- **Max Gibson**, Electrical Designer of MH, to review the electrical systems, and prepared those sections of this report.

- **Justin Pellen**, of KJA Consultants is currently involved with a variety of maintenance inspections, depreciation studies, and condition assessments. Mr. Pellen is also involved with various modernization, new installation, and maintenance management projects. Mr. Pellen prepared the elevator section of the report.

b. We confirm that we carry professional liability insurance in the amount of $2,000,000 per claim.

c. Morrison Hershfield is not associated with Strata Plan BCS 1060 beyond being retained to perform professional services. We are not aware of any conflicts of interest.

2. PHYSICAL ASSESSMENT

This study is based on a review of relevant documents provided by BCS 1060, It is also based on a visual review of the common elements as described in the Building Data Sheet (Appendix A). The following documents were reviewed:

- Savoy Strata Plan BCS 1060 bylaws November 29, 2004
- Financial Statements period August 2022.
- Minutes Council Meetings 2020-2021
- Approved strata Schedule 2022-2023
- Financial History Questionnaire
- Architectural and Electrical drawings requested to Richmond City.

The visual review was completed on December 06, 2022, by Diana Guerrero, the building supervisor, provided access to all areas of the facility included in the list noted below. units 101, 1202, TH 17, and TH9 were reviewed at the time.

- Amenity rooms.
- Main roof.
- Sample corridors, stairwells, and service rooms.
- Service rooms containing major mechanical and electrical equipment.
- The parkade.
- Pool area, sauna and steam room area and lobbies

Current conditions and recommendations by component are included in the attached Tables (Appendix E). The component inventory excludes capital expenses less than $5,000. As identified in the startup questionnaire, these smaller items will be covered out of the operating budget. Following accounting standards, we identify a fiscal year by the year in which it ends. For example, the 2022/2023 fiscal year is referred to throughout as 2023. To maintain consistency in calculations, a component's year of acquisition is also shown as the fiscal year rather than the calendar year.

In summary, we recommend planning for the following renewal projects and studies:

SHORT TERM (WITHIN TWO YEARS)	MIDDLE TERM (WITHIN SIX YEARS)
Projects	**Projects**
• Plumbing System–Rebuild booster pumps and major valves from Domestic Water Distribution. • Plumbing System – Atmospheric gas fired boilers and DHW storage tanks.	• Below Grade Systems - Replacement of traffic coating at suspended slabs parkade level P1 & P2. • Exterior Walls – Repair Brick veneer cladding at all elevations townhouses.

• Plumbing Systems - Replace pool boiler systems, Pool water pumps and spa mechanical equipment. • HVAC - Replace or refurbish the corridor make-up air units, single split AC cabinet units at level 5 floor amenity spaces and parkade exhaust ventilation fans	• Balconies – Replace liquid urethane membrane in balconies and eyebrows. Periodic repairs in balcony slab edges. • Interior Finishes - Replace carpets, amenity fitness room finishes, lobby, concierge, and amenity guest suite. Repaint corridor walls and ceilings as necessary. • Site Development - resetting of concrete paving and replacement of isolated sections. replacing corroded fasteners and paint touch-ups in aluminum fences and waterproofing membrane and tile replacement, on as needed basis. • Elevator -Major control modernization.
Studies	**Studies**
	• Update Depreciation Report • Miscellaneous Engineering Reviews • Electrical Systems- Perform infrared scan study and cleaning of electrical equipment

Prior to any major projects, a detailed review should be undertaken. This will help refine timing and budget.

For example, a pipe analysis will determine the actual condition of the pipes. Once this is done, the timing and budget of the replacement project can be adjusted to reflect the analysis findings.

Similarly, regular building envelope assessments will assist in prioritizing renewals as the life expectancies of those components approach. Windows for example, may be deferred well beyond their useful service life if it is known that they are not contributing to any damage to the wall assembly and owners are satisfied with their appearance and thermal performance.

Ultimately, every identified project should be reviewed by council. The council should act in the best interest of the corporation based on assumed risk and available funds.

Further, we note that while a number of large projects in the future may be shown to occur within a single year (due to the nature of assigning many of the service lives in general five-year increments), in reality major projects will be completed in discrete years. As the depreciation report is updated over time, and these projects become closer, slight timing adjustments can be made as necessary.

As renewal projects come up, the Strata Corporation will need to consider how they would like to complete the work and the various implementation strategies. Below is a discussion of some implementation strategies.

Targeted and Localized Renewals Projects

- Targeted and localized renewals projects are projects that are localized to a particular location of the building. This may be dependent on factors such as exposure and wear conditions. For example, only the failed balcony membranes may be renewed.

Phased Projects

- Phased projects are carried out in multiple stages compared to a single coordinated project. For example, the roofs could be replaced in phases. Phased projects could reduce financial burden by spreading costs over several years, however they cost more over the long term due to the mobilization and demobilization of the trades. For example, the balcony membranes on the north elevation could be renewed first and the remaining membranes on the south could be completed at a later year.

3. FINANCIAL ANALYSIS

Reserve fund contributions should be established by the Council. Three funding Scenarios are summarized below and detailed in Appendix D.

SUMMARY OF FUNDING SCENARIOS

Scenario 1

This Scenario shows contribution increases of 2% per year, including inflation, for 30 years, followed by increases due to inflation only thereafter. The Reserve Fund Balance remains positive over the next thirty years, with a minimum balance of approximately $310,907 in fiscal year 2026. For details, please see the 30 Year Reserve Fund Cash Flow Table for Scenario 1.

	2023	2024	2025	2026
Annual Reserve Contribution*	$30,000	$30,600	$31,212	$31,836
% Increase	n/a	2.0%	2.0%	2.0%
Average Increase per Unit	n/a	$2.38	$2.43	$2.48
Average Annual CRF Contribution per Unit	$119.05	$121.43	$123.86	$126.33

Scenario 2

This Scenario shows contribution increases of 20% per year, including inflation, for 24 years, followed by increases due to inflation only thereafter. Other contributions are included as required. The Reserve Fund Balance remains positive over the next thirty years, with a minimum balance of approximately $310,991 in fiscal year 2024. For details, please see the 30 Year Reserve Fund Cash Flow Table for Scenario 2.

	2023	2024	2025	2026
Annual Reserve Contribution*	$30,000	$36,000	$43,200	$51,840
% Increase	n/a	20.0%	20.0%	20.0%
Average Increase per Unit	n/a	$23.81	$28.57	$34.29
Average Annual CRF Contribution per Unit	$119.05	$142.86	$171.43	$205.71

Scenario 3

This Scenario shows contribution increases of 25% per year, including inflation, for 16 years, followed by increases due to inflation only thereafter. Other contributions are included as required. The Reserve Fund Balance remains positive over the next thirty years, with a minimum balance of approximately $308,356 in fiscal year 2026. For details, please see the 30 Year Reserve Fund Cash Flow Table for Scenario 3.

	2023	2024	2025	2026
Annual Reserve Contribution*	$30,000	$37,500	$46,875	$58,594
% Increase	n/a	25.0%	25.0%	25.0%
Average Increase per Unit	n/a	$29.76	$37.20	$46.50
Average Annual CRF Contribution per Unit	$119.05	$148.81	$186.01	$232.51

* Annual Reserve Contribution refers to the amount contributed each year to the reserve fund from the monthly common expenses.

** Total Other Contributions refers to other contributed amounts including special assessments or surplus funds transferred from other sources (i.e. operating budget or contingency fund).

Scenario 1 was selected to demonstrate the current situation, where the majority of expenditures will be funded by Other Contributions.

Scenario 2 demonstrates an option whereby funding comes more or less equally from the annual contributions and Other Contributions.

Scenario 3 attempts to minimize Other Contributions and augment the reserve so that the majority of expenditures are covered out of annual contributions.

We recommend you review this Depreciation Report with your accountants. They should confirm it meets the needs of your corporation and is in keeping with their accepted principles.

4. CLOSURE

This Depreciation Report presents three possible funding strategies. They all provide adequate funding to cover anticipated major repairs and renewals expected in the next 30 years. They are based on the information provided to us by Strata Plan BCS 1060 and our review of the site.

The Depreciation Report is a dynamic document that will change over time as repairs/renewals are completed and interest/inflation rates change. Note too, the Capital Plan's schedule for expenses do not represent a fixed schedule for expenditures. Expenditures may be required sooner or later than we have anticipated. Similarly, the opinions of probable cost can vary due to a number of reasons including changing market conditions, availability of newer materials and systems, and increased or decreased scope of work than we have identified. As such, regular updates to this Depreciation Report are necessary to re-assess the needs of your building. At a minimum, you are required to complete a Depreciation Update within three years of the date of this study.

Thank you for trusting Morrison Hershfield to complete this study. Please contact us at any time if you wish to update this study or to pursue the recommended investigations and/or capital projects. We would be pleased to provide a proposal to perform any of the additional investigations identified. We also provide full engineering design, tender, construction management and contract administration services for major repair or replacement projects required at your site and welcome the opportunity to provide Engineering services to assist you with these undertakings.

If you have any questions, please contact the undersigned.

Yours truly,

MORRISON HERSHFIELD LIMITED
EGBC Permit # 1001424

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
F.C. GONCALVES MARTINS de BARROS
55435

May 1, 2023

Diana Guerrero. MASc.
Building Science Consultant
Morrison Hershfield

Fred de Barros (P.Eng.) MASc.
Building Science Consultant
Morrison Hershfield

APPENDIX A: Building Data Sheet

BUILDING DATA SHEET

BUILDING NAME: BCS 1060, KATSURA AND SEQUOIA			
Address:	6233 Katsura Street & 9133 Hemlock Drive	**Constructed:**	2004
Units:	252	**Stories:**	16
Recreation Facilities:	Party room, swimming pool and exercise room	**Parking:**	3-levels

Building Description:

Katsura & Sequoia, built in 2004, include two 16-storey high-rise towers with 45 townhouse units and 207 residential units. Each tower is serviced by 2 elevators and common shared amenities include a party room, swimming pool and an exercise room. The complex is an exposed concrete and exterior insulated brick cladding installed in the townhouses and at the tower. Most units are provided with balconies that are waterproofed with liquid applied membrane. The glazing system consists of aluminum framed windows and window wall system. There is a landscaped podium over the parking garage. The system is a protected membrane roof (PMR) system.

Domestic cold water (DCW) is supplied to the buildings via one 8" ductile iron water line from the City of Richmond water main. Distribution DCW and DHW piping 2" and under is assumed to be PEX. The electrical service into the building is through a 12.5kV underground three-phase service from BC Hydro switch in the main electrical room The main electrical room also houses the central distribution panel, main transformer and many of the secondary distribution panels supplying the common areas.

The entire building is protected by means of a sprinkler system. This includes the interior of the suites, common areas and inside of electrical closets.

Common Property:	**Project History:**
• Structural systems • Parking garage • Exterior walls, all components up to the backside of the interior gypsum wallboard • Windows, and sliding doors • Roofing systems • Building common areas (lobbies, corridors, pool area, sauna, gym, service rooms) • Mechanical systems • Electrical systems • Elevators (2) • Common area landscaping	• 2013: Pool Deck and changing rooms renovation. • 2016: Mechanical hot water tank replacement.
Not part of this property (not covered in this document):	Sidewalks and lane on City of Richmond Property

APPENDIX B: Elevators

Elevator Design. Advice. Solutions.

Elevator Depreciation Report

BCS 1060 – Katsura & Sequoia
6233 Katsura Street & 9133 Hemlock Drive
Richmond, BC

Prepared for: Morrison Hershfield
Attention: Liam Bailey

Prepared by: KJA Consultants Inc.
750 West Pender – Suite 803
Vancouver, BC, V6C 2T7
www.kja.com
Justin Pellen, Senior Consultant | Field Specialist
Elevating Devices Mechanic, Class – A

Date of Inspection: November 25, 2022
233104 – V117128

1 Summary

On November 25, 2022, we performed a Depreciation Report inspection of the elevating devices located at 6233 Katsura Street & 9133 Hemlock Drive in Richmond, BC. The purpose of the inspection was to review the equipment condition and provide an estimate for required and recommended capital expenditure over the next 30 years. Please note that KJA did not inspect or test the safety features of the equipment as we are not the regulatory authority responsible for the enforcement of the applicable regulations governing the installation.

The equipment reviewed, and outlined in this report, consists of:

Group	Quantity	Type	Installed By, Year
6233 Katsura passenger elevators	2	Overhead gearless traction	Richmond, circa 2005
9133 Hemlock passenger elevators	2	Overhead gearless traction	Richmond, circa 2005
Amenities accessibility lift	1	Cantilever chain drive hydraulic	Savaria, circa 2005

Richmond elevator is currently maintaining the equipment under the terms of a typical "full-service" maintenance agreement. The periodic maintenance tasks (as required by Code) are not being regularly recorded as complete in the maintenance logbook. A summary of the logbook records is as follows, where the items in **bold** are overdue and need to be signed as complete:

Group	Periodic Tasks	Annual Tasks	Five-year Tasks
6233 Katsura passenger elevators	Completed monthly	Due in July 2023	Due in September 2023
9133 Hemlock passenger elevators	Completed monthly	Due in July 2023	Due in September 2023
Amenities accessibility lift	**No records found**		

The mechanical and electrical equipment in the machine room appears to be operating well with no undue vibrations or unusual noises noted.

2 Possible Upgrades and Concerns

2.1 Introduction

The typical "full-service" maintenance agreement covers the replacement of major components in addition to the labour and materials necessary for ongoing repairs, adjustment and preventative maintenance work. The only additional operating costs to the Owner should be for malicious damage and repairs to the elevator cabs and entrances. It is assumed that repairs due to accidents or “Acts of God” (flood, fire, etc.) are covered by insurance.

A summary of possible upgrades or concerns is as follows. We would suggest that money be set aside for the following upgrades that will likely be required (voluntary or otherwise) over the next 30 years.

The costs noted are indicative budget figures only, are based on the current market and are in present dollars. Costs do not include contingencies or soft costs. All work is presumed to be during regular hours and subject to a standard form of contract (ex: CCDC2). The actual costs may vary depending on the time of tendering, the actual detailed scope of work, scope of the contract, building specific requirements (such as work outside of regular hours or security clearances) and market conditions. The figures listed below do not include work required by other trades in conjunction with the work.

A summary of possible upgrades and concerns are identified in the table below.

Description	Car	Years 1 to 5	Years 6 to 15	Years 16 to 30
Required				
None noted				
Recommended				
Platform Lift Replacement	Amenities Lift		$50,000 - $80,000	
Hoist Machine Replacement	A – D	$600,000		
Major Control Modernization	A – D			
New Cab Finishes	A – D		$100,000	
Machine Room Cooling	A – D		$30,000	
* Barrier-free Access Upgrades	A – D	$26,000		
* Door Operator Replacement	A – D	$100,000		
* Hall Door Retainers	A – D	$33,600		
* Car Door Restrictor	A – D	$20,000		
* Hall Door Unlocking Device	A – D	$33,600		
* Machine Room Equipment Guarding	A – D	$60,000		
* Seismic Upgrades	A – D	$60,000		
Code Changes	All	$15,000	$30,000	$45,000
Vandalism	All	$10,000	$20,000	$30,000

* Items marked with an asterisk (*) would likely be included as part of a major control modernization but are identified separately should it be decided to proceed with individual upgrades independent from a major control modernization.

Required Short Term Work (Years 1 – 5): *None noted.*

Required Mid Term Work (Years 6 – 15): *None noted.*

Required Long Term Work (Years 16 – 30): *None noted.*

Recommended Short Term Work (Years 1 – 5):

Hoist Machine Replacement: A – D

This particular line of gearless hoist machines by manufacturer Leroy Somers are known to have specific problems that warrant giving consideration to short term proactive replacement. There has been a concerning number of incidents involving these machines where the machine brakes were unable to hold the load required by code, the machine bearings failed prematurely, machine shafts failed outright, and/or due to extremely aggressive design rope replacements are required unusually frequently. Additional maintenance is also required for these machines as per revised manufacturer recommendations, especially relating to lubrication of the bearings. We have also frequently witnessed these machines installed in applications that exceed the manufacturer's published design thresholds of the machine (in terms of speeds and/or loads).

As a result of these concerns, we would recommend proactive replacement of these machines in the short term. Although costs for this work would vary considerably, we would recommend a conservative budget figure of $150,000 per elevator to replace the machine, motor, drive unit and hoist ropes. The cost could be reduced if performed in conjunction with a major control modernization.

Barrier-Free Access Recommendations: A – D

The elevating equipment does not meet barrier-free access requirements, as listed in the Safety Code for Elevators (B44 Appendix E). It should be noted that it is not currently mandatory to modify existing buildings to comply with barrier-free access requirements, although in some provincial jurisdictions the building codes have incorporated this requirement for new buildings. It is also probable that this requirement will be enforced for new buildings in other jurisdictions throughout Canada. To conform, the following would need to be provided:

- In-car lanterns with dual-stroke gongs to announce elevator direction;
- A voice synthesizer for floor annunciation;

The cost for this work would be in the area of $6,500 per elevator. This work should be performed within the next one to two years. The cost for this would be included with a major control modernization.

Door Operator Replacement: A – D

The existing door operator has reached the end of its design lifespan and represents dated technology. We recommend replacement with a new closed-loop door operator. A closed-loop door operator would provide feedback on the position and speed of the elevator doors. This allows the door operator to automatically adapt to the environment in which the elevator

is operating, improving overall reliability. We recommend budgeting $25,000 per elevator car entrance for this work. This should be performed within the next two to five years. The cost for this would be included with a major control modernization.

Hall Door Retainer: A – D

The elevator hall doors are not provided with safety retainers. These safety devices are now required by code for new installations and prevent the hall doors from being pushed off the tracks and into the hoistway. While it is currently not mandatory to install hall door retainers on the elevator, some jurisdictions have made it mandatory to provide safety retainers on installations with particular door types. Whether mandated or not it is our opinion that the hall door retainers are a desirable safety measure. We recommend budgeting $8,400 per elevator to perform this work within the next one to two years. The cost for this would be included with a major control modernization.

Car Door Restrictor: A – D

There is currently no car door restrictor provided. The addition of a car door restrictor would prevent the car door from being manually opened by more than 100 mm, except when the car is within the unlocking zone (extending at least 17 mm above and below the landing floor level, and possibly as much as 450 mm). This safety device reduces the risk of people falling down the hoistway while attempting to exit a stalled elevator. The Safety Code for Elevators requires a car door restrictor on all new installations. While it is not mandatory on existing installations, we believe it is a desirable safety enhancement. It is also possible that this Code requirement will be made retroactive at some point in the future. We recommend budgeting in the area of $5,000 per elevator to perform this work within the next one to two years. The cost for this would be included with a major control modernization.

Hall Door Unlocking Device: A – D

Hoistway door unlocking devices are not currently provided at every floor served by the elevator. These devices provide a means to disengage the locking mechanism on hoistway doors and permit the opening of hoistway doors irrespective of the position of the car. In the event of an entrapment, this safety device would allow elevator and emergency personnel to easily access the hoistway at the landing in closest proximity to the stalled car and release passengers.

The Safety Code for Elevators requires new installations to be provided with hoistway door unlocking devices for each elevator at every landing where there is an entrance. While it is not mandatory on existing installations, we believe it is a valuable improvement and it may be made retroactive at some point in the future. In some Canadian jurisdictions the provision of unlocking devices at all floors is a retroactive requirement. We recommend budgeting in the

area of $8,400 per elevator to perform this work within the next one to two years. The cost for this would be included with a major control modernization.

Machine Room Equipment Guarding: A – D

There is a trend across Canada towards providing greater safety for workers on elevator equipment. The statutory requirements are as yet not well defined although the respective authorities often have a wide degree of latitude in the application of existing requirements to provide safe working environments.

It is expected that the requirements applicable to elevating devices might include machine room equipment guarding such as the protection of drive sheaves, machine brakes, commutators, selectors, governors and high voltage connections. We would expect that this work would be carried out by qualified, licenced elevator contractors.

While we cannot determine the timing or extent of future regulations or changes in enforcement of existing regulations, we do recommend budgeting for the provision of elevator machine room equipment guarding. A budget figure of $15,000 per elevator is recommended. The cost for this would be included with a major control modernization.

Seismic Upgrades: A – D

The elevating equipment is located in a region which would be affected by the ground motion from a Cascadian subduction event and is currently not provided with seismic devices. In the event of sufficient seismic activity some of the equipment may fail (e.g. the car guiding, hydraulic feed lines, etc.), possibly leading to an unsafe condition. The Safety Code for Elevators includes comprehensive seismic requirements for new installations and some provincial jurisdictions have mandated some of these requirements to be included as part of major alterations. These partial upgrades would include a counterweight displacement switch, seismic sensor, rope retainers, and car and counterweight guiding member position restraints. These upgrades would aid in restraining equipment during seismic activity, detect excessive vibrations in the building structure or displacement of the counterweight, and, if necessary, operate the elevator under an earthquake specific operation to allow passengers to safely exit at the next floor.

While these partial seismic upgrades are not retroactively required for this equipment, these are a requirement for any major alterations and included as part of comprehensive seismic requirements for new installations. These upgrades may possibly become retroactively enforced at some point in the future. The cost to provide these partial seismic upgrades would be in the area of $15,000 per elevator. We recommend performing these upgrades within the next two to three years. The cost for this would be included with a major control modernization.

Code Changes – All Elevators

Code requirements have become more onerous over the past decade and the interval between code changes has decreased. For that reason, we recommend budgeting funds at five year intervals to address code changes. Without being able to pinpoint these changes, it is reasonable to expect that they would require in the area of $3,000 per device every five years.

Vandalism – All Elevators

We recommend budgeting funds to repair vandalism – principally damage to exposed finishes and fixtures. No precise figure can be assigned since much depends on the location and environment but we suggest allowing a figure of $2,000 per unit every five years.

Recommended Mid Term Work (Years 6 – 15):

Platform Lift Replacement:

The platform lift is in acceptable condition: should the Owner choose to retain the unit for its intended purpose we would expect it to remain operational and reliable for an approximate lifetime of 15 to 30 years, depending on use. This type of device is often used, contrary to government regulations, for material transportation instead of the intended handicap use - this can substantially affect the life of the equipment. Due to the specialized nature of the platform lift, the entire unit would be replaced rather than modernized or upgraded. The estimated cost of the replacement would be in the range of $50,000 to $80,000.

Major Control Modernization: A – D

Although major capital investment cycles for elevators can vary significantly depending on original equipment type, usage patterns, quality of maintenance, regulatory changes and technological advancements, major life cycle replacements are typically recommended every 25-30 years. Given existing the type of machines and the vintage of this equipment, we would recommend planning for a major life cycle upgrade of the elevator in 5 to 8 years.

Should the option to replace the hoist machines and drives be chosen, we would expect the need for a modernization be expanded to 8 to 13 years. For budget purposes we suggest carrying $275,000 to $300,000 per elevator.

It is likely that at this point some of the mechanical components could be retained and refurbished (car sling, car platform, and guide rails for example), while the controller, drive, fixtures and finishes would likely be replaced. Major mechanical components such as machine, motor, brake, safety and door operator would either be refurbished or replaced. As the ultimate life cycle for elevator equipment can vary significantly, we strongly recommend

re-assessment of the elevators at least every few years to establish whether the planned life cycle upgrade needs to be accelerated or whether upgrades can be deferred.

New Cab Finishes: A – D

The existing cab finishes are in good condition. The cost to upgrade the cab finishes could range from $15,000 to $25,000 per elevator, depending on the finishes selected. We recommend using a figure of $25,000 per elevator. We suggest the cab upgrades be performed in the next five to ten years with the modernization. The cost could be reduced if performed in conjunction with a major control modernization.

Machine Room Cooling: A – D

Presently the only form of machine room cooling is a wall fan. Proper machine room cooling (air conditioning) should be provided prior to a major control modernization. This work would normally not be performed by the elevator contractor. The cost for this would be in the area of $15,000 per elevator machine room. The cost for this work should be confirmed by a mechanical engineer.

Recommended Long Term Work (Years 16 – 30): *None noted.*

3 Appendix A Equipment Description

6233 Katsura Passenger Elevators	
Number of elevators in group (designation):	2, (C, D)
Government installation numbers:	21260, 21261
Installed by, installation date:	Richmond, circa 2005
Service company:	Richmond
Capacity (pounds):	2500
Function:	Passenger
Floors served:	*G, 2, 3, 5 – 13, 15 - 18
Contract speed (feet per minute):	300
Car governor trip speed (fpm):	395
Drive method:	Overhead side mount traction
Controller type:	Virginia Controls
Drive type:	Unidrive SP
Machine type:	Leroy Somers Z6L gearless
Motor type:	Leroy Somers 12.1kW AC
Emergency brake:	Dual brake
Roping ratio / # and size of hoist ropes:	2:1/ 7 x 0.5”
Door type:	Single speed side opening
Door operator:	ECI 1000
Hall door interlocks:	GAL MO
Car door restrictor / Hall door retainers:	Not provided/ not provided
Door dimensions (W x H, inches):	42 x 84
Door protection:	Infrared multi-beam
Cab size (W x D, inches):	79 x 50
Cab height to suspended ceiling / car top (inches):	107/ 108
Car guide / counterweight guide:	Guide rollers/ guide rollers
Car station/type:	Main only/ applied
Position indicator (car/hall):	Digital/ digital at floor *G
Arrival and directional signals:	Single in-car lanterns
Communication:	Alarm bell and hands-free phone
Compensation/type:	Provided/ 1 x coated chain
Firefighters’ operation:	Phase I & II
Emergency power operation:	Provided
Security:	In-car proximity card reader and CCTV
Car top railings / equipment guarding:	Provided/ not provided
Machine room HVAC:	Wall fan
Seismic:	Not provided

9133 Hemlock Passenger Elevators	
Number of elevators in group (designation):	2, (A, B)
Government installation numbers:	21258, 21259
Installed by, installation date:	Richmond, circa 2005
Service company:	Richmond
Capacity (pounds):	2500
Function:	Passenger
Floors served:	*G, 2, 3, 5 – 13, 15 - 18
Contract speed (feet per minute):	300
Car governor trip speed (fpm):	395
Drive method:	Overhead side mount traction
Controller type:	Virginia Controls
Drive type:	Unidrive SP
Machine type:	Leroy Somers Z6L gearless
Motor type:	Leroy Somers 12.1kW AC
Emergency brake:	Dual brake
Roping ratio / # and size of hoist ropes:	2:1/ 7 x 0.5”
Door type:	Single speed side opening
Door operator:	ECI 1000
Hall door interlocks:	GAL MO
Car door restrictor / Hall door retainers:	Not provided/ not provided
Door dimensions (W x H, inches):	42 x 84
Door protection:	Infrared multi-beam
Cab size (W x D, inches):	79 x 50
Cab height to suspended ceiling / car top (inches):	107/ 108
Car guide / counterweight guide:	Guide rollers/ guide rollers
Car station/type:	Main only/ applied
Position indicator (car/hall):	Digital/ digital at floor *G
Arrival and directional signals:	Single in-car lanterns
Communication:	Alarm bell and hands-free phone
Compensation/type:	Provided/ 1 x coated chain
Firefighters’ operation:	Phase I & II
Emergency power operation:	Provided
Security:	In-car proximity card reader and CCTV
Car top railings / equipment guarding:	Provided/ not provided
Machine room HVAC:	Wall fan
Seismic:	Not provided

Amenities Accessibility Lift	
Number of elevators in group (designation):	1, (1)
Government installation numbers:	00022116
Installed by, installation date:	Savaria, circa 2005
Service company:	Savaria
Capacity (pounds):	750
Function:	Passenger
Floors served:	Gym, Pool
Contract speed (feet per minute):	30
Drive method:	Cantilever chain drive hydraulic
Controller type:	Savaria
Pumping unit type:	Savaria
Overspeed valve:	Not provided
Door type:	Automatic swing
Hall door interlocks:	GAL “N”
Door dimensions (W x H, inches):	36 x 80
Door protection:	Not provided
Cab size (W x D x H, inches):	34 x 53
Car guide:	Guide shoes
Car station/type:	Main only/ applied
Position indicator (car/hall):	Not provided/ not provided
Arrival and directional signals:	Not provided
Communication:	Alarm bell
Emergency power operation:	Not provided
Security:	Lockout key switch in-car and at all floors

4 Appendix C Photographs

Photo 1: Elevator hoist machine

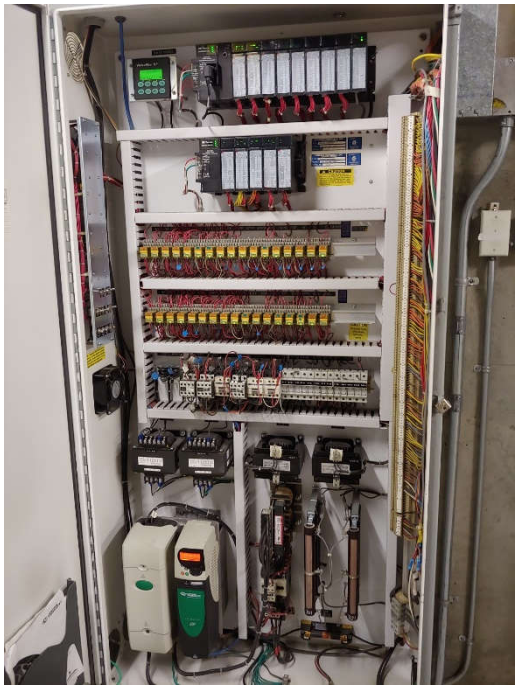


Photo 2: Elevator controller

Photo 3: Elevator car top

Photo 4: Elevator pit

Photo 5: Elevator cab interior

Photo 6: Elevator car operating panel

APPENDIX C: General Depreciation Report Information

DEPRECIATION REPORT GENERAL INFORMATION

Objectives

The objective of this study is to provide the Strata Council with sufficient information to enable you to:

a) Set up a schedule for the anticipated repair and replacement of common element items.

b) Set up a special account for major repair items and replacement of common elements and assets of the Corporation.

c) To determine the annual contributions necessary to maintain an adequate balance for the 30 year period of this study.

d) Satisfy the legislation regarding the *Strata Property Act 1999 with Amendments July 1, 2000 and December 13, 2011* that requires a depreciation report be completed.

Limitations and Assumptions

This report is intended for the sole use of Strata Plan BCS 1060, and must not be distributed or used by others without our knowledge (with the exception of disclosure to potential purchasers of BCS 1060). It is based on the documents and information provided to us and the findings at the time of our on-site investigation.

It is a basic assumption that any correspondence, material, data, evaluations and reports furnished by others are free of latent deficiencies or inaccuracies except for apparent variances discovered during the completion of this report.

Unless specifically noted in this report, no testing, verification of operation of systems, physical review of subsurface conditions or concealed systems and components, review of concealed elements, intrusive openings, opening of system components for internal inspection, detailed analysis or design calculations were conducted, nor were they within the scope of this review.

Some of the findings herein are based on a random sampling visual review of the surface conditions, discussions with the Strata Council and/or their designated representatives, and review of relevant documents. Observations were made only of those areas that were readily accessible during our review. Deficiencies existing but not recorded in this report were not apparent given the level of study undertaken. Components not included have not been reviewed, and if their conditions need to be known, further study will be required.

It is possible that unexpected conditions may be encountered at the building/facility that have not been explored within the scope of this report. Should such an event occur, MH should be notified in order that we may determine if modifications to our conclusions are necessary.

In issuing this report, MH does not assume any of the duties or liabilities of the designers, builders or owners of the subject property. Owners, prospective purchasers, tenants or others who use or rely on the contents of this report do so with the understanding as to the limitations of the documents reviewed and the general visual inspection undertaken, and understand that

MH cannot be held liable for damages they may suffer in respect to the purchase, ownership, or use of the subject property.

Professional judgment was exercised in gathering and analyzing the information obtained and in the formulation of the conclusions. Like all professional persons rendering advice, we do not act as insurers of the conclusions we reach, but we commit ourselves to care and competence in reaching those conclusions. No other warranties, either expressed or implied, are made.

Report Format

A description of the table contents and our approach to assigning ratings is described below:

COLUMN	DESCRIPTION
Component ID	The component number, as per the ASTM Uniformat II Classification for Building Elements (E1557-09)
Location / Type	Where appropriate, we have provided a location or other modifier as needed to assist in identifying the specific component is provided. This may refer to an elevation, floor number, room, or material type.
Description & History	A brief description of the component, deficiencies observed by MH (if any), and problems or previous repairs reported by site staff.
Condition Rating	We have also provided an overall condition rating for each component, as follows: Excellent — Functioning as intended; as new condition. Good — Functioning as intended; limited (if any) deterioration observed. Fair — Function and operation exhibiting wear or minor deterioration, normal maintenance frequency. Poor — Function and operation failing; significant deterioration and distress observed; increased maintenance attention has been required. NR — Not Reviewed –applicable to concealed systems, such as buried services, or where access was not provided to MH to review a component NA — Not Applicable – applicable to Studies/Reports/Surveys.

COLUMN	DESCRIPTION
Year of Acquisition	This is assigned based on available data from drawings or reports, readily accessible nameplate information on equipment, or interviews with site staff. Where the year is not known, MH provides an estimate based on observed condition. Year reflects the fiscal year in which the component was acquired, not necessarily the calendar year.
Recommendation	Our recommended approach for reserve fund budgeting.
Type	We have categorized the type of expense as follows: Renewal – Replace like with like (typically at end of service life), allowing for changing contemporary standards. Repair – For repairs, typically to extend the life of a component, restore functionality, or for partial replacements of isolated failures. Contingency – For repairs likely to be required where the timing and scope cannot be assessed without additional study; or where failure is unpredictable. Study – Further study is required to assign more accurate repair/replacement costs or timing for a Contingency item. Upgrade – Replace to a higher standard (more efficient, higher quality, etc). Our report may identify upgrades which we believe are worth exploring. In such cases, we have included 0% responsibility since we understand upgrades may not be funded out of the Reserve Fund, and the costs are not considered within the cash-flow. New – For new components added to the Depreciation Report, typically to reflect changing legislation.

COLUMN	DESCRIPTION
Priority	A Priority Rating is provided to each Recommendation to assist you with budgeting of expenses, and to assess where deferral of an expense may be appropriate. 1. Immediate: items that require immediate repair or replacement because of either a code deficiency, legislative requirement or a safety concern 2. Restore Functionality: items that currently show signs of failure, requiring repair or replacement to restore functionality in the near future. 3. Future Renewal: items that will require future repair or replacement to maintain functionality (life cycle replacement). Most Reserve Fund Expenses will fall under this category. 4. Discretionary Renewal: items where the timing, scope of work and phasing is at the owner's discretion. This is typically limited to cosmetic issues.
Age in Current Fiscal Year	The age at the time of the assessment. Where the exact age is unknown, MH provides an estimate based on observed condition.
Typical Lifecycle	Standard lifespan, assuming normal maintenance, based on our experience and manufacturer's recommendations. A piece of equipment may have a typical lifespan for complete replacement, as well as a typical lifespan for a recommended repair with a much shorter frequency. A lifecycle of 99 shows a one-time project.
Remaining Life Expectancy	Remaining life of component and/or time to the next major repairs. Based on Age subtracted from Typical Lifespan, but confirmed and adjusted as needed depending on observed condition. A negative value is used to show phased projects already partially complete.
Years Over Which Project is Phased	Normally projects are completed in one year. Larger projects may be phased over several consecutive years.
Percent Responsibility	Our understanding of the Corporation's responsibility for shared facilities. Most common elements are budgeted for at 100%, but any exceptions are noted in this column.

COLUMN	DESCRIPTION
Recommended Budget	This represents our opinion of probable cost, in current fiscal year dollars, including consulting services (design, tendering and construction review) and contingencies where we believe it is appropriate. The cost for these services can vary significantly depending on the size, scope and degree of complexity of the project. Applicable taxes are also included. Opinions of probable cost are provided only as an indication of possible cost of remedial work. The repair or replacement costs are based on published construction cost data, recent bid prices on similar work, information provided by the owner, and our professional judgment. More precise opinions of probable cost would require more detailed investigation to define the scope of work. The costs in this report are typically referred to as Class D estimates (±50%), defined by the Budget Guidelines for Consulting Engineering Services as: "A preliminary estimate which, due to little or no site information, indicates the approximate magnitude of cost of the proposed project, based on the client's broad requirements. This overall cost estimate may be derived from lump sum or unit costs for a similar project. It may be used in developing long term capital plans and for preliminary discussion of proposed capital projects." The opinions of probable cost we have presented can vary due to a number of reasons including changing market conditions, availability of newer materials and systems, and increased or decreased scope of work than we have identified. All opinions of probable cost assume that regular annual maintenance and repairs will be performed to all elements at the facility. We recommend that costs for consulting services, including design, tendering and construction review, be included in the reserve fund plan. The cost for these services can vary significantly depending on the size, scope and degree of complexity of the project. We have included a variable allowance for consulting fees and contingencies where we believe it is appropriate, and the 5 percent GST. All costs in the Condition Assessment and Capital Plan tables are identified in CURRENT FISCAL YEAR Canadian dollars.
Capital Plan	The tables show MH's opinion of the probable cost to carry out the recommendations (in current fiscal year dollars) during the planning horizon. The repairs and replacements we have forecasted do not represent a fixed schedule for replacements; repairs or replacements may be required sooner or later than we have anticipated.

The **Component Condition Assessment** and **Capital Plan Expenditure Forecast Table** in Appendices C and D show MH's opinion of the probable cost to carry out the recommendations (in current fiscal year dollars) during the depreciation planning period. The repairs and replacements we have forecasted do not represent a fixed schedule for replacements; repairs or replacements may be required sooner or later than we have anticipated.

Review of the Tables reveals several contingencies that occur in a single year of the study period. Though these repairs and replacements will not all take place in one year, and may not be required at all, it is prudent to budget for such repairs since failure of some components is unpredictable.

Financial Terms, Assumptions and Calculations

Inflation

The Government of Canada and the Bank of Canada inflation-control policy is aimed at keeping inflations at agreed to target values. At present the target range is 1 to 3 per cent, with the Bank's monetary policy aimed at keeping inflation at the 2 per cent target midpoint. This policy has continued to be renewed since implementation in 1991, and currently extends to December 31, 2021.

The total annual estimated expenditures are shown in the Capital Plan in current fiscal year dollars. The expenditures shown in the Cash Flow Table are inflated annually by the inflation percentage show.

In the startup questionnaire, MH requested confirmation of the inflation rate to be used over the course of the study. This may not be the actual current inflation rate, but is a reasonable estimate to begin the long term planning.

Interest

In the startup questionnaire, MH requested confirmation of the interest rate to be used over the course of the study. This may not be the actual rate of interest on the Corporation's current investments, but is a reasonable estimate to begin the long term planning.

The interest earned on the Reserve Fund for each year is based on a **Mid-Year Interest Calculation i**n accordance with generally accepted accounting practice. Over the 30-year period, the calculated interest is lower than calculating Simple Interest, therefore it is a more conservative method for calculating interest.

With the Mid-Year Interest Calculation, the interest earned on the Reserve Fund is calculated at the middle of the fiscal year assuming that half the expenses have been taken out of the Reserve Fund and half the annual contribution has been deposited into the Reserve Fund. Therefore, Interest is calculated as follows:

$$Interest = InterestRate \times (StartingBalance - \frac{Expenses}{2} + \frac{AnnualContribution}{2})$$

Starting Balance

MH requested information regarding the Reserve Fund balance at the start of the current fiscal year in the startup questionnaire. Where appropriate documents are provided, we confirm the opening balance against the financial statements. We assume the Strata Council confirms the starting balance is correct to the best of their knowledge prior to authorizing us to finalize the report.

Contributions

MH requested information regarding the present annual contribution to the Reserve Fund in the startup questionnaire. Where appropriate documents are provided, we confirm the contribution amount against the most recent Notice of Future Funding provided to the Owners. We assume the Strata Council confirms the current annual contribution is correct to the best of their knowledge prior to authorizing us to finalize the report.

Future annual contributions are calculated based on the estimates of life expectancy and opinions of probable cost, Minimum Reserve Fund Balance, and the assumptions for inflation and interest. Sample annual contributions that would result in an adequate Reserve Fund are indicated in the attached Cash Flow Scenarios.

When large expenses are anticipated in the near future and the existing Reserve Fund Balance is relatively low, increases to the annual contribution may not be sufficient. Increasing the annual contribution to an amount that can accommodate the major expenses is typically not considered a suitable funding plan since the Reserve Fund Balance often becomes relatively high for the remainder of the study period. Excess funds in a Reserve Fund cannot be used for any other purpose except for the major repairs and replacements for which they have been budgeted.

In such cases, Other Contributions are considered in the Cash-Flow Plan. These contributions can be in the form of special assessments or surplus funds that the Council has indicated will be available from other sources (i.e. transferred from operating budgets or contingency funds).

Minimum Reserve Fund Balance

MH requests information regarding the desired minimum balance in the startup questionnaire. We assume the Strata Council confirms the minimum balance of the approved scenario is acceptable even if it contradicts original directions provided in the completed questionnaire.

As a guideline, we recommend a minimum balance of 25% of the operating budget, as per Section 6.1 (a)(ii). (See below)

Requirements Under the Act

Contributions

The Annual Reserve Contribution for the first year of this study was provided by the Strata. Future annual contributions are calculated based on the estimates of life expectancy and opinions of probable cost, Minimum Reserve Fund Balance, and the assumptions for inflation and interest.

Contributions may be limited by the Strata Act as provided by Section 6.1, which indicates that the amount of the annual contribution to the contingency reserve fund must be determined as follows:

(a) if the amount of money in the contingency reserve fund at the end of any fiscal year after the first annual general meeting is less than 25% of the total annual budgeted for the contribution to the operating fund for the fiscal year that has just ended, the annual contribution to the contingency reserve fund for the current fiscal year must be at least the lesser of:

   i. 10% of the total amount budgeted for the contribution to the operating fund for the current fiscal year; and

   ii. The amount required to bring the contingency reserve fund to at least 25% of the total amount budgeted for the contribution to the operating fund for the current fiscal year.

(b) if the amount of money in the contingency reserve fund at the end of any fiscal year after the first annual general meeting is equal to or greater than 25% of the total annual budgeted for the contribution to the operating fund for the fiscal year that has just ended, additional contributions to the contingency reserve fund may be made as part of the annual budget approval process after consideration of the depreciation report, if any, obtained under section 94 of the Act.

Timing of Studies

The Depreciation Report is a dynamic document that will change over time as repairs/replacements are carried out on the common elements and interest/inflation rates change. The repairs and replacements we have forecasted do not represent a fixed schedule for replacements; repairs or replacements may be required sooner or later than we have anticipated. Similarly, the opinions of probable cost we have presented can vary due to a number of reasons including changing market conditions, availability of newer materials and systems, and increased or decreased scope of work than we have identified. As such, regular updates are necessary to re-assess your needs.

The Corporation is required to complete an update with site Inspection within three years of this study.

Glossary of Building Terms

The following is a list of terms and abbreviations which may have been used in the report produced for the noted project. All of the terms and abbreviations used are standard within the industry, but the glossary may be of some aid for those not familiar with construction terms.

Air Barrier:	An assembly of one or more materials, including joints, that prevents the continuous passage of air, and whatever it contains, between different environments under a difference of pressure.
Ampere (A):	The unit of measurement of electric current. The greater the amperage, the larger the size of the conductor required to carry the current.
Annunciator Panel:	A lighted panel that provides information about the location of an activated fire alarm in a building, typically located near the main entrance of a building.
Backflow Preventer:	A device used in plumbing systems to prevent potentially contaminated water from moving back into the clean water supply.
Bitumen:	The term covering numerous mixtures of hydrocarbons such as those found in asphalt and mineral pitch.
Built-Up Roof:	Waterproof membrane constructed of multiple felt layers mopped down with bitumen.
Caulking:	Material with widely different chemical compositions used to make a seam or joint air-tight or watertight.
CCTV:	Closed Circuit Television, a video camera system that transmits video images to specific monitors as opposed to broadcasting the signal over air waves. Typically used in security applications.
CFM	Cubic feet per minute, the common unit of air flow measurement.
Cladding:	Any material that covers an interior or exterior wall.
Control Joint:	Also Movement Joint, a continuous joint in a structure or element, used to regulate the amount of cracking and separation resulting from relative movement.
Condenser:	A device used to remove heat from refrigerating equipment by circulating hot refrigerant gas through coils in the unit and blowing outdoor air across the coils with a fan. Cooling the gas causes it to condense back into a liquid.
Cooling Tower:	A device used to cool condenser water in a chiller by evaporation. Condenser water is sprayed into the top of the cooling tower. The droplets fall through the tower as air is blown upward through the tower, partly evaporating the droplets, which cools the remaining water. Water leaving the cooling tower is typically 10 degrees cooler than when it entered.
Delamination:	A separation along a plane parallel to a surface.
Direct expansion:	A refrigeration method in which an air cooling coil contains refrigerant rather than a secondary coolant glycol or brine.

Drip Edge:	A projection detailed to direct water run-off away from the wall or window face below.
Efflorescence:	Deposits of salt, usually white, due to the migration of salt-laden (in solution) water through concrete or masonry units.
EPDM:	Synthetic rubber membrane usually applied in single-ply applications.
Exhaust Air:	Air mechanically removed from a building to reduce the concentration of moisture, cooking odours and other contaminants from the building.
Fan Coil Unit:	A device consisting of a fan and water coil that can heat an area by circulating hot water through the coil and cool by circulating chilled water through the coil.
Fire Detector:	A fire alarm system component which senses the presence of a possible fire through the presence of smoke particles or heat (i.e. smoke detector, heat detector).
Flashing:	A thin waterproof sheet material, flexible or rigid, used to direct water out of, or away from, the structure.
Glazing:	A generic term for the transparent, or sometimes translucent, material in a window or door. Often, but not always, glass.
Glazing Bead:	A molding or stop around the inside of a frame to hold the glass in place.
Glazing Unit:	That part of a window which includes more than one glazing layer sealed around the outside edge to prevent air or moisture from entering the airspace and eliminating dirt and condensation between glazings.
Heat Exchanger:	A device used to heat a fluid or gas with another fluid or gas without the two streams coming in direct contact with each other and mixing. For example a radiator heats air using hot water. The air and water circulate through the heat exchanger (the radiator) but are prevented from coming in contact with each other by the radiator.
Heat Pump:	A mechanical device designed to provide both winter heating and summer cooling.
HID:	High Intensity Discharge, a generic term for mercury, vapour, metal halide and high pressure sodium light fixtures. Light in these fixtures is produces by an electric arc between two electrodes.
House Panelboard:	A panelboard which supplies power to common area loads
Hydronic Heating:	A means of heating a space through the use of hot water circulated through heating coils or a radiator in the space
Initiating Device:	A fire alarm system component which initiates a fire alarm (i.e. pull station).
Inverted Roof:	Where the roof membrane is located below the insulation and ballast (also Protected Membrane Roof).
Joist:	One of several parallel, horizontal and relatively closely spaced concrete, wood or steel members directly supporting a floor or roof slab or deck.
kVA:	Kilo-Volt-Ampere, the unit used to measure apparent power. This is what is charged by the utility.

kW:	Kilowatt, the unit used to measure real power. This is power that is actually used by the customer.
Lintel:	A horizontal structural support above an opening in a wall.
Makeup Air:	Fresh, outdoor air that is mechanically introduced to a building to make up for the air removed from buildings by exhaust systems.
Panelboard:	A component of an electrical distribution system which divides an electrical power feed into subsidiary circuits, while providing a protective fuse or circuit breaker for each circuit all contained in a common enclosure.
Refractory:	A ceramic insulating material used in boilers and similar equipment because it can withstand very high temperatures.
Retaining Wall:	A wall constructed to hold back earth, water or other backfill.
Riser:	Pipes or ductwork used to transport water, effluent, air or service cables vertically through a multi-storey building for distribution of services.
Roof Structural Deck:	An elevated platform consisting of a variety of materials such as wood planks or metal pans, often supported by structural joists, beams and columns made of steel or wood, all structurally designed to support loads such as a roofing system.
Scaling:	A degradation of the surface of a concrete element, consisting of local flaking or peeling away of the near-to-surface sand and cement portion of hardened concrete or mortar.
Sealant:	A flexible material used on the inside (or outside) of a building to seal gaps in the building envelope in order to prevent uncontrolled air infiltration and exfiltration.
Sealed Units:	Two pieces (lites) of glass sealed around the perimeter, increasing the thermal resistance of the window.
Shear Wall:	A wall that resists horizontal forces applied in the plane of the wall, usually due to wind or seismic effects (also Flexural Wall).
Signaling Device:	A fire alarm system component which visually or audibly alarms (i.e. bell, strobe).
Slab-on-Grade:	A concrete floor slab placed directly on compacted fill and deriving its support from this fill (also Slab-on-Ground).
Spall:	A fragment of concrete or masonry detached from a larger mass by a blow, weather action, internal pressure, or efflorescence within the mass (sub flourescence).
Stucco:	A finish consisting of cement plaster, used for coating exterior building surfaces.
Switchboard:	A board or panel equipped with apparatus for controlling the operation of a system of electric circuits.
Terminal Board:	An insulating base on which terminals for wires or cables have been mounted
Thermographic Scanning:	Also known as infra-red scanning. A photograph that detects hot spots of electrical equipment or temperature differences at building surfaces.

Tuckpointing: Also Repointing, the process of removing deteriorated mortar from the joints of masonry and replacing it with new mortar.

Uninterruptible Power Supply: A power electronic device primarily used as a back-up power source for computers and computer networks to ensure on-going operation in the event of a power failure. Sophisticated units also have power conditioning and power monitoring features.

Vapour Barrier: A material or combination of materials having a high resistance to water vapour diffusion, used to separate a high water vapour pressure environment from a low water vapour pressure environment.

Vent: An opening placed in a facing wall or window assembly to promote circulation of air within a cavity behind the facing, usually to encourage drying of the cavity and/or to moderate the pressure across the facing.

Volt (V): A unit of potential energy equal to the potential difference between two points on a conductor carrying a current of 1 ampere.

VRLA Valve Regulated Lead-Acid, low maintenance batteries which use much less battery acid than traditional lead-acid batteries typically used in UPS applications.

Weather-strip A strip of material placed around an operating window or door to reduce air leaks.

Weephole: An opening placed in a wall or window assembly to permit the escape of liquid water from within the assembly. Weepholes can also act as vents.

Weeping Tiles: Drainage pipes placed at the base of foundation walls.

Window: A manufactured assembly of a frame, sash, glazing and necessary hardware, made to fit an opening in a wall.

- *Window sill*: horizontal member at the base of a window opening
- *Window head*: horizontal member at the top of a window opening
- *Window jamb*: either of the vertical members at the sides of a window opening
- *Mullion*: vertical member between glazed units
- *Rail:* horizontal member between glazed units
- *Glazing:* The glass portion of the window
- *IGU:* Insulated glazing unit. Double or triple panes of glass sealed together to provide insulation value. The still gas between the panes acts as the insulation.
- *Condensation track*: a channel at the interior sill level of the window intended to intercept small amounts of water condensing on the interior surface of the glass.

Appendix D: Funding Scenarios

30 Year Reserve Fund Cash Flow Table
Scenario 1 - Final - May 2023
Current Contribution (Fully Funded by Other Contributions)

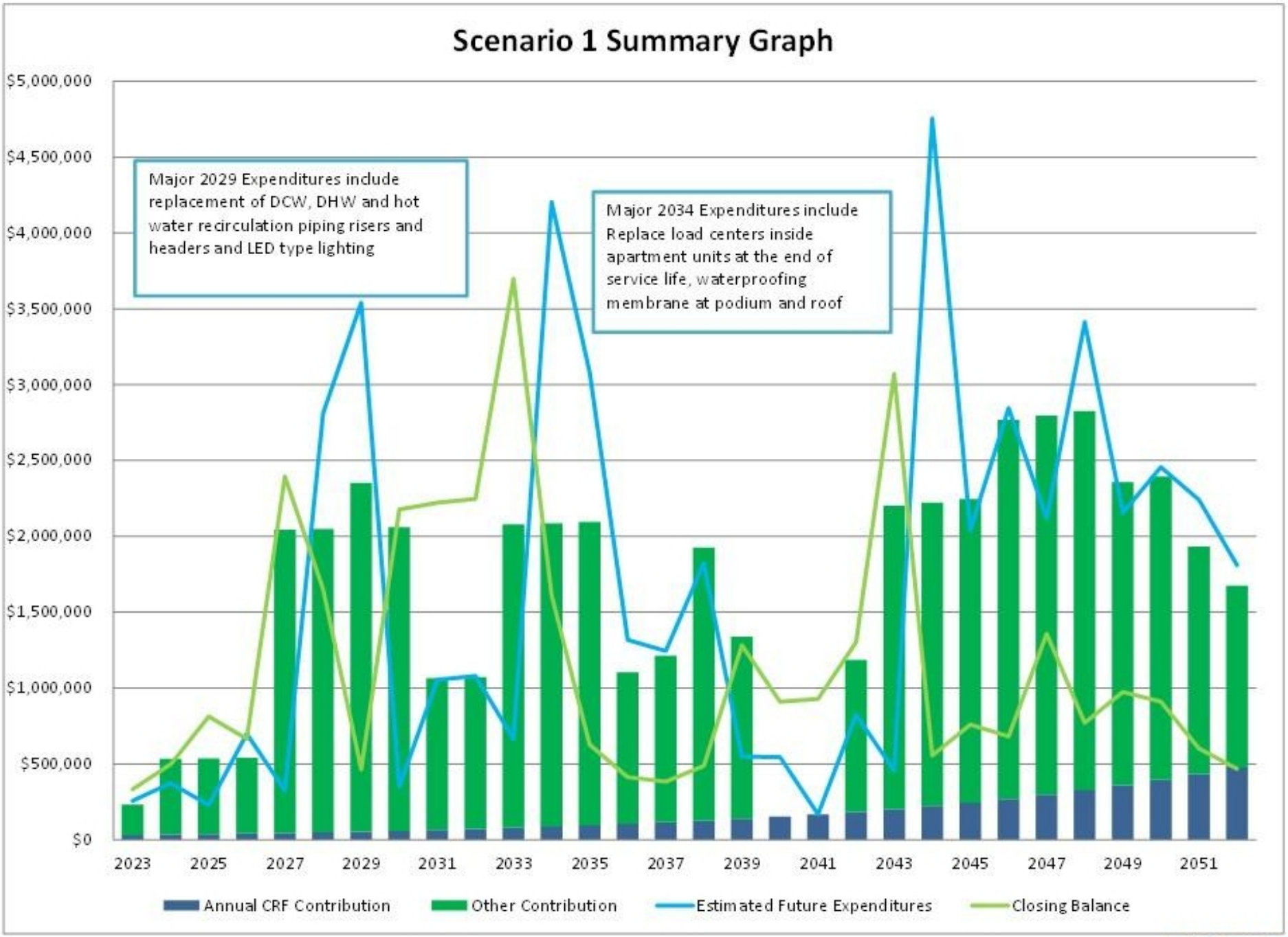
Assumed Interest Rate	2.0%
Assumed Inflation Rate	2.0%
Reserve Fund Balance at Start of 2023 Fiscal Year	$355,016
Present Annual Contribution to the Reserve Fund	$30,000
Minimum Reserve Fund Balance	$332,846

Year Ending In	Opening Balance	Annual CRF Contribution *	Percent Increase over Previous Year	Other Contribution **	Estimated Future Inflated Expenditures ***	Projected Interest Earned	Closing Balance	Average Annual CRF Contribution Per Unit
2023	$355,016	$30,000		$200,000	$257,000	$4,830	$332,846	$913
2024	$332,846	$33,000	10.0%	$500,000	$372,300	$3,264	$496,810	$2,115
2025	$496,810	$36,300	10.0%	$500,000	$228,888	$8,010	$812,233	$2,128
2026	$812,233	$39,930	10.0%	$500,000	$697,567	$9,668	$664,264	$2,143
2027	$664,264	$43,923	10.0%	$2,000,000	$324,008	$10,484	$2,394,663	$8,111
2028	$2,394,663	$48,315	10.0%	$2,000,000	$2,812,793	$20,248	$1,650,434	$8,128
2029	$1,650,434	$53,147	10.0%	$2,300,000	$3,540,992	$0	$462,588	$9,338
2030	$462,588	$58,462	10.0%	$2,000,000	$350,694	$6,329	$2,176,685	$8,168
2031	$2,176,685	$64,308	10.0%	$1,000,000	$1,053,673	$33,640	$2,220,960	$4,223
2032	$2,220,960	$70,738	10.0%	$1,000,000	$1,079,527	$34,331	$2,246,502	$4,249
2033	$2,246,502	$77,812	10.0%	$2,000,000	$664,718	$39,061	$3,698,658	$8,245
2034	$3,698,658	$85,594	10.0%	$2,000,000	$4,205,154	$32,778	$1,611,875	$8,276
2035	$1,611,875	$94,153	10.0%	$2,000,000	$3,081,891	$2,360	$626,497	$8,310
2036	$626,497	$103,568	10.0%	$1,000,000	$1,317,603	$390	$412,851	$4,379
2037	$412,851	$113,925	10.0%	$1,100,000	$1,243,675	$0	$383,102	$4,817
2038	$383,102	$125,317	10.0%	$1,800,000	$1,822,306	$0	$486,113	$7,640
2039	$486,113	$137,849	10.0%	$1,200,000	$547,741	$5,623	$1,281,844	$5,309
2040	$1,281,844	$151,634	10.0%		$544,694	$21,706	$910,491	$602
2041	$910,491	$166,798	10.0%		$167,105	$18,207	$928,390	$662
2042	$928,390	$183,477	10.0%	$1,000,000	$821,642	$12,186	$1,302,412	$4,696
2043	$1,302,412	$201,825	10.0%	$2,000,000	$456,186	$23,505	$3,071,556	$8,737
2044	$3,071,556	$222,007	10.0%	$2,000,000	$4,755,024	$16,101	$554,640	$8,817
2045	$554,640	$244,208	10.0%	$2,000,000	$2,041,080	$0	$757,769	$8,906
2046	$757,769	$268,629	10.0%	$2,500,000	$2,845,646	$0	$680,752	$10,987
2047	$680,752	$295,492	10.0%	$2,500,000	$2,118,714	$0	$1,357,530	$11,093
2048	$1,357,530	$325,041	10.0%	$2,500,000	$3,412,871	$0	$769,700	$11,210
2049	$769,700	$357,545	10.0%	$2,000,000	$2,154,107	$0	$973,138	$9,355
2050	$973,138	$393,300	10.0%	$2,000,000	$2,456,636	$0	$909,802	$9,497
2051	$909,802	$432,630	10.0%	$1,500,000	$2,241,133	$111	$601,409	$7,669
2052	$601,409	$475,893	10.0%	$1,200,000	$1,809,586	$0	$467,716	$6,650
	TOTALS	$4,934,821		$44,300,000	$49,424,954			

* The term "annual contribution" refers to the amount contributed each year to the reserve fund from the monthly expenses.

** Total Other Contributions refers to other contributed amounts including special assessments or surplus funds transferred from other sources (i.e. operating budget or contingency fund).

*** Expenditures are presented as future dollars (based on 2% inflation), and are considered Class D estimates (+/-50%).


Scenario 1 Summary Graph
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Major 2029 Expenditures include replacement of DCW, DHW and hot water recirculation piping risers and headers and LED type lighting
Major 2034 Expenditures include Replace load centers inside apartment units at the end of service life, waterproofing membrane at podium and roof
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Annual CRF Contribution
Other Contribution
Estimated Future Expenditures
Closing Balance

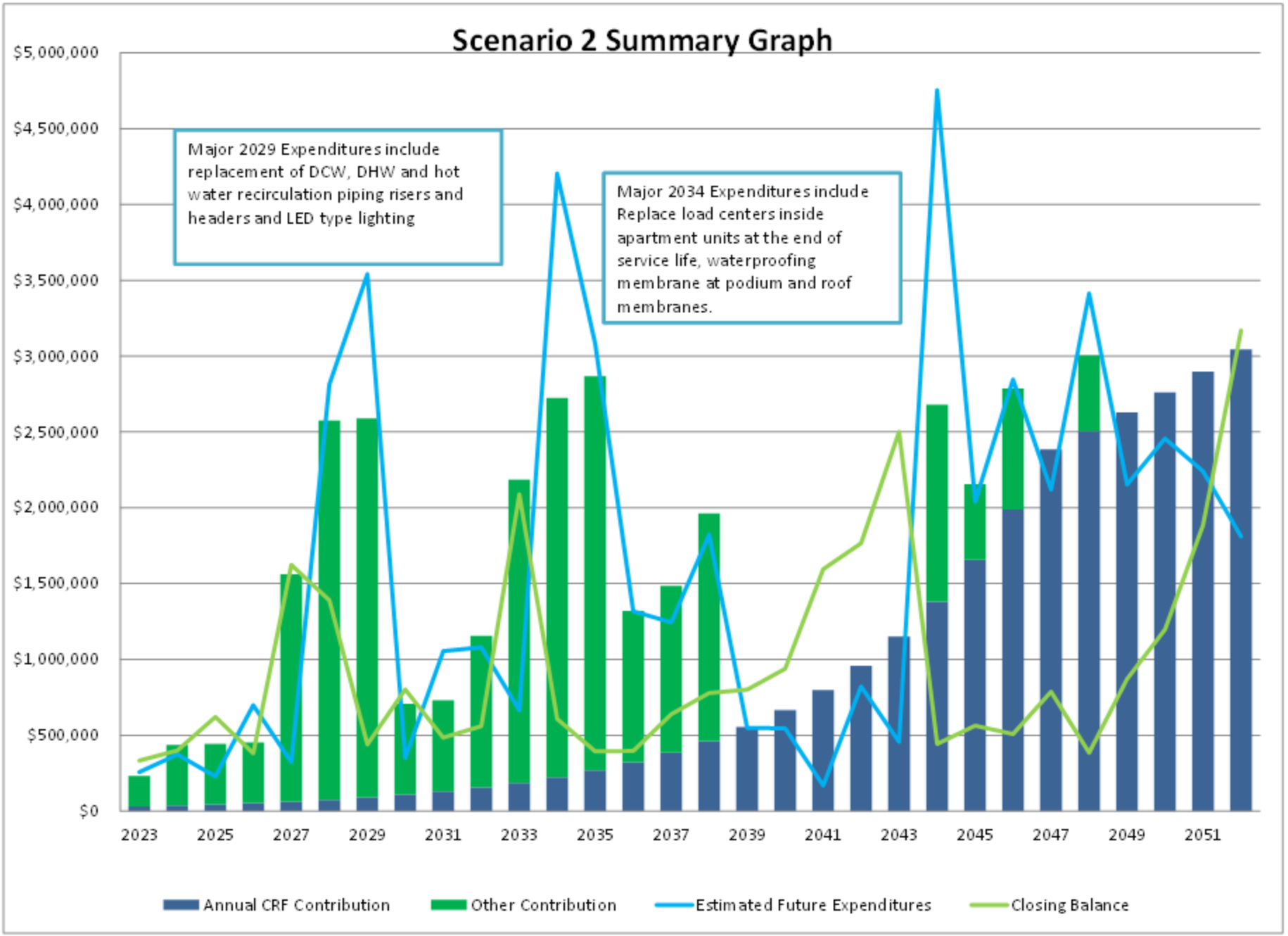
30 Year Reserve Fund Cash Flow Table
Scenario 2 - Final - May 2023
Aggressive Contribution Increase + Other Contributions as Required

Assumed Interest Rate	2.0%
Assumed Inflation Rate	2.0%
Reserve Fund Balance at Start of 2023 Fiscal Year	$355,016
Present Annual Contribution to the Reserve Fund	$30,000
Minimum Reserve Fund Balance	$332,846

Year Ending In	Opening Balance	Annual CRF Contribution*	Percent Increase over Previous Year	Other Contribution **	Estimated Future Inflated Expenditures ***	Projected Interest Earned	Closing Balance	Average Annual CRF Contribution Per Unit
2023	$355,016	$30,000		$200,000	$257,000	$4,830	$332,846	$913
2024	$332,846	$36,000	20.0%	$400,000	$372,300	$3,294	$399,840	$1,730
2025	$399,840	$43,200	20.0%	$400,000	$228,888	$6,140	$620,292	$1,759
2026	$620,292	$51,840	20.0%	$400,000	$697,567	$5,949	$380,513	$1,793
2027	$380,513	$62,208	20.0%	$1,500,000	$324,008	$4,992	$1,623,706	$6,199
2028	$1,623,706	$74,650	20.0%	$2,500,000	$2,812,793	$5,093	$1,390,655	$10,217
2029	$1,390,655	$89,580	20.0%	$2,500,000	$3,540,992	$0	$439,242	$10,276
2030	$439,242	$107,495	20.0%	$600,000	$350,694	$6,353	$802,396	$2,808
2031	$802,396	$128,995	20.0%	$600,000	$1,053,673	$6,801	$484,519	$2,893
2032	$484,519	$154,793	20.0%	$1,000,000	$1,079,527	$443	$560,228	$4,583
2033	$560,228	$185,752	20.0%	$2,000,000	$664,718	$6,415	$2,087,677	$8,674
2034	$2,087,677	$222,903	20.0%	$2,500,000	$4,205,154	$1,931	$607,357	$10,805
2035	$607,357	$267,483	20.0%	$2,600,000	$3,081,891	$0	$392,949	$11,379
2036	$392,949	$320,980	20.0%	$1,000,000	$1,317,603	$0	$396,326	$5,242
2037	$396,326	$385,176	20.0%	$1,100,000	$1,243,675	$0	$637,826	$5,894
2038	$637,826	$462,211	20.0%	$1,500,000	$1,822,306	$0	$777,731	$7,787
2039	$777,731	$554,653	20.0%		$547,741	$15,624	$800,266	$2,201
2040	$800,266	$665,583	20.0%		$544,694	$17,214	$938,370	$2,641
2041	$938,370	$798,700	20.0%		$167,105	$25,083	$1,595,049	$3,169
2042	$1,595,049	$958,440	20.0%		$821,642	$33,269	$1,765,116	$3,803
2043	$1,765,116	$1,150,128	20.0%		$456,186	$42,242	$2,501,300	$4,564
2044	$2,501,300	$1,380,154	20.0%	$1,300,000	$4,755,024	$16,277	$442,706	$10,636
2045	$442,706	$1,656,184	20.0%	$500,000	$2,041,080	$5,005	$562,816	$8,556
2046	$562,816	$1,987,421	20.0%	$800,000	$2,845,646	$2,674	$507,265	$11,061
2047	$507,265	$2,384,905	20.0%		$2,118,714	$12,807	$786,264	$9,464
2048	$786,264	$2,504,151	5.0%	$500,000	$3,412,871	$6,638	$384,182	$11,921
2049	$384,182	$2,629,358	5.0%		$2,154,107	$12,436	$871,869	$10,434
2050	$871,869	$2,760,826	5.0%		$2,456,636	$20,479	$1,196,538	$10,956
2051	$1,196,538	$2,898,867	5.0%		$2,241,133	$30,508	$1,884,780	$11,503
2052	$1,884,780	$3,043,811	5.0%		$1,809,586	$50,038	$3,169,043	$12,079
	TOTALS	$27,996,446		$23,900,000	$49,424,954			

* The term "annual contribution" refers to the amount contributed each year to the reserve fund from the monthly expenses.
** Total Other Contributions refers to other contributed amounts including special assessments or surplus funds transferred from other sources (i.e. operating budget or contingency fund).

*** Expenditures are presented as future dollars (based on 2% inflation), and are considered Class D estimates (+/-50%)


Scenario 2 Summary Graph
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Major 2029 Expenditures include replacement of DCW, DHW and hot water recirculation piping risers and headers and LED type lighting
Major 2034 Expenditures include Replace load centers inside apartment units at the end of service life, waterproofing membrane at podium and roof membranes.
Annual CRF Contribution
Other Contribution
Estimated Future Expenditures
Closing Balance

30 Year Reserve Fund Cash Flow Table
Scenario 3 - Final - May 2023
Gradual Contribution Increase + Other Contributions as Required

Assumed Interest Rate	2.0%
Assumed Inflation Rate	2.0%
Reserve Fund Balance at Start of 2023 Fiscal Year	$355,106
Present Annual Contribution to the Reserve Fund	$30,000
Minimum Reserve Fund Balance	$327,645

Year Ending In	Opening Balance	Annual CRF Contribution *	Percent Increase over Previous Year	Other Contribution **	Estimated Future Inflated Expenditures ***	Projected Interest Earned	Closing Balance	Average Annual CRF Contribution Per Unit
2023	$355,106	$30,000		$200,000	$257,000	$4,832	$332,938	$913
2024	$332,938	$37,500	25.0%	$500,000	$372,300	$3,311	$501,449	$2,133
2025	$501,449	$46,875	25.0%		$228,888	$8,209	$327,645	$186
2026	$327,645	$58,594	25.0%	$800,000	$697,567	$163	$488,834	$3,407
2027	$488,834	$73,242	25.0%	$1,500,000	$324,008	$7,269	$1,745,337	$6,243
2028	$1,745,337	$91,553	25.0%	$2,500,000	$2,812,793	$7,694	$1,531,792	$10,284
2029	$1,531,792	$114,441	25.0%	$2,500,000	$3,540,992	$0	$605,240	$10,375
2030	$605,240	$143,051	25.0%		$350,694	$10,028	$407,626	$568
2031	$407,626	$178,814	25.0%	$1,000,000	$1,053,673	$0	$532,766	$4,678
2032	$532,766	$223,517	25.0%	$1,000,000	$1,079,527	$2,095	$678,852	$4,855
2033	$678,852	$279,397	25.0%	$1,500,000	$664,718	$9,724	$1,803,255	$7,061
2034	$1,803,255	$349,246	25.0%	$2,500,000	$4,205,154	$0	$447,347	$11,307
2035	$447,347	$436,557	25.0%	$2,600,000	$3,081,891	$0	$402,013	$12,050
2036	$402,013	$545,697	25.0%	$1,000,000	$1,317,603	$321	$630,428	$6,134
2037	$630,428	$682,121	25.0%	$1,000,000	$1,243,675	$6,993	$1,075,868	$6,675
2038	$1,075,868	$852,651	25.0%	$400,000	$1,822,306	$11,821	$518,034	$4,971
2039	$518,034	$1,065,814	25.0%		$547,741	$15,541	$1,051,648	$4,229
2040	$1,051,648	$1,172,396	10.0%		$544,694	$27,310	$1,706,659	$4,652
2041	$1,706,659	$1,289,635	10.0%		$167,105	$45,358	$2,874,548	$5,118
2042	$2,874,548	$1,418,599	10.0%		$821,642	$63,461	$3,534,966	$5,629
2043	$3,534,966	$1,560,458	10.0%		$456,186	$81,742	$4,720,980	$6,192
2044	$4,720,980	$1,716,504	10.0%		$4,755,024	$64,034	$1,746,495	$6,812
2045	$1,746,495	$1,888,155	10.0%		$2,041,080	$33,401	$1,626,971	$7,493
2046	$1,626,971	$2,076,970	10.0%		$2,845,646	$24,853	$883,147	$8,242
2047	$883,147	$2,284,667	10.0%		$2,118,714	$19,322	$1,068,423	$9,066
2048	$1,068,423	$2,513,134	10.0%	$200,000	$3,412,871	$12,371	$381,057	$10,766
2049	$381,057	$2,764,447	10.0%		$2,154,107	$13,725	$1,005,122	$10,970
2050	$1,005,122	$3,040,892	10.0%		$2,456,636	$25,945	$1,615,322	$12,067
2051	$1,615,322	$3,344,981	10.0%		$2,241,133	$43,345	$2,762,515	$13,274
2052	$2,762,515	$3,679,479	10.0%		$1,809,586	$73,949	$4,706,358	$14,601
	TOTALS	$33,959,388		$19,200,000	$49,424,954			

* The term "annual contribution" refers to the amount contributed each year to the reserve fund from the monthly expenses.
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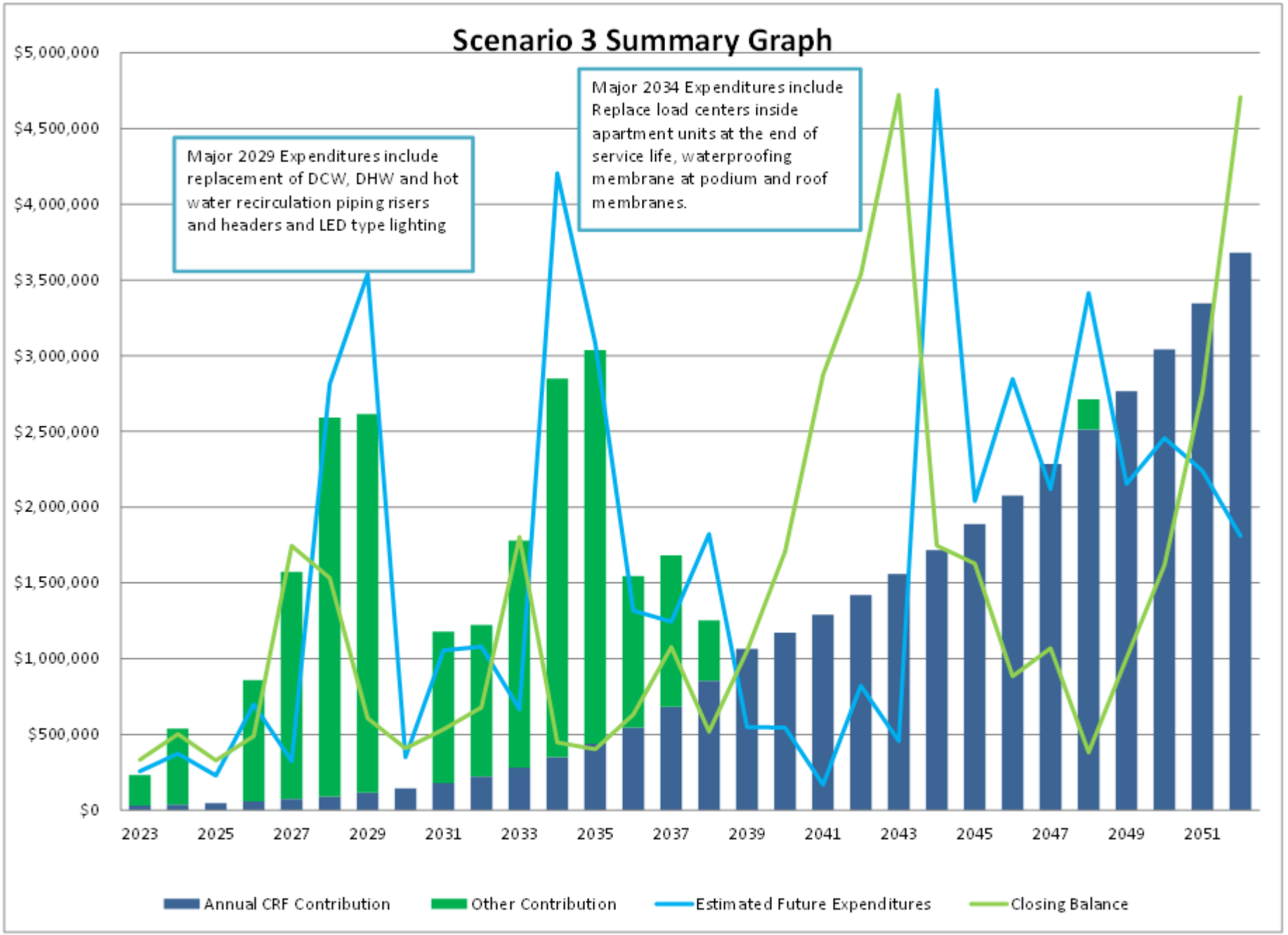
Scenario 3 Summary Graph
Major 2029 Expenditures include replacement of DCW, DHW and hot water recirculation piping risers and headers and LED type lighting
Major 2034 Expenditures include Replace load centers inside apartment units at the end of service life, waterproofing membrane at podium and roof membranes.
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Annual CRF Contribution
Other Contribution
Estimated Future Expenditures
Closing Balance

Summary of Funding Scenarios
Final - May 2023

Current Fiscal Year 2023
from April 1, 2022 to March 31, 2023

Number of Units
252

Operating Budget	$1,210,742
Minimum Balance	$302,685

Scenario 1

This Scenario shows contribution increases of 10% per year, including inflation, for 30 years, followed by increases due to inflation only thereafter. The Reserve Fund Balance remains positive over the next thirty years, with a minimum balance of approximately $332,846 in fiscal year 2023. For details, please see the 30 Year Reserve Fund Cash Flow Table for Scenario 1.

	2023	2024	2025	2026
Annual Reserve Contribution*	$30,000	$33,000	$36,300	$39,930
% Increase	n/a	10.0%	10.0%	10.0%
Average Increase per Unit	n/a	$11.90	$13.10	$14.40
Average Annual CRF Contribution per Unit	$119.05	$130.95	$144.05	$158.45

Scenario 2

This Scenario shows contribution increases of 20% per year, including inflation, for 24 years, followed by increases due to inflation only thereafter. Other contributions are included as required. The Reserve Fund Balance remains positive over the next thirty years, with a minimum balance of approximately $332,846 in fiscal year 2023. For details, please see the 30 Year Reserve Fund Cash Flow Table for Scenario 2.

	2023	2024	2025	2026
Annual Reserve Contribution*	$30,000	$36,000	$43,200	$51,840
% Increase	n/a	20.0%	20.0%	20.0%
Average Increase per Unit	n/a	$23.81	$28.57	$34.29
Average Annual CRF Contribution per Unit	$119.05	$142.86	$171.43	$205.71

Scenario 3

This Scenario shows contribution increases of 25% per year, including inflation, for 16 years, followed by increases due to inflation only thereafter. Other contributions are included as required. The Reserve Fund Balance remains positive over the next thirty years, with a minimum balance of approximately $327,645 in fiscal year 2025. For details, please see the 30 Year Reserve Fund Cash Flow Table for Scenario 3.

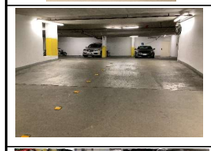
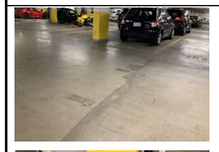
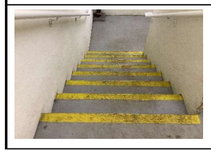
	2023	2024	2025	2026
Annual Reserve Contribution*	$30,000	$37,500	$46,875	$58,594
% Increase	n/a	25.0%	25.0%	25.0%
Average Increase per Unit	n/a	$29.76	$37.20	$46.50
Average Annual CRF Contribution per Unit	$119.05	$148.81	$186.01	$232.51

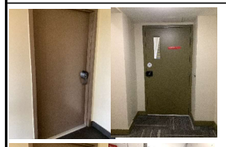
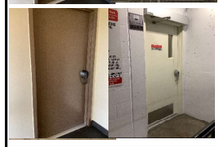
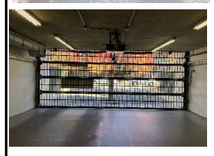
*Annual Reserve Contribution refers to the amount contributed each year to the reserve fund from the monthly common expenses.
** Total Other Contributions refers to other contributed amounts including special assessments or surplus funds transferred from other sources (i.e. operating budget or contingency fund).

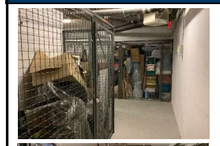
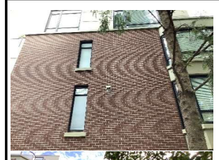
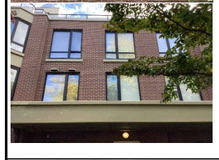
Appendix E: Condition Assessment and Capital Plan

Depreciation Report
Katsura and Sequoia - 6233 Katsura Street & 9133 Hemlock Drive, Richmond BC
Final - May 2023

Priority Ratings:

PHOTOS	COMPONENT			CONDITION ASSESSMENT			RECOMMENDATION			LIFECYCLE DATA				BUDGET		
PHOTOS	LABEL	COMPONENTS	LOCATION	DESCRIPTION & HISTORY	CONDITION	ACTUAL / EST YEAR OF ACQUISITION	RECOMMENDATIONS	TYPE	PRIORITY	AGE IN 2023	TYPICAL LIFE CYCLE	ESTIMATED REMAINING LIFE	YRS OVER WHICH PROJ IS PHASED	% OF RESP	INCLUDE Y / N	RECOMMENDED BUDGET (2023 Dollars)
	BELOW GRADE SYSTEMS															
	BG01	Concrete Structure	Parkade	The foundation walls are poured cast-in-place concrete supported on strip footings. The structural framing of the parkade consists of reinforced concrete slabs on reinforced concrete shear walls, foundation walls and columns. We noted various typical settlement cracking in isolated locations.	Fair	2004	A regular allowance has been included to address cracking as required.	Contingency	2	19	5	5	1	100%	Y	$6,000
	BG02	Slab on Grade	P3 / P2	Level P3 and half of level P2 is a slab on grade. We observed the slab to be in good condition with some localized cracking and previous repairs. Cracking of the slab is typical and does not indicate a structural concern.	Good	2004	The slab on grade is expected to last the life of the complex with regular maintenance. No anticipated capital expenses.	Not Applicable	Not Applicable	19			1		N	
	BG03	Suspended Slabs-Traffic Coating	Parkade Level P1 & P2	The suspended slabs in the parking garage have been protected with a liquid-applied polyurethane waterproofing membrane system. Some repair patches were identified in different areas.	Fair	2004	Replacement of traffic coating, including repainting of stall and traffic lines at end of service life. Regular maintenance should include patch repair in high use areas (typically drive aisles).	Renewal	3	19	20	3	3	100%	Y	$898,000
	BG04	Exterior Stairs and Fire Escapes	Parkade	There is an exit stairwell connecting the parking levels and exiting to the rear lane. It is a concrete stairwell with aluminum handrails.	Good	2004	Stairs likely last the life of the complex. Handrails may require localized replacement. These repairs are assumed to be completed as part of regular maintenance.	Contingency	Not Applicable	19			1		N	

PHOTOS	COMPONENT			CONDITION ASSESSMENT			RECOMMENDATION			LIFECYCLE DATA				BUDGET		
PHOTOS	LABEL	COMPONENTS	LOCATION	DESCRIPTION & HISTORY	CONDITION	ACTUAL / EST YEAR OF ACQUISITION	RECOMMENDATIONS	TYPE	PRIORITY	AGE IN 2023	TYPICAL LIFE CYCLE	ESTIMATED REMAINING LIFE	YRS OVER WHICH PROJ IS PHASED	% OF RESP	INCLUDE Y / N	RECOMMENDED BUDGET (2023 Dollars)
	BG05	Interior Parkade Finishes	Parkade	The walls and columns are painted for improved visibility. Spalling paint were identified in selected areas.The paint was observed to be in fair condition,	Fair	2004	Renew paint coating.	Renewal	3	19	10	3	1	100%	Y	$65,000
 	BG06	Man Doors	Parkade	There is one pedestrian exit door at grade. The door provide egress from the parking garage. The door is hollow metal with security glass in pressed steel frame and fire rated. Service room doors including mechanical, electrical and locker rooms, are typically hollow metal in pressed steel frames.	Good	2004	The man doors will likely last the life of the complex unless physically damaged. No capital replacements anticipated therefore individual replacements are assumed to completed as part of regular maintenance.	Renewal	Not Applicable	19			1		N	
 	BG07	Overhead Doors - Metal	Parkade	There is an overhead door at the main parkade access to the below-grade levels. the main parkade access overhead door was painted in 2022.	Good	2004	Replacement of the overhead metal doors and operating system.	Renewal	3	19	15	5	1	100%	Y	$16,000
	BG08	Overhead Doors - Metal	Parkade	There are two overhead door to section of visitor and residential parking at grade level. They are steel grated doors.	Good	2004	Replacement of the overhead metal doors and operating system.	Renewal	3	19	20	5	1	100%	Y	$32,000

PHOTOS	COMPONENT			CONDITION ASSESSMENT			RECOMMENDATION			LIFECYCLE DATA				BUDGET		
PHOTOS	LABEL	COMPONENTS	LOCATION	DESCRIPTION & HISTORY	CONDITION	ACTUAL / EST YEAR OF ACQUISITION	RECOMMENDATIONS	TYPE	PRIORITY	AGE IN 2023	TYPICAL LIFE CYCLE	ESTIMATED REMAINING LIFE	YRS OVER WHICH PROJ IS PHASED	% OF RESP	INCLUDE Y / N	RECOMMENDED BUDGET (2023 Dollars)
 	BG09	Storage lockers	Parkade	Storage lockers with metal mesh located in parkade. The paint was observed to be in good condition.	Good	2004	An allowance has been noted to repaint the mesh and for the repair of miscellaneous hardware.	Repair Allowance	3	19	15	5	1	100%	Y	$23,000
	ABOVE GRADE SYSTEMS															
	Exterior Walls															
	EW01	Exterior Wall Construction - Concrete	All Elevations	The mass concrete walls at the complex are protected by an elastomeric paint coating. Powerwahing and repainting of all exterior walls in Townhouses were completed in summer 2022.	Good	2022	The exterior concrete should be repainted every 10 years. Budget allows for some crack repair to be completed at the same time.	Renewal	3	1	10	9	1	100%	Y	$535,000
 	EW02	Brick Veneer Cladding	All Elevations Townhouses.	Drained cavity brick cladding is used at the townhouses. The assembly is brick, air space, moisture barrier applied to the concrete wall.	Good	2004	Brick is expected to last the life of the building, however, localized replacement and mortar joint repointing is required.	Repair Allowance	3	19	20	5	1	100%	Y	$90,000
 	EW03	Exterior Sealant	Windows and Doors	Sealants are provided between different cladding materials (e.g. brick to concrete), at gumlip flashings and around the window frames. In general, sealants are in good condition and will coincide with brick and repainting project. Re-caulking of the exterior sealant was completed in 2022 as part of a exterior maintenance project.	Good	2022	Replace sealants at end of service life. Localized replacements as needed may prolong life expectancy. The following sealant replacement has been planned to occur in line with the concrete repainting project to address observations and take advantage of economies of scale.	Renewal	3	1	12	11	1	100%	Y	$142,000

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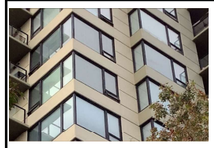
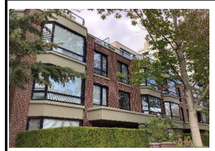
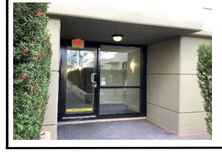
	Glazing System															
 	GS01	Aluminum Framed Windows	All Elevations	A combination of aluminum framed double glazed windows,and punched windows are casement and fixed. Overtime isolated failures of insulated glazing units (IGU's), brakets gaskets and handles have been replaced as they occur. A complete window replacements occured to TH06-9133 Hemlock Drive & TH13-6233 Katsura Street.	Fair	2004	An allowance has been noted to replace failed IGU's and for the repair of miscellaneous hardware.	Repair Allowance	2	19	3	3	1	100%	Y	$21,000
	GS02				Good	2004	Replacement of the windows at the end of the service life.	Renewal	3	19	40	21	8	100%	Y	$10,298,000
	GS03	Aluminum Framed Sliding Doors	Various exterior access to courtyard, and decks	Access to various decks and courtyards are provided with aluminum framed double glazed sliding glass doors.Water ingress and misaligned doors were reported during the site visit.	Good	2004	Replace the sliding doors at the end of their service life. Repair cost included in window repair allowance.	Renewal	3	19	40	21	1	100%	Y	$95,000
 	GS04	Exterior Swing Doors - Aluminum Framed	Various exterior access to balconies.	Access to balconies are provided with aluminum framed double-glazed swing doors.Water ingress and misaligned doors were reported during the site visit.	Good	2004	Replace doors at end of service life. Painting is assumed to be covered under general maintenance.	Renewal	3	19	40	21	1	100%	Y	$323,000
	GS05	Tower Exterior Swing Doors	Towers	Access to towers are provided with aluminum framed double-glazed swing doors.	Good	2004	Replace doors at end of service life. Painting is assumed to be covered under general maintenance.	Renewal	3	19	40	21	1	100%	Y	$11,000

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	GS06	Exterior Swing Doors - Solid Core Wood	Entry to Townhouses	The entry to the townhouses are accessed by solid core wood swing doors with double-glazed units in metal frames.	Good	2004	Replace doors at end of service life. Painting is assumed to be covered under general maintenance.	Renewal	3	19	40	21	1	100%	Y	$83,000
	GS08	Front Door and Interior doors	Ground Floor - Amenity Area	A combination of aluminum framed double glazed windows and aluminum framed double-glazed swing doors are identified in the Amenity area.	Good	2004	Replacement of the windows at the end of the service life.	Renewal	3	19	40	21	1	100%	Y	$42,000
	GS09	Lobby Doors	East and South Elevation of Towers	Main access to the front and rear lobbies on the East and South elevations are provided with glazed aluminum door assemblies in metal frames.	Good	2004	Replace the lobby door assemblies at the end of their service life.	Renewal	3	19	40	21	1	100%	Y	$21,000

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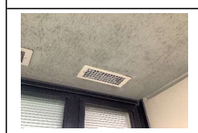
	Balcony Systems															
	BS01	Balconies- Liquid Urethane	Balconies	The cantilevered balcony slabs are protected with a liquid applied urethane traffic coating. In general the coating is in good conditions.	Good	2004	Replace membrane at the end of their service life. Cost includes surface preparation and recoating.	Renewal	3	19	12	5	1	100%	Y	$323,000
	BS02	Eyebrows	Townhouses	Concrete eyebrows (slab projections at roof level and at townhouse levels) are protected with a liquid-applied urethane waterproofing coating. There is a section of concrete eyebrows to the rear of townhouse units protected with a liquid-applied urethane membrane with gravel ballast.	Good	2004	Replace membrane at the end of their service life. Cost includes surface preparation and recoating.	Renewal	3	19	12	5	1	100%	Y	$47,000
	BS04	Glazed Metal Guardrails & Dividers	Balconies & Decks	Metal dividers with frosted glass are provided to separate balconies and add privacy.	Good	2004	Railings expected to last at least 50 years with ongoing maintenance. Replace at end of service life.	Renewal	3	19	50	31	1		N	
	BS05	Balcony Guardrails	Balconies, Decks, Roof Deck	Balcony guardrails are aluminum framed with glass panels.paint deterioration was evdence in selected townhouses guardrails.	Good	2004	Replace guardrails at end of service life.Painting is assumed to be covered under general maintenance.	Renewal	3	19	35	16	1	100%	Y	$240,000
	BS07	Balcony Slab Edges	Balconies	The cantilevered concrete balcony slabs edges are coated with traffic coating.	Fair	2004	Allowance to conduct periodic concrete repairs to the slab edge and deck; includes repainting balcony soffits. In conjunction with balcony waterproofing.	Renewal	3	19	12	3	1	100%	Y	$105,000

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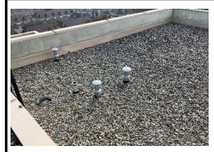
	Roof Systems															
 	RS01	Flat roof	Tower & Townhouse Roofs	The tower roof system is a protected membrane roof (PMR) system, a system in which the membrane is located below insulation and ballast. The roof assembly consists of a waterproofing membrane directly applied to the concrete deck with drainage mat, insulation, filter fabric, finished with gravel ballast. This assembly is in place at rooftop level of the tower, over the rooftop mechanical rooms, and over stairwells at townhouses. We were unable to review the membrane due to the overburden material.	Good	2004	Replacement of the roof membranes at the end of the service life, including all associated work such as flashing replacement and joint sealing. Assumes the majority of ballast and insulation will be reused. Membranes can have a life expectancy from 15-30 years depending on the type. We assume SBS or better was installed during construction. No roof replacement, Repairs & maintenance of roof drains, scuppers, flashing, vents and anchors are inlcuded in the annual maintenance.	Renewal	3	19	30	11	4	100%	Y	$2,573,000
	RS02	Roof Deck Membranes	Ground Floor	There are roof decks (over living space) at level 16 of the Towers. According to the Architectural details reviewed, the roof assembly consists of water proofing membrane directly applied to the concrete deck with drainage mat, rigid insulation R-28, filter fabric, finished with concrete pavers. We were unable to review the membrane due to the overburden material.	Fair	2004	Replacement at end of service life includes all associated work such as flashing replacement and joint sealing. Assumes the majority of the pavers and insulation will be reused.	Renewal	3	19	25	6	1	100%	Y	$192,000
 	RS04	Podium Waterproofing System	Over Parkade	The landscaped areas of the podium, including the courtyard areas and at grade levels are comprised of a liquid applied waterproofing membrane, composite drainage layer and filter fabric on top of the parkade roof suspended slab. Overburden includes planters, grass, paved walkways and a pond area. We were unable to review the membrane due to the overburden material.	Good	2004	Replace waterproofing membrane at end of service life. Cost includes removal and replacement of all overburden.	Renewal	3	19	30	11	2	100%	Y	$2,693,000
	RS06	Sklight	Amenity Area	There a steel-framed skylight featureat the amenity room. In general the slylight is in good conditions.	Good	2004	Skylights are expected to last the life of the building. An allowance has been included in the plan.	Repair Allowance	2	19	15	3	1	100%	Y	$27,000

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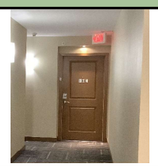
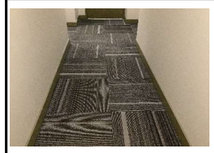
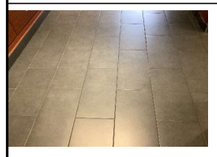
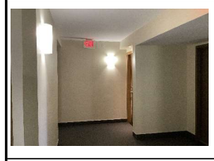
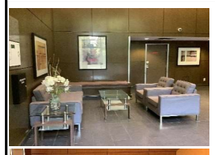
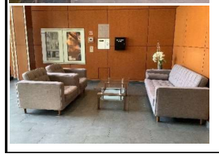
	RS09	Metal Louvres	Tower & Townhouse Roofs	Architectural metal louvres on the south elevation on parking levels.	Good	2004	Replace at the end of service life.(40 years of lifecycle).	Renewal	2	19	40	21	1	100%	Y	$11,000
	INTERIOR FINISHES															
	IF01	Interior Doors	Entrances to Units	Suite entry doors in the tower are painted solid core wood swing doors and doors for the service rooms are typically hollow metal.	Good	2004	Phased replacement of the swing doors as required. Maintenance includes repainting the doors completed on an as needed basis funded through the operating budget.	Repair Allowance	3	19	40	21	1	100%	Y	$87,000
	IF02	Corridors Flooring	Common Corridors	The common corridors are finished with carpet tiles. The carpet is original and in general ir in good conditions.	Good	2004	Replace carpets at end of service life.	Renewal	3	19	20	5	1	100%	Y	$102,000
	IF03	Lobby Tile Flooring	Lobby & Elevator Vestibules	The main entrance lobby at the ground floor of the tower is furnished with tile and wallpaper. A fireplace, furniture, and wall art are provided.	Good	2004	Replace tile at end of service life or as required.	Contingency	3	19	20	5	1	100%	Y	$44,000
	IF04	Corridor Walls and Ceilings	Common Corridors	The common corridor walls and ceilings are painted. Corridor walls have been touched up and regularly maintained which helps extend the service life.	Good	2004	Repaint corridor walls and ceilings as required	Renewal	3	19	20	5	1	100%	Y	$161,000
 	IF05	Amenity - Lobby Finishes	Main Floor - Lobby and Concierge	The main entrance lobby in both towers, walls with various feature walls including stone and wood panels. The lobby also includes various art, mail box and furniture.	Good	2004	An allowance to renew finishes and furnishings as needed.	Contingency	4	19	15	3	1	100%	Y	$17,000

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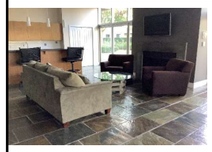
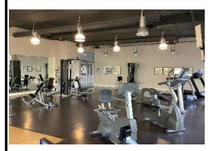
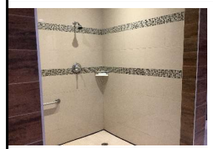
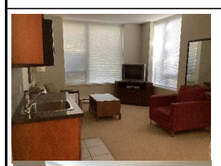
	IF07	Amenity - Lounge Room	Ground Floor - Amenity Area	Lounge room located in the amenity area has tiled floor, painted walls with variouos feature walls including wood panels. The lounge also includes various art, and furniture. Includes the floor tiles of the circulation area in the amenity area.	Good	2004	An allowance to renew finishes and furnishings as needed.	Contingency	4	19	15	3	1	100%	Y	$43,000
	IF08	Amenity - Gym Equipment	Ground Floor - Amenity Area	The gym has a variety of miscellaneous fitness equipment such as treadmills, fitness bicycles, cross trainers, a row machine and free weights, it includes floor tilign and mirrored walls. We understand various items have been updated and added since original construction.quipments are inclueded in current lease program	Good	2004	Fitness equipment is leased by the Strata.	Repair Allowance	3	5	10	5	1	100%	Y	$16,000
 	IF09	Washrooms	Ground Floor - Amenity Area	Amenity area include men and ladies changing and wash rooms. Finishes include tile flooring, painted drywall wall tiling, and various washroom related finishes. Renewal project was developed in 2013 including pool upgrades and lightinf replacement.	Good	2013	An allowance to renew finishes and equipment as needed.	Renewal	3	10	15	5	1	100%	Y	$15,000
 	IF10	Amenity - Guest Suite	Ground Floor	There are two guest suite on ground floor of each tower. The rooms include carpeted flooring, painted gypsum walls and painted ceilings. Furnishes include a full bathroom. We understand various updates to the guest suite have been completed since construction.	Good	2004	An allowance to renew guest room finishes as needed.	Repair Allowance	2	19	10	3	1	100%	Y	$16,000

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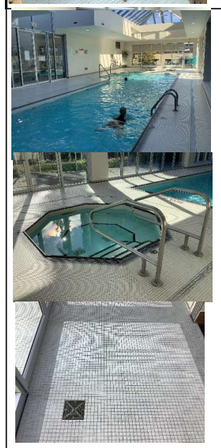
	IF11	Sauna and Steam Room	Ground Floor - Amenity Area	Amenities area include a sauna and steam room. Finishes include tile flooring, wood walls and tiled floor.	Good	2004	An allowance to renew finishes and equipment as needed.	Renewal	3	19	15	3	1	100%	Y	$6,000
	IF13	Pool Area	Ground Floor - Amenity Area	Pool area inlcudes tile flooring, epoxy paint in walls,and jacuzzi area. Pool area was covered in a renovation project in 2013, inlcuding lighting was replacement.	Good	2013	An allowance to renew finishes and equipment as needed.	Renewal	3	10	15	5	1	100%	Y	$50,000
	SITE DEVELOPMENT															
	SD01	Pedestrian Paving	Throughout Complex	There is concrete paving throughout the complex around townhouse entrances and around the tower entrance.	Good	2004	An allowance is provided for periodic resetting of concrete paving.	Repair Allowance	2	19	10	3	1	100%	Y	$11,000

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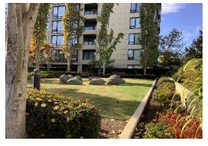
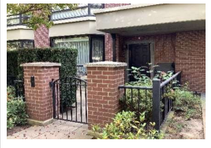
	SD02	Aluminum Fences	Throughout Complex	There are miscellaneous benches for seating located on the common roof deck on Floor 4th and outdoor furnitures located in amenity area.	Good	2004	Replace site furniture at the end of service life or as required.	Repair Allowance	4	19	5	2	1	100%	Y	$6,000
	SD03	Concrete Planters	Throughout Complex	There are concrete planter walls at grade level and at the common roof deck on Floor 4th.	Good	2004	An allowance for localized replacement and repointing.	Renewal	3	19	15	5	1	100%	Y	$8,000
	SD04	Soft Landscaping	Throughout Complex	The roof deck and podium are landscaped with various shrubs and trees.	Good	2004	Landscaping is assumed to be covered under maintenance. Full replacement is included in cost of roof deck and podium renewals. No capital expenses anticipated.	Not Applicable	4	19					N	
	SD06	Metal Fences	Throughout Complex, Townhouses	Aluminum picket fence including entry gates are provided for the townhouses. There are also picket fences around the second floor courtyard areas.	Good	2004	Railings will likely last the life of the complex with maintenance including replacing corroded fasteners and paint touch ups.	Repair Allowance	4	19	20	5	1	100%	Y	$6,000

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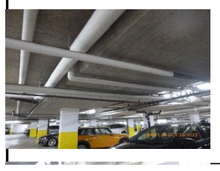
	MECHANICAL SYSTEMS															
	Plumbing Systems															
	MS01	Plumbing Fixtures	Throughout Building	Ground floor has one guest/amenity room with 1 toilet, 1 lavatory and 1 bathtub. Common Areas on the 5th floor are served by men and women change rooms consisting of 3 water closets, 4 lavatories, 4 showers and 1 urinial. The pool room has 1 drinking fountain. These fixtures typically last a long time and are commonly replaced after many years as a discretionary upgrade.	Good	2004	The plumbing fixtures in the building are in good condition and are expected to last approximately 30 years. A repair allowance has been provided to cover random damage to fixtures.	Repair Allowance	4	19	30	11	1	100%	Y	$9,000
	MS02	Domestic Water Distribution - Pipes	Water Entry Room	Domestic cold water (DCW) is supplied to the buildings via one 8" ductile iron water line from the City of Richmond water main. Water enters into the mechanical room located on level 1 and splits into two 6" line , one that serves the domestic water to towers C, D and townhomes, and one that serves the fire suppression. The condition of the interior of the pipes is unknown, and the insulation also renders the exterior of the pipe not visible. Pipework insulation is generally in fair condition with	Fair	2004	The service life of the ductile pipe is over 40 years. This cost estimate includes a lump sum for the replacement/repair of the ductile pipe in the Water Entry Room.	Renewal	3	19	40	21	1	100%	Y	$698,000
 	MS03	Domestic Water Distribution - Pipes	Throughout Building	DCW and domestic hot water (DHW) is distributed throughout the building with copper pipework. The 6" copper line going to the boiler room on the roof is split into two 4incopper pipes feeding the two boilers and the four HW tanks. The domestic cold water is treated with Hytec water treatment system. The condition of the interior of the pipes is unknown, and the insulation also renders the exterior of the pipe not visible. Given the age of the pipework, it is assumed to be in good condition.	Fair	2019	The life expectancy for copper pipework used for domestic water distribution ranges from 20-25 years . Re-piping a building requires demolition of wall finishings, removal of existing header and riser piping, replacement of all piping, and refinishing of demolished areas. Stainless steel piping is recommended as a replacement, as it is constructed with thicker walls, which extends service life significantly. Stainless steel re-piping typically has a cost of approximately $8,150.00 per unit in the building. This cost estimate incorporates replacement of DCW, DHW and hot water recirculation piping risers and headers.	Renewal	3	4	25	21	1	100%	Y	$2,537,000
	MS04	Domestic Water Distribution - Pipes	Distribution to Suites and Within Suites to Fixtures	Distribution DCW and DHW piping 2" and under is assumed to be PEX.	Fair	2004	The service life of PEX is at least 50 years. Re-piping of PEX typically has a cost approximately $7,250.00 per unit in the building. This cost estimate incorporates replacement of DCW, DHW and hot water recirculation piping branches to the fixtures in the suites.	Renewal	3	19	50	31	1	100%	Y	$2,257,000

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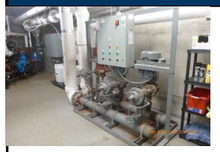	MS05	Domestic Water Distribution - Booster Pumps	Mechanical Room	The DCW supply is boosted by two Bell & Gossett 15hp booster pumps & one 10hp Armstrong booser pump compete with TornaTech controls and valve components. There is no seismic base is installed on the DCW booster pump package. There is some rust stains on the floor below the booster pumps.	Fair	2004	Total replacement of pumps at the end of service lives (25 - 30 years).	Renewal	3	19	30	11	5	100%	Y	$65,000
	MS06	Domestic Water Distribution - Booster Pumps	Mechanical Room	The DCW supply is boosted by two Bell & Gossett 15hp booster pumps & one 10hp Armstrong booser pump compete with TornaTech controls and valve components. There is no seismic base is installed on the DCW booster pump package. There is some rust stains on the floor below the booster pumps.	Fair	2004	Rebuild one pump every 4-6 years. We recommend wire brushing the rusty sections and coating with an anti-corrosive paint system.	Renewal	3	19	5	0	1	100%	Y	$9,000
	MS07	Domestic Water Distribution - Major Valves	Mechanical Room	This item includes all the major valves (4" and larger) serving the domestic water system, and includes the double-check back-flow preventers, pressure reducing valves, water meter, strainers, check, and shut-offs.	Good	2008	Major valves have a typical lifespan of 10-15 years, but the lifespan can be extended by performing rebuilds as part of the regular maintenance schedule. Replace at the end of the typical lifespan.	Renewal	3	15	15	1	1	100%	Y	$54,000
	MS08	Domestic Hot Water System - Water Heaters	Mechanical Room - Penthouse - Tower D, Katsura St.	The DHW system in the mechanical room on the roof provides hot water for Tower D and consists of two vented A.O. Smith HW-670-300, 660,000BTU/h gas fired copper coil hot water heaters. Both water heaters do not appear to be from the original construction.	Good	2017	Atmospheric gas fired boilers have a typical service life of 15 years.	Renewal	3	6	15	10	1	100%	Y	$64,000
	MS09	Domestic Hot Water System - Water Heaters	Mechanical Room - Penthouse - Tower C - Hemlock St.	The DHW system in the mechanical room on the roof provides hot water for Tower C and consists of two vented A.O. Smith HW-610-962, 610,000BTU/h gas fired copper coil hot water heaters.	Fair	2004	Atmospheric gas fired boilers have a typical service life of 15 years.	Renewal	3	19	15	0	1	100%	Y	$64,000
	MS10	Domestic Hot Water System - Pumps	Mechanical Room - Penthouse - Tower D - Katsura St.	DHW is circulated between DHW storage tank(s) and boiler(s) by two Bell & Gossett circulation pumps (approximately 1/6hp each). It is assumed that the pumps were replaced in 2019 based on the marking on the pumps. A tinfoil pan was installed directly below the	Fair	2019	Inline centrifugal pumps have a typical lifespan of approximately 15 years. Replace at the end of the typical lifespan. Repair any active leak.	Renewal	3	4	15	12	1	100%	Y	$7,000

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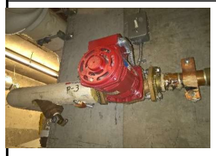
	MS11	Domestic Hot Water System - Pumps	Mechanical Room - Penthouse - Tower C - Hemlock St.	DHW is circulated between DHW storage tank(s) and boiler(s) by two Bell & Gossett circulation pumps (approximately 1/6hp each). It is assumed that the pumps were replaced in 2010 based on the markings on the pumps.	Fair	2010	Inline centrifugal pumps have a typical lifespan of approximately 15 years. Replace at the end of the typical lifespan.	Renewal	3	13	15	2	1	100%	Y	$7,000
	MS12	Domestic Hot Water Recirculation Pumps	Mechanical Room - Penthouse - Tower D - Katsura St.	DHW from Tower D is circulated back to the DHW storage tank(s) by two Bell & Gossett circulation pump (approximately 1/12hp). One located in the mechanical room penthouse and one in level 2 storage room. Recirculation pump on the mechanical room penthouse appears to be recently installed.	Good	2021	Inline centrifugal pumps have a typical lifespan of approximately 15 years. Replace at the end of the typical lifespan.	Renewal	3	2	15	13	1	100%	Y	$4,000
	MS13	Domestic Hot Water Recirculation Pumps	Mechanical Room - Penthouse - Tower C - Hemlock St.	DHW from Tower C is circulated back to the DHW storage tank(s) by two Bell & Gossett circulation pump (approximately 1/12hp). One located in the mechanical room penthouse and one in level 2 storage room. It is assumed that the pump was replaced in 2008 based on the written note on the pump	Fair	2008	Inline centrifugal pumps have a typical lifespan of approximately 15 years. Replace at the end of the typical lifespan.	Renewal	3	15	15	0	1	100%	Y	$3,000
	MS14	Domestic Hot Water System - DHW Storage - Katsura St.	Mechanical Room - Penthouse - Tower D - Katsura St.	DHW storage in the mechanical room is provided by four Rheem approximate 115gal commercial storage tanks. It is assumed that one of the the storage tanks was replaced in 2012, see next item below.	Fair	2004	DHW storage tanks have a typical lifespan of 15-20 years. Replace at the end of the typical lifespan.	Renewal	3	19	20	1	1	100%	Y	$28,000
	MS15	Domestic Hot Water System - DHW Storage - Katsura St.	Mechanical Room - Penthouse - Tower D - Katsura St.	It is assumed that one of the the storage tanks in Tower D was replaced in 2012 based on the markings on the tanks.	Fair	2012	DHW storage tanks have a typical lifespan of 15-20 years. Replace at the end of the typical lifespan.	Renewal	3	11	20	9	1	100%	Y	$10,000
	MS16	Domestic Hot Water System - DHW Storage - Hemlock St.	Mechanical Room - Penthouse - Tower C - Hemlock St.	DHW storage in the mechanical room is provided by four Rheem approximate 115gal commercial storage tanks.	Fair	2004	DHW storage tanks have a typical lifespan of 15-20 years. Replace at the end of the typical lifespan.	Renewal	3	19	20	1	1	100%	Y	$38,000
	MS17	Domestic Hot Water System - Expansion Tanks - Katsura St.	Mechanical Room - Penthouse - Tower D - Katsura St.	The DHW system in the tower penthouse mechanical room contains one 150psi Expanflex expansion tank (approximately 22 gal.). It is assumed that the expansion tank was replaced in 2015 based on the equipment tag.	Fair	2015	Expansion tanks have a typical lifespan of approximately 20 years. Replace tanks at the end of service life.	Renewal	3	8	20	12	1	100%	Y	$2,000

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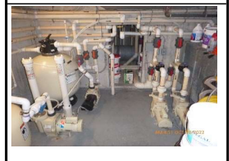
	MS18	Domestic Hot Water System - Expansion Tanks - Hemlock St.	Mechanical Room - Penthouse - Tower C - Hemlock St.	The DHW system in the tower penthouse mechanical room contains one 150psi Expanflex expansion tank.	Fair	2004	Expansion tanks have a typical lifespan of approximately 20 years. Replace tanks at the end of service life.	Renewal	3	19	20	1	1	100%	Y	$2,000
	MS19	Domestic Cold Water System - Drawdown Tanks - Towers C & D	Roof Mechanical Room - Towers C & D - Hemlock St. & Katsura St.	The DCW system is equipped one 90 gal. Amtrol Therm-X-Trol expansion tank as drawdown tank.	Fair	2004	Drawdown tanks have a typical lifespan of approximately 20 years. Replace tanks at the end of service life.	Renewal	3	19	20	1	1	100%	Y	$8,000
	MS20	Pool Water & Spa Systems - Boilers	Boiler & Pool Equipment Room - Level 5	The pool water & spa systems are heated by Hayward water pool boilers (approx. 150MBh each). The heat exchanger was replaced in 2018 in one of the boiler.	Fair	2004	Replace pool boiler systems at the end of service life.	Renewal	3	19	15	0	1	100%	Y	$12,000
	MS21	Pool Water & Spa System - Pumps	Boiler & Pool Equipment Room - Level 5	The pool & spa water system in the pool mechanical room are circulated by four fractional Pentair circulation pumps.	Fair	2004	Pool water pumps have a typical lifespan of approximately 10 - 15 years. Replace at the end of the typical lifespan.	Renewal	3	19	15	0	1	100%	Y	$16,000
	MS22	Pool Water & Spa System - General	Boiler & Pool Equipment Room - Level 5	The pool & spa water systems includes two Tagelus sand filter systems and associated valves and pipework.	Fair	2004	Pool mechanical equipment has a typical lifespan of 15-20 years. Replace worn out components at the end of life. A lump sum repair allowance has been included.	Renewal	3	19	20	1	1	100%	Y	$13,000
	MS23	Steam Room Heating Systems	Steam Room	The Steam Room is served by two electric steam generator (assumed 13.5kW). The steam generators were replaced in 2022. Steam generators not visible. Based on the age of the equipment, it is assumed to be in good condition.	Good	2022	Typical lifespan of a steam generator is approximately 10 years. Replace unit at end of service life.	Renewal	3	1	10	9	1	100%	Y	$29,000

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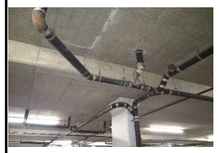
	MS24	Sanitary - Water Piping and Fittings	Parkade Level and Throughout	Sewage is collected from the suites and common areas via cast iron piping that runs down multiple sanitary stacks from the high rise to the ground floor parkade. It is then run by gravity to the City of Richmond sanitary sewage system. Some of the sanitary pipework has some minor rust. This is noticeable in the parkade.	Fair	2004	Cast iron sanitary drainage piping typically lasts 40+ years. A repair allowance has been included to address sectional repairs. We recommend wire brushing the rusty sections and coating with an anti-corrosive paint system.	Contingency	2	19	40	21	1	100%	Y	$32,000
	MS25	Storm - Water Piping and Fittings	Parkade Level and Throughout	Roof areas of the building are drained by roof drains with internal rain water leaders that run down to the ground floor parkade. The storm water is then run by gravity to the City of Richmond storm sewer system.	Fair	2004	Cast iron storm water drainage piping typically lasts 40+ years. A repair allowance has been included to address sectional repairs.	Repair Allowance	3	19	40	21	1	100%	Y	$27,000
	MS26	Storm - Sump Pump - Parkade drain, Elevator pit sump	Level 1 - Elevator Pit, Towers C & D	The parkade drain and elevator drain sump pit consists of a submersible pumps (approximately 1/3hp) with a Northwest Tech-con Systems control system that lift the storm water to a manhole that connects to the City of Richmond storm sewer system.	Fair	2004	Submersible pumps have a typical lifespan of 10-15 years. Replace at the end of service life.	Renewal	3	19	15	0	1	100%	Y	$8,000
	HVAC Systems															
	MS27	Heating Systems	Hallways and Throughout	Outdoor air is preheated by way of natural gas burners in the makeup air units. The natural gas service is located on the south side of the property and is delivered to the building via a 2in gas line. Electric baseboard heaters provide additional heat to common areas as well as primary heat for all the units. Unit heaters provide additional heat to some storage rooms.	Fair	2004	Baseboard and unit heaters can be replaced as required based on surface damage. Typical expected lifespan is 30 years.	Renewal	4	19	30	11	1	100%	Y	$13,000
	MS28	HVAC - Corridor Make-Up Air Unit	Penthouse Roof - Tower C & D - Hemlock St. & Katsura St	Towers C & D makeup air for hallway pressurization and ventilation are provided by two Engineered Air DJ60 unit complete with 300,000BTUh natural gas burner. Each unit is located in the tower penthouse mech. room at each tower and supplies 6600cfm to the tower corridors via a combination of multiple different sized grilles. Burner exhaust is ducted through an exhaust vent.	Fair	2004	Outdoor makeup air units have a typical lifespan of approximately 15-20 years. Provide periodic maintenance. Replace or refurbish when unit fails.	Repair Allowance	4	19	20	1	5	100%	Y	$55,000
(No photo)	MS29	HVAC - Towers C & D Vestibules - Supply Fans	Level 1 - Parkade - Towers C & D	A ceiling mounted inline cabinet fans provide ventilation to the Towers C & D vestibules (400 - 850 cfm)	Fair	2004	Centrifugal exhaust and supply fans have a typical service life of 20 years. Provide periodic maintenance. Replace or refurbish when unit fails.	Repair Allowance	3	19	20	1	1	100%	Y	$4,000

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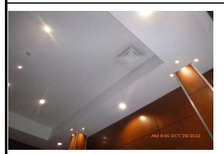
	MS30	HVAC - Indoor Pool Make-Up Unit Unit	Boiler & Pool Equipment Room - Level 5	Indoor Pool makeup air is provided by one Engineered Air DJ40 unit complete with 300,000BTUh natural gas burner. The makeup air unit supplies 3300cfm to the pool room via a combination of multiple different sized grilles. Burner exhaust is ducted to the level 5 roof.	Fair	2004	Indoor makeup air units have a typical lifespan of approximately 20-25 years. Provide periodic maintenance. Replace or refurbish when unit fails.	Renewal	3	19	25	6	1	100%	Y	$28,000
	MS31	HVAC - Electrical/Transformer Room AC Cabinet Unit	Level 1 - Parkade - Tower C - Hemlock St.	The electrical/transformer room was served by a fan coil cabinet type air conditioning unit (approximately 7.5 ton).	Fair	2004	Air to air condensing units and associated fan coil units have a typical life span of 10-15 years. Replace at end of life. Note: Replacement value includes condensing unit and fan coil.	Renewal	3	19	30	11	1	100%	Y	$22,000
	MS32	HVAC - Single Split AC Cabinet Units	Level 5 Floor Amenity Spaces	The amenity room on level 5, including the lounge and exercise rooms are ventilated and conditioned with two fan coil cabinet type air conditioning units (approximately 4 tons each). Fan coil units not visible. Based on the age of the equipment it is assumed to be in fair condition.	Fair	2004	Air to air condensing units and associated fan coil units have a typical life span of 10-15 years. Replace at end of life. Note: Replacement value includes condensing unit and fan coil.	Renewal	3	19	15	0	1	100%	Y	$26,000
	MS33	HVAC - Single Split AC Cabinet Unit	Ground Floor Lobby - Towers C & D - Hemlock St.& Katsura St.	Each lobby was served by a fan coil air conditioning unit (approximately 2 tons each). Fan coil units not visible. Based on the age of the equipment it is assumed to be in fair condition.	Fair	2004	Air to air condensing units and associated fan coil units have a typical life span of 10-15 years. Replace at end of life. Note: Replacement value includes condensing unit and fan coil.	Renewal	3	19	15	0	1	100%	Y	$21,000
	MS34	Ventilation Fans - Parkade Exhaust	Parkade Throughout	Parkade exhaust is achieved using tube-axial exhaust fans (approximately 1hp each). There are a number of CO/NOx sensors located throughout the parkade levels.	Fair	2004	Axial type exhaust and supply fans have a typical service life of 20 years. Provide periodic maintenance. Replace or refurbish when unit fails.	Repair Allowance	3	19	20	1	1	100%	Y	$42,000
	MS35	Ventilation Fans - Storage & Locker Rooms	Storage & Locker Rooms Throughout	A number of ceiling mounted and inline cabinet fans provide supply and exhaust ventilation to the storage rooms located throughout the building (ranging from 75 - 100 cfm)	Fair	2004	Cabinet exhaust and supply fans have a typical service life of 20 years. Provide periodic maintenance. Replace or refurbish when unit fails.	Repair Allowance	3	19	20	1	1	100%	Y	$36,000

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	MS36	Ventilation Fans - Utility Rooms	Tel/Cable, Water Entry, Service Rooms	A number of ceiling mounted and inline cabinet fans provide supply and exhaust ventilation to the Tel/Cable, Water Entry and Service rooms (approximately 75 cfm)	Fair	2004	Centrifugal exhaust and supply fans have a typical service life of 20 years. Provide periodic maintenance. Replace or refurbish when unit fails.	Repair Allowance	3	19	20	1	1	100%	Y	$11,000
	MS37	Ventilation Fans - Electrical and Emergency Panel Rooms	Level 1 - Tower D - Electrical & Emergency Panel Rooms	The electrical and emergency panel rooms are exhausted by a packaged cabinet fans (ranging from 775 to 1200 cfm)	Fair	2004	Centrifugal exhaust and supply fans have a typical service life of 20 years. Provide periodic maintenance. Replace or refurbish when unit fails.	Repair Allowance	3	19	20	1	1	100%	Y	$9,000
	MS38	Ventilation Fans - Garbage Rooms	Ground Level Garbage Rooms - Towers C & D	The garbage rooms are exhausted by a continuous running packaged cabinet fans complete with filters (approximately 1200 cfm)	Fair	2004	Centrifugal exhaust and supply fans have a typical service life of 20 years. Provide periodic maintenance. Replace or refurbish when unit fails.	Repair Allowance	3	19	20	1	1	100%	Y	$9,000
	MS39	Ventilation Fans - Elevator Machine Rooms	Penthouse Roof - Tower C & D - Hemlock St. & Katsura St	The elevator machine rooms are exhausted by a packaged cabinet fans complete with filters (approximately 2400 cfm each)	Fair	2004	Centrifugal exhaust and supply fans have a typical service life of 20 years. Provide periodic maintenance. Replace or refurbish when unit fails.	Renewal	3	19	20	2	1	100%	Y	$11,000
	MS40	CO/NOx Sensors - Parkade Exhaust	Parkade	There are 18 CO/NOx sensors located throughout the parkade levels.	Fair	2004	CO/NOx sensors have a typical lifespan of 15 years. Replace or recalibrate when unit fails.	Renewal	3	19	15	0	1	100%	Y	$28,000
	MS41	Ventilation - Local Exhaust Fans	Kitchens/ Bathrooms/ Laundries	Individual unit ventilation is accomplished by kitchen, dryer, ensuite and bathroom exhaust fans that exhaust to the deck/patio areas. These fans are the unit owners' responsibility and not in this assessment's scope.	Fair	2004	Domestic style exhaust fans have a statistical median life span of 20 years. It is assumed that these units are the responsibility of the corresponding suite owners. As such no depreciation costs are provided for these items.	Renewal	3	19	0	0	5		N	

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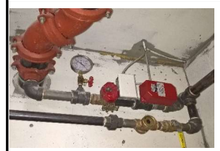
	Fire Suppression Systems															
	MS42	Sprinkler System - Main Supply	Water Entry Room on Level 1	The complex is sprinkled with a combination wet and dry valve suppression system. All fire suppression equipment is located in the water entry room on level 1. Water for fire suppression is supplied by a 6" main taken off of a single 8" combined fire/domestic water supply main. The takeoff is equipped with a double check valve backflow preventer	Fair	2004	Ensure that all valves and valve assemblies are inspected, maintained and tested as per NFPA 25. Replace or refurbish components as they fail. We recommend wire brushing the rusty sections and coating with an anti-corrosive paint system.	Renewal	3	19	40	21	1	100%	Y	$37,000
	MS43	Sprinkler System - Fire Pump & Controller	Water Entry Room on Level 1	System pressure is provided by a AC fire pump system with a 3/4hp jockey pump. The pump combination is provided with Eaton controls and switch station.	Fair	2004	Ensure that water flow tests and internal pipe inspections are performed as per NFPA 25. Fire pumps should last in excess of 25 years. A modest repair allowance after this time is recommended.	Repair Allowance	3	19	25	6	1	100%	Y	$58,000
	MS44	Sprinkler System - Pipes & Sprinklers	Water Entry Room on Level 1 and Throughout	The 4" wet standpipe system extends up the main stairwell, with sprinkler flow control stations and fire department hose connections on every floor. An average reading of approximately 100psi was recorded at the top of the standpipe. Each floor has full sprinkler coverage. There are two fire department Siamese connections that tap into the standpipe system.	Fair	2004	Ensure that water flow tests and internal pipe inspections are performed as per NFPA 25. Pipes and sprinklers should last in excess of 40 years. A modest repair allowance after this time is recommended.	Repair Allowance	3	19	40	21	1	100%	Y	$42,000
	ELECTRICAL SYSTEMS															
	ES02	Main high-voltage disconnect	Main Electrical Room	25kV, 600A hydro disconnect switches are located in the Main Electrical Room in the first floor parkade.	Good	2004	Replace disconnect switch at the end of the service life. With proper maintenance may survive age of the building. Regular cleaning (every 5 years) and infrared scanning is recommended.	Renewal	4	19	30	11	1	100%	Y	$18,000

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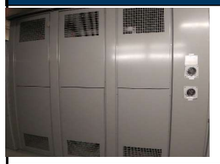	ES03	Main high-voltage transformer	Main Electrical Room	Dual wound step-down transformer 25kV input to dual outputs: - 208/120V, 600kVA - 600/347V, 1150kVA	Good	2004	Replace transformer at the end of the service life. With proper maintenance may survive age of the building. Regular cleaning (every 5 years) and infrared scanning is recommended.	Renewal	4	19	30	11	1	100%	Y	$81,000
	ES04	Secondary low-voltage transformer	Electrical Distribution Rooms	Multiple step-down transformers supplying power to various distribution sections. All step-down 600/347V to 208/120V and rated as follows: - 2HC: 112.5kVA - 2HD: 112.5kVA - Tower D Meter Centre Distribtution: 600kVA	Good	2004	Replace transformer at the end of the service life. With proper maintenance may survive age of the building. Regular cleaning (every 5 years) and infrared scanning is recommended.	Renewal	4	19	30	11	1	100%	Y	$35,000
	ES05	Safety Switch	Various Electrical Rooms	Meter centers fed via 120/208V, 2500A switchgear unit. Housing breakers:	Good	2004	Replace transformers and panels at the end of service life. With proper maintenance may survive age of the building. Regular cleaning (every 5 years) and infrared scanning is recommended.	Renewal	4	19	30	11	1	100%	Y	$9,000
	ES06	Meter Center Distribution Switchgear	Main Electrical Room	Meter centers for each tower fed via 120/208V, 3000A for Tower C and 120/208V, 2500A forTower D.	Good	2004	Replace transformers and panels at the end of service life. With proper maintenance may survive age of the building. Regular cleaning (every 5 years) and infrared scanning is recommended.	Renewal	4	19	30	11	1	100%	Y	$93,000
	ES07	Building distribution	Main Electrical Room	Common building power loads are fed via 800A, 347/600V switchboard. Housing breakers: - Booster Pumps, 125A - 6MMC, 200A - Tower D House Distribution, 125A - Tower C House Distribution, 200A	Good	2004	Replace transformers and panels at the end of service life. With proper maintenance may survive age of the building. Regular cleaning (every 5 years) and infrared scanning is recommended.	Renewal	4	19	30	12	1	100%	Y	$35,000
	ES08	Main building switch gear	Main Electrical Room	2000A, 347/600V, 3-phase, 4-wire switch gear, manufactured by Eaton, located in the main electrical room is housing a 700A breaker for Tower D Distribution and an 800A breaker for Sub Main.	Good	2004	Replace switchgear and disconnect switches at the end of service life. With proper maintenance may survive age of the building. Regular cleaning (every 5 years) and infrared scanning is recommended.	Renewal	4	19	30	12	1	100%	Y	$41,000

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	ES09	Distribution Panelboards	Electrical Distribution Rooms	120/208V, 3-phase, 4-wire panels.	Good	2004	Replace switchgear and disconnect switches at the end of service life. With proper maintenance may survive age of the building. Regular cleaning (every 5 years) and infrared scanning is recommended.	Renewal	4	19	30	11	1	100%	Y	$116,000
	ES10	Residential metering centers	Electrical Closets Throughout Building	Metering center with dedicated for each unit combos of electrical meter and breaker.	Good	2004	Replace metering center (excluding electrical meters) at the end of service life. With proper maintenance may survive age of the building. Regular cleaning (every 5 years) and infrared scanning is recommended.	Renewal	4	19	30	11	1	100%	Y	$157,000
	ES11	Residential load centers	Residential Units	120/240V, 125A, 48 CCT load center.	Good	2004	Replace load centers inside apartment units at the end of service life. With proper maintenance may survive age of the building. Regular cleaning (every 5 years) and infrared scanning is recommended.	Renewal	4	19	30	11	1	100%	Y	$262,000
	ES12	Back up Generator	Emergency Generator Room	Emergency power distribution is from 350kW, 437.5kVA, 347/600V stand-by diesel generator.	Good	2004	Replace generator at the end of service life. With proper maintenance may survive age of the building. Regular cleaning (every 5 years) and infrared scanning is recommended.	Renewal	4	19	35	16	1	100%	Y	$105,000
	ES13	Back up power	Main Emergency Distribution Room	There are 2 transfer switches connecting the back-up generator to emergency distribution transformers and panels and the fire pump.	Good	2004	Replace automatic transfer switch at the end of service life. With proper maintenance may survive age of the building. Regular cleaning (every 5 years) and infrared scanning is recommended.	Renewal	4	19	30	11	1	100%	Y	$47,000
	ES14	Emergency Distribution Transformers	Emergency Distribution Rooms	There are - 4EMC: 75kVA - 4EMD: 45kVA	Good	2004	Replace transformer at the end of the service life. With proper maintenance may survive age of the building. Regular cleaning (every 5 years) and infrared scanning is recommended.	Renewal	4	19	30	11	1	100%	Y	$24,000

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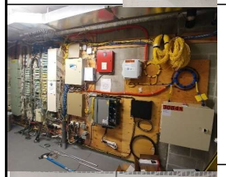
	ES15	Emergency Distribution Panels	Emergency Distribution Rooms		Good	2004	Perform infrared scan.	Study	2	19	5	0		100%	Y	$70,000
	ES16	Security system	Throughout Building	Enter phone entrance panel is located at main entrances. 8 cameras are located throughout the complex. Control panel and recording equipment is located in the communication room.	Good	2015	Security equipment has a typical lifespan of 15 years. Condition of security equipment is good and may require periodic maintenance. As with most electronic equipment, its lifespan can be estimated to be approximately 15 years, as advances in technology will make the system obsolete and it will become difficult to source replacement parts.	Renewal	3	8	15	5	1	100%	Y	$48,000
	ES17	Telephone and TV cable	Communication room	Located in the communication room.	Good	2015	Maintenance and replacement of the equipment by service provider. No capital expenses anticipated.	Not Applicable	Not Applicable	8		1	1	100%	Y	
	ES18	Fire alarm panel	Main Entrances	An Edwards EST amplifier termnial panel is installed in the Main Emergency Distribution Room and Emergency Panel Room. An annunciator panel is located at main entrances of both towers, complete with firefighter phones.	Good	2004	Fire alarm panel has a typical lifespan of 15 years. Condition of Fire Alarm panel is good and may require periodic maintenance. As with most electronic equipment, its lifespan can be estimated to be approximately 15 years, as advances in technology will make the system obsolete and it will become difficult to source replacement parts.	Renewal	4	19	15	10	1	100%	Y	$35,000
	ES19	Fire alarm system devices		Fire alarm system devices must be replaced on a regular basis.	Good	2004	The system is tested every year and when failing the devices are replaced immediately. We recommend to include $500 per year into maintenance budget for replacing failed units. Assumed to be covered under operating budget.	Repair Allowance	3	19	1	1	1	100%	Y	$818,000
	ES20	Building indoor lighting system		Majority of the lighting system is a mixture of CFL (compact fluorescent light), halogen and T8 tube fluorescent lighting fixtures.	Good	2004	Replace lighting fixtures at the end of service life. Lighting technology changes and new type of energy efficient lighting appears on market. LED type lighting is becoming more and more affordable every year. We recommend performing an energy study before replacement.	Renewal	4	19	20	5	10	100%	Y	$2,993,000

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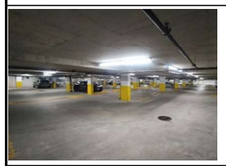
	ES21	Building outdoor lighting system		Outdoor lighting system consists of 27 bollard type fixtures and miscellaneous perimeter wall and in ground installed fixtures	Good	2004	Replace lighting fixtures at the end of service life. Lighting technology changes and new type of energy efficient lighting appears on market. LED type lighting is becoming more and more affordable every year. We recommend performing an energy study before replacement.	Renewal	4	19	20	5	1	100%	Y	$21,000
	ES22	Emergency and Exit lighting		Exit lights and battery back up emergency lighting fixtures are installed throughout the building. Battery packs are mainly used in service rooms while exit signs are near egress points throughout the building.	Good	2004	The life span of fixtures is 20 years. The lifespan for battery packs is approximately 5 years. We recommend to include $500 per year into maintenance budget for replacing failed units. Assumed to be covered under operating budget.	Repair Allowance	3	19	20	1	1	100%	Y	$56,000
	ES23	Parkade lighting	Parkade	Parkade lighting system was mainly lit with T8 fluorescent tube fixtures.	Good	2004	Replace lighting fixtures at the end of service life. Lighting technology changes and new type of energy efficient lighting appears on market. LED type lighting is becoming more and more affordable every year. We recommend performing an energy study before replacement.	Renewal	4	19	20	5	1	100%	Y	$125,000
ELEVATOR SYSTEMS																
 	EL01	Host Marchine Replacement	Car A-D	Machines by manufacturer Leroy Somers are known to have specific problems that warrant giving consideration to short term proactive replacement (the machine brakes were unable to hold the load required by code, the machine bearings failed and prematurely, machine shafts failed outright).	Not Applicable	N/A	Proactive replacement of these machines in the short term. to replace the machine, motor, drive unit and hoist ropes.	Upgrade	2	N/A	0	5	1	100%	Y	$600,000
	EL02	Barrier-Free Access	Car A-D	The elevating equipment does not meet barrier-free access requirements, as listed in the Safety Code for Elevators (B44 Appendix E).	Not Applicable	N/A	While not mandatory to modify existing elevators, barrier free upgrades are recommended within the next 1 - 2 years.	Upgrade	4	N/A	99	2	1	100%	Y	$26,000
	EL03	Door Operator Repalcement	Car A-D	The existing door operator has reached the end of its design lifespan and represents dated technology, it recommend replacement with a new closed-loop door operator	Not Applicable	N/A	This allows the door operator to automatically adapt to the environment in which the elevator is operating, improving overall reliability.	Upgrade	4	N/A	99	5	1	100%	Y	$100,000
	EL04	Hall Door Retainer	Car A-D	The elevator hall doors are not provided with safety retainers. These safety devices are now required by code for new installations and prevent the hall doors from being pushed off the tracks and into the hoistway.	Not Applicable	N/A	the hall door retainers are a desirable safety measure.	Upgrade	4	N/A	99	2	1	100%	Y	$34,000

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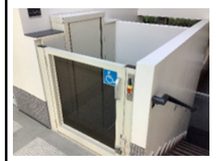
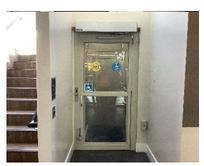
	EL05	Car Door Restrictors	Car A-D	There is currently no car door restrictor provided. The addition of a car door restrictor would prevent the car door from being manually opened by more than 100 mm, This safety device reduces the risk of people falling down the hoistway while attempting to exit a stalled elevator.	Not Applicable	N/A	It is also possible that this code requirement will be made retroactive at some point in the future.	Upgrade	4	N/A	99	2	1	100%	Y	$20,000
	EL06	Hall Door Unlocking Device	Car A-D	Hoistway door unlocking devices are not currently provided at every floor served by the elevator. These devices provide a means to disengage the locking mechanism on hoistway doors and permit the opening of hoistway doors irrespective of the position of the car.	Not Applicable	N/A	it is a valuable improvement and it may be made retroactive at some point in the future.	Upgrade	4	N/A	99	2	1	100%	Y	$34,000
	EL07	Machine Room Equipment Guarding	Car A-D	Equipment Guarding is not provided to the elevators.	Not Applicable	N/A	While not mandatory to provide greater safety for workers, upgrades are recommended.	Upgrade	4	N/A	99	2	1	100%	Y	$60,000
	EL08	Sesimic Upgrades	Car A-D	The Safety Code for Elevators includes comprehensive seismic requirements for new installations to allow passengers to safely exit at the next floor.	Not Applicable	N/A	Upgrades would include a counterweight displacement switcH, seismic sensor, rope retainers, and car and counterweight guiding member position restraints.	Upgrade	4	N/A	99	3	1	100%	Y	$60,000
	EL09	Code Changes and Vandalism	Car A-D	Repairs principally damage to exposed finishes and code changes	Not Applicable	N/A		Upgrade	4	N/A	99	5	1	100%	Y	$25,000
	EL10	Platform Lift Replacement		The platform lift is in acceptable condition: should the Owner choose to retain the unit for its intended purpose we would expect it to remain operational and reliable for an approximate lifetime of 15 to 30 years, depending on use	Not Applicable	N/A	Due to the specialized nature of the platform lift, the entire unit would be replaced rather than modernized or upgraded	Upgrade	4	N/A	99	15	1	100%	Y	$80,000
	EL11	Major Control Modernization	Car A-D	Full maintenance contract covers replacement of major components but over time some components require modernization.	Good	2004	Over time, replacement parts for the controllers will become obsolete and elevator downtime will increase. Complete elevator modernization at end of service life. Soft costs and costs of other trades as included in this item.	Renewal	3	19	30	8	1	100%	Y	$600,000
	EL12	Machine Room Cooling	Car A-D	Presently the only form of machine room cooling is a wall fan. . Proper machine room cooling (air conditioning) should be provided prior to a major control modernization	Good	2004	The cost for this work should be confirmed by a mechanical engineer.	Renewal	3	15	30	15	1	100%	Y	$30,000
	EL13	New Cab Finishes	Car A-D	The existing cab finishes are reasonable and show some signs of wear. The cost could be reduced if performed in conjunction with a major control modernization.	Good	2004	We recommend using a figure of 25.00 per elevator. The cab upgrade be performed in the next 5 to 10 years	Renewal	4	19	10	10	1	100%	Y	$50,000
	PROFESSIONAL SERVICES															
	PS01	Depreciation Report Updates		Updates are recommended every 3 years.	Not Applicable	2019	Update depreciation report.	Study	4	4	3	3	1	100%	Y	$9,000
	PS02	Miscellaneous Engineering Reviews		Periodic reviews of the building envelope and mechanical systems are prudent.	Not Applicable	N/A	Miscellaneous engineering reviews prior to major renewals.	Study	4	N/A	5	5	1	100%	Y	$12,000

Depreciation Report
Katsura and Sequoia - 6233 Katsura Street & 9133 Hemlock Drive, Richmond BC
Final - May 2023

COMPONENT			RECOMMENDATION	CAPITAL PLAN / RESERVE FUND EXPENDITURE FORECAST																												
LABEL	COMPONENTS	LOCATION	RECOMMENDATIONS	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052
				$257,000	$365,000	$220,000	$657,333	$299,333	$2,547,633	$3,144,300	$305,300	$899,300	$903,300	$545,300	$3,382,050	$2,430,050	$1,018,550	$942,550	$1,354,000	$399,000	$389,000	$117,000	$564,000	$307,000	$3,137,250	$1,320,250	$1,804,583	$1,317,250	$2,080,250	$1,287,250	$1,439,250	$1,287,250	$1,019,000
BELOW GRADE SYSTEMS																																
BG01	Concrete Structure	Parkade	A regular allowance has been included to address cracking as required.						$6,000					$6,000					$6,000					$6,000					$6,000				
BG02	Slab on Grade	P3 / P2	The slab on grade is expected to last the life of the complex with regular maintenance. No anticipated capital expenses.																														
BG03	Suspended Slabs-Traffic Coating	Parkade Level P1 & P2	Replacement of traffic coating, including repainting of stall and traffic lines at end of service life. Regular maintenance should include patch repair in high use areas (typically drive aisles).				$299,333	$299,333	$299,333																		$299,333						
BG04	Exterior Stairs and Fire Escapes	Parkade	Stairs likely last the life of the complex. Handrails may require localized replacement. These repairs are assumed to be completed as part of regular maintenance.																														
BG05	Interior Parkade Finishes	Parkade	Renew paint coating.				$65,000										$65,000										$65,000						
BG06	Man Doors	Parkade	The man doors will likely last the life of the complex unless physically damaged. No capital replacements anticipated therefore individual replacements are assumed to completed as part of regular maintenance.																														
BG07	Overhead Doors - Metal	Parkade	Replacement of the overhead metal doors and operating system.						$16,000															$16,000									
BG08	Overhead Doors - Metal	Parkade	Replacement of the overhead metal doors and operating system.						$32,000																				$32,000				
BG09	Storage lockers	Parkade	An allowance has been noted to repaint the mesh and for the repair of miscellaneous hardware.						$23,000															$23,000									
ABOVE GRADE SYSTEMS																																
Exterior Walls																																
EW01	Exterior Wall Construction - Concrete	All Elevations	The exterior concrete should be repainted every 10 years. Budget allows for some crack repair to be completed at the same time.										$535,000										$535,000										$535,000
EW02	Brick Veneer Cladding	All Elevations Townhouses.	Brick is expected to last the life of the building, however, localized replacement and mortar joint repointing is required.						$90,000																				$90,000				
EW03	Exterior Sealant	Windows and Doors	Replace sealants at end of service life. Localized replacements as needed may prolong life expectancy. The following sealant replacement has been planned to occur in line with the concrete repainting project to address observations and take advantage of economies of scale.												$142,000												$142,000						
Glazing System																																
GS01	Aluminum Framed Windows	All Elevations	An allowance has been noted to replace failed IGU's and for the repair of miscellaneous hardware.				$21,000			$21,000			$21,000			$21,000			$21,000			$21,000			$21,000			$21,000			$21,000		
GS02			Replacement of the windows at the end of the service life.																					$1,287,250	$1,287,250	$1,287,250	$1,287,250	$1,287,250	$1,287,250	$1,287,250	$1,287,250		
GS03	Aluminum Framed Sliding Doors	Various exterior access to courtyard, and decks	Replace the sliding doors at the end of their service life. Repair cost included in window repair allowance.																					$95,000									
GS04	Exterior Swing Doors - Aluminum Framed	Various exterior access to balconies.	Replace doors at end of service life. Painting is assumed to be covered under general maintenance.																					$323,000									
GS05	Tower Exterior Swing Doors	Towers	Replace doors at end of service life. Painting is assumed to be covered under general maintenance.																					$11,000									
GS06	Exterior Swing Doors - Solid Core Wood	Entry to Townhouses	Replace doors at end of service life. Painting is assumed to be covered under general maintenance.																					$83,000									
GS08	Front Door and Interior doors	Ground Floor - Amenity Area	Replacement of the windows at the end of the service life.																					$42,000									
GS09	Lobby Doors	East and South Elevation of Towers	Replace the lobby door assemblies at the end of their service life.																					$21,000									
Balcony Systems																																
BS01	Balconies- Liquid Urethane	Balconies	Replace membrane at the end of their service life. Cost includes surface preparation and recoating.						$323,000												$323,000												$323,000
BS02	Eyebrows	Townhouses	Replace membrane at the end of their service life. Cost includes surface preparation and recoating.						$47,000												$47,000												$47,000
BS04	Glazed Metal Guardrails & Dividers	Balconies & Decks	Railings expected to last at least 50 years with ongoing maintenance. Replace at end of service life.																														
BS05	Balcony Guardrails	Balconies, Decks, Roof Deck	Replace guardrails at end of service life.Painting is assumed to be covered under general maintenance.																	$240,000													
BS07	Balcony Slab Edges	Balconies	Allowance to conduct periodic concrete repairs to the slab edge and deck; includes repainting balcony soffits. In conjunction with balcony waterproofing				$105,000												$105,000											$105,000			

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				$257,000	$365,000	$220,000	$657,333	$299,333	$2,547,633	$3,144,300	$305,300	$899,300	$903,300	$545,300	$3,382,050	$2,430,050	$1,018,550	$942,550	$1,354,000	$399,000	$389,000	$117,000	$564,000	$307,000	$3,137,250	$1,320,250	$1,804,583	$1,317,250	$2,080,250	$1,287,250	$1,439,250	$1,287,250	$1,019,000
Roof Systems																																
RS01	Flat roof	Tower & Townhouse Roofs	Replacement of the roof membranes at the end of the service life, including all associated work such as flashing replacement and joint sealing. Assumes the majority of ballast and insulation will be reused. Membranes can have a life expectancy from 15-30 years depending on the type. We assume SBS or better was installed during construction. No roof replacement, Repairs & maintenance of roof drains, scuppers, flashing, vents and anchors are inlcuded in the annual maintenance.												$643,250	$643,250	$643,250	$643,250															
RS02	Roof Deck Membranes	Ground Floor	Replacement at end of service life includes all associated work such as flashing replacement and joint sealing. Assumes the majority of the pavers and insulation will be reused.							$192,000																						
RS04	Podium Waterproofing System	Over Parkade	Replace waterproofing membrane at end of service life. Cost includes removal and replacement of all overburden.												$1,346,500	$1,346,500																
RS06	Sklight	Amenity Area	Skylights are expected to last the life of the building. An allowance has been included in the plan				$27,000															$27,000										
RS09	Metal Louvres	Tower & Townhouse Roofs	Replace at the end of service life.(40 years of lifecycle).																						$11,000							
INTERIOR FINISHES																																
IF01	Interior Doors	Entrances to Units	Phased replacement of the swing doors as required. Maintenance includes repainting the doors completed on an as needed basis funded through the operating budget.																						$87,000							
IF02	Corridors Flooring	Common Corridors	Replace carpets at end of service life.						$102,000																				$102,000				
IF03	Lobby Tile Flooring	Lobby & Elevator Vestibules	Replace tile at end of service life or as required.						$44,000																				$44,000				
IF04	Corridor Walls and Ceilings	Common Corridors	Repaint corridor walls and ceilings as required						$161,000																				$161,000				
IF05	Amenity - Lobby Finishes	Main Floor - Lobby and Concierge	An allowance to renew finishes and furnishings as needed.				$17,000															$17,000										
IF07	Amenity - Lounge Room	Ground Floor - Amenity Area	An allowance to renew finishes and furnishings as needed.				$43,000															$43,000										
IF08	Amenity - Gym Equipment	Ground Floor - Amenity Area	Fitness equipment is leased by the Strata.						$16,000										$16,000										$16,000				
IF09	Washrooms	Ground Floor - Amenity Area	An allowance to renew finishes and equipment as needed.						$15,000															$15,000									
IF10	Amenity - Guest Suite	Ground Floor	An allowance to renew guest room finishes as needed.			$16,000										$16,000										$16,000						
IF11	Sauna and Steam Room	Ground Floor - Amenity Area	An allowance to renew finishes and equipment as needed.			$6,000															$6,000											
IF13	Pool Area	Ground Floor - Amenity Area	An allowance to renew finishes and equipment as needed.						$50,000															$50,000									
SITE DEVELOPMENT																																
SD01	Pedestrian Paving	Throughout Complex	An allowance is provided for periodic resetting of concrete paving.				$11,000										$11,000										$11,000						
SD02	Aluminum Fences	Throughout Complex	Replace site furniture at the end of service life or as required.			$6,000					$6,000					$6,000					$6,000				$6,000					$6,000		
SD03	Concrete Planters	Throughout Complex	An allowance for localized replacement and repointing.						$8,000															$8,000									
SD04	Soft Landscaping	Throughout Complex	Landscaping is assumed to be covered under maintenance. Full replacement is included in cost of roof deck and podium renewals. No capital expenses anticipated.																														
SD06	Metal Fences	Throughout Complex, Townhouses	Railings will likely last the life of the complex with maintenance including replacing corroded fasteners and paint touch ups.						$6,000																				$6,000				

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LABEL	COMPONENTS	LOCATION	RECOMMENDATIONS	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052
				$257,000	$365,000	$220,000	$657,333	$299,333	$2,547,633	$3,144,300	$305,300	$899,300	$903,300	$545,300	$3,382,050	$2,430,050	$1,018,550	$942,550	$1,354,000	$399,000	$389,000	$117,000	$564,000	$307,000	$3,137,250	$1,320,250	$1,804,583	$1,317,250	$2,080,250	$1,287,250	$1,439,250	$1,287,250	$1,019,000
MECHANICAL SYSTEMS																																
Plumbing Systems																																
MS01	Plumbing Fixtures	Throughout Building	The plumbing fixtures in the building are in good condition and are expected to last approximately 30 years. A repair allowance has been provided to cover random damage to fixtures.												$9,000																		
MS02	Domestic Water Distribution - Pipes	Water Entry Room	The service life of the ductile pipe is over 40 years. This cost estimate includes a lump sum for the replacement/repair of the ductile pipe in the Water Entry Room.																						$698,000								
MS03	Domestic Water Distribution - Pipes	Throughout Building	The life expectancy for copper pipework used for domestic water distribution ranges from 20-25 years . Re-piping a building requires demolition of wall finishings, removal of existing header and riser piping, replacement of all piping, and refinishing of demolished areas. Stainless steel piping is recommended as a replacement, as it is constructed with thicker walls, which extends service life significantly. Stainless steel re-piping typically has a cost of approximately $8,150.00 per unit in the building. This cost estimate incorporates replacement of DCW, DHW and hot water recirculation piping risers and headers.							$2,537,000																							
MS04	Domestic Water Distribution - Pipes	Distribution to Suites and Within Suites to Fixtures	The service life of PEX is at least 50 years. Re-piping of PEX typically has a cost approximately $7,250.00 per unit in the building. This cost estimate incorporates replacement of DCW, DHW and hot water recirculation piping branches to the fixtures in the suites.																														
MS05	Domestic Water Distribution - Booster Pumps	Mechanical Room	Total replacement of pumps at the end of service lives (25 - 30 years).												$65,000																		
MS06	Domestic Water Distribution - Booster Pumps	Mechanical Room	Rebuild one pump every 4-6 years. We recommend wire brushing the rusty sections and coating with an anti-corrosive paint system.	$9,000					$9,000					$9,000					$9,000					$9,000					$9,000				
MS07	Domestic Water Distribution - Major Valves	Mechanical Room	Major valves have a typical lifespan of 10-15 years, but the lifespan can be extended by performing rebuilds as part of the regular maintenance schedule. Replace at the end of the typical lifespan.		$54,000															$54,000												
MS08	Domestic Hot Water System - Water Heaters	Mechanical Room - Penthouse - Tower D, Katsura St.	Atmospheric gas fired boilers have a typical service life of 15 years.											$64,000															$64,000				
MS09	Domestic Hot Water System - Water Heaters	Mechanical Room - Penthouse - Tower C - Hemlock St.	Atmospheric gas fired boilers have a typical service life of 15 years.	$64,000															$64,000														
MS10	Domestic Hot Water System - Pumps	Mechanical Room - Penthouse - Tower D - Katsura St.	Inline centrifugal pumps have a typical lifespan of approximately 15 years. Replace at the end of the typical lifespan. Repair any active leak.													$7,000															$7,000			
MS11	Domestic Hot Water System - Pumps	Mechanical Room - Penthouse - Tower C - Hemlock St.	Inline centrifugal pumps have a typical lifespan of approximately 15 years. Replace at the end of the typical lifespan.			$7,000															$7,000												

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				$257,000	$365,000	$220,000	$657,333	$299,333	$2,547,633	$3,144,300	$305,300	$899,300	$903,300	$545,300	$3,382,050	$2,430,050	$1,018,550	$942,550	$1,354,000	$399,000	$389,000	$117,000	$564,000	$307,000	$3,137,250	$1,320,250	$1,804,583	$1,317,250	$2,080,250	$1,287,250	$1,439,250	$1,287,250	$1,019,000
MS12	Domestic Hot Water Recirculation Pumps	Mechanical Room - Penthouse - Tower D - Katsura St.	Inline centrifugal pumps have a typical lifespan of approximately 15 years. Replace at the end of the typical lifespan.													$4,000															$4,000		
MS13	Domestic Hot Water Recirculation Pumps	Mechanical Room - Penthouse - Tower C - Hemlock St.	Inline centrifugal pumps have a typical lifespan of approximately 15 years. Replace at the end of the typical lifespan.	$3,000															$3,000														
MS14	Domestic Hot Water System - DHW Storage - Katsura St.	Mechanical Room - Penthouse - Tower D - Katsura St.	DHW storage tanks have a typical lifespan of 15-20 years. Replace at the end of the typical lifespan.		$28,000																				$28,000								
MS15	Domestic Hot Water System - DHW Storage - Katsura St.	Mechanical Room - Penthouse - Tower D - Katsura St.	DHW storage tanks have a typical lifespan of 15-20 years. Replace at the end of the typical lifespan.										$10,000																				$10,000
MS16	Domestic Hot Water System - DHW Storage - Hemlock St.	Mechanical Room - Penthouse - Tower C - Hemlock St.	DHW storage tanks have a typical lifespan of 15-20 years. Replace at the end of the typical lifespan.		$38,000																				$38,000								
MS17	Domestic Hot Water System - Expansion Tanks - Katsura St.	Mechanical Room - Penthouse - Tower D - Katsura St.	Expansion tanks have a typical lifespan of approximately 20 years. Replace tanks at the end of service life.													$2,000																	
MS18	Domestic Hot Water System - Expansion Tanks - Hemlock St.	Mechanical Room - Penthouse - Tower C - Hemlock St.	Expansion tanks have a typical lifespan of approximately 20 years. Replace tanks at the end of service life.		$2,000																				$2,000								
MS19	Domestic Cold Water System - Drawdown Tanks - Towers C & D	Roof Mechanical Room - Towers C & D - Hemlock St. & Katsura St.	Drawdown tanks have a typical lifespan of approximately 20 years. Replace tanks at the end of service life.		$8,000																				$8,000								
MS20	Pool Water & Spa Systems - Boilers	Boiler & Pool Equipment Room - Level 5	Replace pool boiler systems at the end of service life.	$12,000															$12,000														
MS21	Pool Water & Spa System - Pumps	Boiler & Pool Equipment Room - Level 5	Pool water pumps have a typical lifespan of approximately 10 - 15 years. Replace at the end of the typical lifespan.	$16,000															$16,000														
MS22	Pool Water & Spa System - General	Boiler & Pool Equipment Room - Level 5	Pool mechanical equipment has a typical lifespan of 15-20 years. Replace worn out components at the end of life. A lump sum repair allowance has been included.		$13,000																				$13,000								
MS23	Steam Room Heating Systems	Steam Room	Typical lifespan of a steam generator is approximately 10 years. Replace unit at end of service life.										$29,000										$29,000										$29,000
MS24	Sanitary - Water Piping and Fittings	Parkade Level and Throughout	Cast iron sanitary drainage piping typically lasts 40+ years. A repair allowance has been included to address sectional repairs. We recommend wire brushing the rusty sections and coating with an anti-corrosive paint system.																						$32,000								
MS25	Storm - Water Piping and Fittings	Parkade Level and Throughout	Cast iron storm water drainage piping typically lasts 40+ years. A repair allowance has been included to address sectional repairs.																						$27,000								
MS26	Storm - Sump Pump - Parkade drain, Elevator pit sump	Level 1 - Elevator Pit, Towers C & D	Submersible pumps have a typical lifespan of 10-15 years. Replace at the end of service life.	$8,000															$8,000														

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HVAC Systems																																
MS27	Heating Systems	Hallways and Throughout	Baseboard and unit heaters can be replaced as required based on surface damage. Typical expected lifespan is 30 years.												$13,000																		
MS28	HVAC - Corridor Make-Up Air Unit	Penthouse Roof - Tower C & D - Hemlock St. & Katsura St	Outdoor makeup air units have a typical lifespan of approximately 15-20 years. Provide periodic maintenance. Replace or refurbish when unit fails.		$55,000																				$55,000								
MS29	HVAC - Towers C & D Vestibules - Supply Fans	Level 1 - Parkade - Towers C & D	Centrifugal exhaust and supply fans have a typical service life of 20 years. Provide periodic maintenance. Replace or refurbish when unit fails.		$4,000																				$4,000								
MS30	HVAC - Indoor Pool Make-Up Unit Unit	Boiler & Pool Equipment Room - Level 5	Indoor makeup air units have a typical lifespan of approximately 20-25 years. Provide periodic maintenance. Replace or refurbish when unit fails.							$28,000																						
MS31	HVAC - Electrical/Transformer Room AC Cabinet Unit	Level 1 - Parkade - Tower C - Hemlock St.	Air to air condensing units and associated fan coil units have a typical life span of 10-15 years. Replace at end of life. Note: Replacement value includes condensing unit and fan coil.												$22,000																		
MS32	HVAC - Single Split AC Cabinet Units	Level 5 Floor Amenity Spaces	Air to air condensing units and associated fan coil units have a typical life span of 10-15 years. Replace at end of life. Note: Replacement value includes condensing unit and fan coil.	$26,000															$26,000														
MS33	HVAC - Single Split AC Cabinet Unit	Ground Floor Lobby - Towers C & D - Hemlock St.& Katsura St.	Air to air condensing units and associated fan coil units have a typical life span of 10-15 years. Replace at end of life. Note: Replacement value includes condensing unit and fan coil.	$21,000															$21,000														
MS34	Ventilation Fans - Parkade Exhaust	Parkade Throughout	Axial type exhaust and supply fans have a typical service life of 20 years. Provide periodic maintenance. Replace or refurbish when unit fails.		$42,000																				$42,000								
MS35	Ventilation Fans - Storage & Locker Rooms	Storage & Locker Rooms Throughout	Cabinet exhaust and supply fans have a typical service life of 20 years. Provide periodic maintenance. Replace or refurbish when unit fails.		$36,000																				$36,000								
MS36	Ventilation Fans - Utility Rooms	Tel/Cable, Water Entry, Service Rooms	Centrifugal exhaust and supply fans have a typical service life of 20 years. Provide periodic maintenance. Replace or refurbish when unit fails.		$11,000																				$11,000								
MS37	Ventilation Fans - Electrical and Emergency Panel Rooms	Level 1 - Tower D - Electrical & Emergency Panel Rooms	Centrifugal exhaust and supply fans have a typical service life of 20 years. Provide periodic maintenance. Replace or refurbish when unit fails.		$9,000																				$9,000								
MS38	Ventilation Fans - Garbage Rooms	Ground Level Garbage Rooms - Towers C & D	Centrifugal exhaust and supply fans have a typical service life of 20 years. Provide periodic maintenance. Replace or refurbish when unit fails.		$9,000																				$9,000								
MS39	Ventilation Fans - Elevator Machine Rooms	Penthouse Roof - Tower C & D - Hemlock St. & Katsura St	Centrifugal exhaust and supply fans have a typical service life of 20 years. Provide periodic maintenance. Replace or refurbish when unit fails.			$11,000																				$11,000							
MS40	CO/NOx Sensors - Parkade Exhaust	Parkade	CO/NOx sensors have a typical lifespan of 15 years. Replace or recalibrate when unit fails.	$28,000															$28,000														
MS41	Ventilation - Local Exhaust Fans	Kitchens/ Bathrooms/ Laundries	Domestic style exhaust fans have a statistical median life span of 20 years. It is assumed that these units are the responsibility of the corresponding suite owners. As such no depreciation costs are provided for these items.																														

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Fire Suppression Systems																																
MS42	Sprinkler System - Main Supply	Water Entry Room on Level 1	Ensure that all valves and valve assemblies are inspected, maintained and tested as per NFPA 25. Replace or refurbish components as they fail. We recommend wire brushing the rusty sections and coating with an anti-corrosive paint system.																						$37,000								
MS43	Sprinkler System - Fire Pump & Controller	Water Entry Room on Level 1	Ensure that water flow tests and internal pipe inspections are performed as per NFPA 25. Fire pumps should last in excess of 25 years. A modest repair allowance after this time is recommended.							$58,000																						
MS44	Sprinkler System - Pipes & Sprinklers	Water Entry Room on Level 1 and Throughout	Ensure that water flow tests and internal pipe inspections are performed as per NFPA 25. Pipes and sprinklers should last in excess of 40 years. A modest repair allowance after this time is recommended.																						$42,000								
ELECTRICAL SYSTEMS																																
ES02	Main high-voltage disconnect	Main Electrical Room	Replace disconnect switch at the end of the service life. With proper maintenance may survive age of the building. Regular cleaning (every 5 years) and infrared scanning is recommended.												$18,000																		
ES03	Main high-voltage transformer	Main Electrical Room	Replace transformer at the end of the service life. With proper maintenance may survive age of the building. Regular cleaning (every 5 years) and infrared scanning is recommended.												$81,000																		
ES04	Secondary low-voltage transformer	Electrical Distribution Rooms	Replace transformer at the end of the service life. With proper maintenance may survive age of the building. Regular cleaning (every 5 years) and infrared scanning is recommended.												$35,000																		
ES05	Safety Switch	Various Electrical Rooms	Replace transformers and panels at the end of service life. With proper maintenance may survive age of the building. Regular cleaning (every 5 years) and infrared scanning is recommended.												$9,000																		
ES06	Meter Center Distribution Switchgear	Main Electrical Room	Replace transformers and panels at the end of service life. With proper maintenance may survive age of the building. Regular cleaning (every 5 years) and infrared scanning is recommended.												$93,000																		
ES07	Building distribution	Main Electrical Room	Replace transformers and panels at the end of service life. With proper maintenance may survive age of the building. Regular cleaning (every 5 years) and infrared scanning is recommended.													$35,000																	
ES08	Main building switch gear	Main Electrical Room	Replace switchgear and disconnect switches at the end of service life. With proper maintenance may survive age of the building. Regular cleaning (every 5 years) and infrared scanning is recommended.													$41,000																	
ES09	Distribution Panelboards	Electrical Distribution Rooms	Replace switchgear and disconnect switches at the end of service life. With proper maintenance may survive age of the building. Regular cleaning (every 5 years) and infrared scanning is recommended.												$116,000																		
ES10	Residential metering centers	Electrical Closets Throughout Building	Replace metering center (excluding electrical meters) at the end of service life. With proper maintenance may survive age of the building. Regular cleaning (every 5 years) and infrared scanning is recommended.												$157,000																		
ES11	Residential load centers	Residential Units	Replace load centers inside apartment units at the end of service life. With proper maintenance may survive age of the building. Regular cleaning (every 5 years) and infrared scanning is recommended.												$262,000																		
ES12	Back up Generator	Emergency Generator Room	Replace generator at the end of service life. With proper maintenance may survive age of the building. Regular cleaning (every 5 years) and infrared scanning is recommended.																	$105,000												
ES13	Back up power	Main Emergency Distribution Room	Replace automatic transfer switch at the end of service life. With proper maintenance may survive age of the building. Regular cleaning (every 5 years) and infrared scanning is recommended.												$47,000																		
ES14	Emergency Distribution Transformers	Emergency Distribution Rooms	Replace transformer at the end of the service life. With proper maintenance may survive age of the building. Regular cleaning (every 5 years) and infrared scanning is recommended.												$24,000																		

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ES15	Emergency Distribution Panels	Emergency Distribution Rooms	Perform infrared scan.	$70,000					$70,000					$70,000					$70,000					$70,000					$70,000				
ES16	Security system	Throughout Building	Security equipment has a typical lifespan of 15 years. Condition of security equipment is good and may require periodic maintenance. As with most electronic equipment, its lifespan can be estimated to be approximately 15 years, as advances in technology will make the system obsolete and it will become difficult to source						$48,000															$48,000									
ES17	Telephone and TV cable	Communication room	Maintenance and replacement of the equipment by service provider. No capital expenses anticipated																														
ES18	Fire alarm panel	Main Entrances	Fire alarm panel has a typical lifespan of 15 years. Condition of Fire Alarm panel is good and may require periodic maintenance. As with most electronic equipment, its lifespan can be estimated to be approximately 15 years, as advances in technology will make the system obsolete and it will become difficult to source											$35,000															$35,000				
ES19	Fire alarm system devices		The system is tested every year and when failing the devices are replaced immediately. We recommend to include $500 per year into maintenance budget for replacing failed units. Assumed to be covered under operating budget																$818,000														
ES20	Building indoor lighting system		Replace lighting fixtures at the end of service life. Lighting technology changes and new type of energy efficient lighting appears on market. LED type lighting is becoming more and more affordable every year. We recommend performing an energy study before replacement.						$299,300	$299,300	$299,300	$299,300	$299,300	$299,300	$299,300	$299,300	$299,300	$299,300																
ES21	Building outdoor lighting system		Replace lighting fixtures at the end of service life. Lighting technology changes and new type of energy efficient lighting appears on market. LED type lighting is becoming more and more affordable every year. We recommend performing an energy study before replacement.						$21,000																				$21,000				
ES22	Emergency and Exit lighting		The life span of fixtures is 20 years. The lifespan for battery packs is approximately 5 years. We recommend to include $500 per year into maintenance budget for replacing failed units. Assumed to be covered under operating budget		$56,000																				$56,000								
ES23	Parkade lighting	Parkade	Replace lighting fixtures at the end of service life. Lighting technology changes and new type of energy efficient lighting appears on market. LED type lighting is becoming more and more affordable every year. We recommend performing an energy study before replacement.						$125,000																				$125,000				
ELEVATOR SYSTEMS																																	
EL01	Host Marchine Replacement	Car A-D	Proactive replacement of these machines in the short term. to replace the machine, motor, drive unit and hoist ropes.						$600,000																								
EL02	Barrier-Free Access	Car A-D	While not mandatory to modify existing elevators, barrier free upgrades are recommended within the next 1 - 2 years.			$26,000																											
EL03	Door Operator Repalcement	Car A-D	This allows the door operator to automatically adapt to the environment in which the elevator is operating, improving overall reliability.						$100,000																								
EL04	Hall Door Retainer	Car A-D	the hall door retainers are a desirable safety measure.			$34,000																											
EL05	Car Door Restrictors	Car A-D	It is also possible that this code requirement will be made retroactive at some point in the future.			$20,000																											
EL06	Hall Door Unlocking Device	Car A-D	it is a valuable improvement and it may be made retroactive at some point in the future.			$34,000																											
EL07	Machine Room Equipment Guarding	Car A-D	While not mandatory to provide greater safety for workers, upgrades are recommended.			$60,000																											
EL08	Sesimic Upgrades	Car A-D	Upgrades would include a counterweight displacement switcH, seismic sensor, rope retainers, and car and counterweight guiding member position restraints.				$60,000																										
EL09	Code Changes and Vandalism	Car A-D							$25,000															$50,000								$75,000

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EL10	Platform Lift Replacement		Due to the specialized nature of the platform lift, the entire unit would be replaced rather than modernized or upgraded																$80,000														
EL11	Major Control Modernization	Car A-D	Over time, replacement parts for the controllers will become obsolete and elevator downtime will increase. Complete elevator modernization at end of service life. Soft costs and costs of other trades as included in this item.									$600,000																					
EL12	Machine Room Cooling	Car A-D	The cost for this work should be confirmed by a mechanical engineer.																$30,000														
EL13	New Cab Finishes	Car A-D	We recommend using a figure of 25.00 per elevator. The cab upgrade be performed in the next 5 to 10 years											$50,000																			
PROFESSIONAL SERVICES																																	
PS01	Depreciation Report Updates		Update depreciation report.				$9,000			$9,000			$9,000			$9,000			$9,000			$9,000			$9,000			$9,000			$9,000		
PS02	Miscellaneous Engineering Reviews		Miscellaneous engineering reviews prior to major renewals.						$12,000					$12,000					$12,000					$12,000					$12,000				