Depreciation Report Update | Project R-07671.003

Chateau Comox, 1272 Comox Street, Vancouver, BC

To The Owners, Strata Plan LMS280
c/o Edward Jang, Strata Property Manager
Sterling Management Services Ltd.
2033 – 1177 West Hastings Street
Vancouver BC

Site Visit: April 25, 2023
Submitted: August 24, 2023 by
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1 Introduction

RDH Building Science Inc. (RDH) was retained by Strata Plan LMS280 (Owners) to prepare a Depreciation Report Update (Report) for the building known as Chateau Comox, which is located at 1272 Comox Street, Vancouver, BC. The Report considers the common property and limited common property components (the Assets) that the Owners are responsible to maintain, repair, and replace.

The Report is intended to help the Owners, the Strata Council, and the Management Team make informed decisions about the allocation of resources to the common property Assets (such as roofs, windows, boilers, and elevators).

This Report meets the requirements stipulated in the current Strata Property Act and Regulations. The Report includes a physical inventory of the common property Assets; estimated costs for capital expenditures over a 30-year horizon; and three funding models. Refer to the appendices for RDH's qualifications and information on errors and omissions insurance. In accordance with the requirements of the Act, RDH declares that there is no relationship between the employees of RDH and the Owners.

This Report is an update to the original Depreciation Report, which was issued on January 23, 2015. As part of our work for this Report, a site visit was completed on April 25, 2023. The financial data is based on the 2022/2023 fiscal year. A Report was distributed to the Strata Council and Strata Management on August 24, 2023.

The Report is a synopsis of a significant volume of data and has two parts: the summary and the appendices. The summary is intended to provide an overview of the Report. The appendices provide detailed information to support the summary Report. The appendices include a glossary of terms. Words that are *italicized* are defined in the glossary.

As the physical and financial status of the Assets change over time, the Report will require updating. The Strata Property Act requires updates to the Report every three years; however, the Owners can choose to update portions of the Report more frequently, at their discretion, to reflect changes to their financial status and completed work.

2 Chateau Comox

Chateau Comox is a residential mid-rise building of cast-in-place concrete construction with steel stud in-fill walls, situated over a below-grade concrete parkade. A 2-phase building enclosure rehabilitation project was completed in 1999 and 2009, and consisted of new rainscreen stucco clad walls, window and sliding glass doors, and balcony assemblies. Exterior wall areas that are protected remain as the original face-sealed stucco cladding. Additionally, the low-sloped roof and deck membranes were renewed in 2008.

The principal systems in the building include the building enclosure (the separation of the interior from exterior space), electrical (the electrical distribution, communications, and security equipment), mechanical (heating and plumbing), elevators, fire safety (sprinklers, fire detection, and egress equipment), interior finishes, amenities, and site work. The Assets within each system are described in detail in Appendix B.

Key physical parameters of Chateau Comox are summarized in Table 2.1, Figure 2.1, and Figure 2.2 below.

TABLE 2.1 KEY PHYSICAL PARAMETERS

Figure 2.1 South elevation photograph of Chateau Comox.

Date of first occupancy (approximate)	1992
Approximate gross floor area, including the parkade (ft²)	38,700
Stories above-grade	8
Total number of strata lots	21

Figure 2.2 Aerial photograph of Chateau Comox (©Google 2023).

3 Assessments

The Report combines two distinct types of analysis: a *physical assessment,* and a *financial assessment.* The assessments are used to determine what the Owners possess, what condition the Assets are in, what the Owners are responsible for, and the *capital costs* associated with the Assets.

The process of preparing the Depreciation Report Update is summarized in Figure 3.1 below:

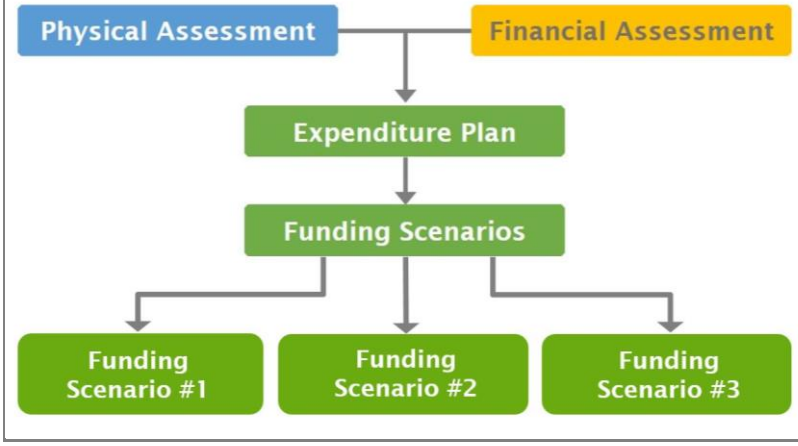

Figure 3.1

Depreciation Report Update Process

Funding models are built based on the Strategic Plan (30 years).

The following sections provide a brief overview of the physical assessment and financial assessment.

3.1 Physical Assessment

The physical assessment has two parts: an inventory and an evaluation.

The *Asset Inventory* identifies "the common property, the common Assets and those parts of a strata lot or limited common property, or both, that the Owners are responsible to maintain or repair under the Act, the Strata Corporation's bylaws or an agreement with an Owner" (*Strata Property Act Regulation,* BC Reg 43/2000, Ch. 6.2). In other words, it identifies what the Owners possess and must repair and maintain. The Asset Inventory is included as an appendix to this Report.

The evaluation is used to forecast common repairs, replacements, and maintenance activities that "usually occur less often than once a year or that do not usually occur" (*Strata Property Act Regulation*, BC Reg 43/2000, Ch.6.2). In other words, the evaluation predicts only events that occur at intervals greater than one year.

The evaluation is typically based on:

- → A review of historical documentation, such as meeting minutes and invoices,
- → Discussions with Strata Corporation representatives,
- → A visual review of the building, limited to a sample of readily accessible Assets, and
- → A review of other technical information, such as construction drawings, previous investigations or reports, and maintenance manuals.

Destructive testing, disassembly, and performance testing are not included in the physical evaluation; this Report does not replace a Warranty Review or Condition Assessment. Please visit www.rdh.com for additional information on Warranty Reviews and Condition Assessments.

The condition of some Assets may be concealed, for example, buried infrastructure (such as sanitary drainage lines) or building enclosure Assets (such as cladding). For Assets with the potential for concealed failure, a number of tools are used to assign a reasonable expected service life including the typical performance of the Asset in other, similar properties; the performance history reported by the Owners; the original drawings; and any previous investigation reports commissioned by the Owners. It is expected that the Owners will need more detailed reviews as Assets approach the end of their service lives. A summary of the Asset service lives is provided in the appendices of this Report. Allowances for additional reviews or investigations are included, as appropriate. Recommendations taken from any additional reviews should be incorporated into future Depreciation Report Updates.

As part of the physical assessment, RDH compiled a history of completed projects by reviewing the documents provided by the Owners and interviewing Strata Corporation representatives. The history is summarized in Table 3.1 below. The history of renewals establishes the chronological age of the Assets while the history of major maintenance may affect the effective age of the Assets.

TABLE 3.1 MAINTENANCE AND RENEWALS HISTORY

Building Enclosure

- 2019 – Recoated the exterior concrete wall and stucco clad wall
- 2013 – Locally repaired the deteriorated wall flashings at the northeast corner of the building at Levels 1 to 4
- 2013 – Painted the overhead parkade gate
- 2012 – Commissioned a Building Enclosure Condition Assessment Report by Spratt Emanual
- 2011 – Replaced the metal grating on the overhead parkade gate
- 2010 – Commissioned a 12-Month Warranty Review by Spratt Emanual
- 2009 – Building enclosure rehabilitation project, including:
  - Replaced the stucco cladding and windows on the north and south elevations
  - Sliding glass doors
  - Recoated the balcony membrane on the north elevation and 8th floor of south elevation
- 2008 – Replaced the low-sloped roof and deck membranes
- 2007 – Commissioned a Leak Investigation Report by Spratt Emanual
- As required – Replace the balcony membranes in phases
- As required – Commission roof and deck assessments, including localized repairs

Electrical

- 2017 – Upgraded the interior lighting throughout all common areas
- 2017 – Replaced the enterphone
- 2017 – Upgraded the security surveillance system
- 2014 – Installed the battery charger for emergency generator
- 2011 – Replaced the proximity access control receiving unit
- 2009 – Replaced the exterior light fixtures

TABLE 3.1 MAINTENANCE AND RENEWALS HISTORY
Mechanical → 2021 – Replaced the storm sump pump → 2017 – Replaced the gas detection devices → 2016 – Replaced the domestic hot water tanks in rooftop mechanical room → 2014 – Replaced the overhead parkade gate motor → 2012 – Replaced the water recirculation pump → 2011 – Epoxy relined the domestic water distribution piping → 2007/2006 – Replaced the domestic hot water heaters → As required – Replaced the fans, motors, pumps, valves, etc.
Elevator → 2010 – Keying of the elevator at 6th floor → 2006 – Replaced the elevator cab finishes
Fire Safety → 2017 – Replaced the fire alarm panel → 2013 – Replaced the relays of the fire alarm panel → 2013 – Replaced the dry sprinkler compressor → 2010 – Converted the 6th floor to cross over floor → 2008 – Replaced various fire extinguishers → Ongoing – Cyclically replace the fire detection and initiation devices and emergency egress equipment
Interior Finishes → 2017 – Replaced the meeting room carpet → 2017 – Repainted the meeting room → 2014 – Repainted the vestibules from lobby to P1, east stairs, parkade to laneway doors, garbage room doors → 2012 – Repainted the walls and replaced carpet in various hallways → 2003 – Replaced the lobby carpet and wall tiles
Sitework → 2010 – Installed the aluminum metal gates and enclosures at east and west stairwell exits

On April 25, 2023, a representative of RDH visited the site to visually review the Assets. In addition, a sub consultant (Gunn Consultants Inc.) reviewed the elevator. While the Report does not constitute a maintenance review or condition assessment, some observations regarding the general condition, design and construction of the Assets were made as part of the visual review. These observations were used to determine a reasonable estimated remaining service life of various Assets. Table 3.2 includes examples of some observations made during the review.

TABLE 3.2 OBSERVATIONS BY SYSTEM

SYSTEM	OBSERVATION
Building Enclosure	→ During our site review, it was reported that various original sliding glass doors are difficult to operate and are providing poor thermal comfort.
Mechanical	→ There is various existing natural gas fired mechanical equipment. As the City of Vancouver is aiming to phase out natural gas by 2030, some mechanical equipment may require electrification at the time of renewal. Please contact us if you have questions on options of how to approach this.

3.2 Financial Assessment

The financial assessment estimates the future costs associated with the Assets and examines how future funding requirements will be affected by current financial practises. More specifically, the financial assessment identifies:

- → The opening balance in the *Contingency Reserve Fund* (CRF).
- → The estimated value of capital expenditures, expressed in *Current Year Dollars* (CYD).
- → The estimated future value of capital expenditures, expressed in *Future Year Dollars* (FYD). These costs are calculated by applying an inflation rate (3% per year) to the current costs.

The future value of Major Maintenance and Renewal costs can be compared against the building reproduction cost. The building reproduction cost is the cost to reproduce the building in similar materials, in accordance with current market prices, and is obtained from the most recent insurance appraisal.

The financial assessment begins with a review of the current financial situation of the Owners. Table 3.3 below summarizes the key financial parameters reviewed as part of the financial assessment.

TABLE 3.3 KEY FINANCIAL PARAMETERS		
PARAMETER	ORIGINAL REPORT (2014/2015)	UPDATE REPORT (2022/2023)
Fiscal year end	June 30	
Building reproduction cost	$6,683,000	$10,700,000
Operating budget (excluding CRF contribution)	$103,000	$133,156
Annual CRF contribution	$16,000	$11,500
Opening Balance of the CRF	$85,000	$103,528*

**The balance in the CRF varies each month as contributions are made and funds are withdrawn for capital renewal projects and major maintenance activities. The opening CRF balance is reconciled as of the beginning of the 2022/2023 fiscal year.*

The Report includes capital costs only: the costs for activities that occur at intervals greater than one year. Activities that occur annually or more frequently than once a year are considered operating expenses and are not included in the Report funding models and calculations.

Capital costs can be distributed into three general categories:

→ *Catch-up costs*. The cost to complete any deferred maintenance and renewals.

→ *Keep-up costs*. The cost to complete planned cyclical maintenance and renewals.

→ *Get-ahead costs*. The cost to adapt, upgrade and improve.

The Report is based on Keep-up costs. Get-ahead costs (improvements) may also be included, but only if they are required to meet changing codes or standards.

Costs are considered *Class D* estimates (±50%), as defined by the Engineers and Geoscientists of British Columbia (EGBC), or unless noted otherwise. Unless otherwise noted, soft costs, such as consulting fees and contingency allowances are not included, because these costs are highly dependent on the scope of work for a particular project. Scopes of work for specific projects should be developed well in advance so that project budgets, including soft costs, can be refined.

The current value of many Major Maintenance and Renewal activities is calculated by multiplying the quantity of an Asset by standard unit rates (for example, the cost per square foot or cost per linear foot). Quantities are measured from original construction documents and visual observations on-site. The unit rates are based on historical information, construction trends, information from contractors, and other sources, as appropriate. Unit rates will fluctuate over time. Basic unit rates are adjusted for the relative complexity of the property. A detailed list of activities and their associated costs are available through the appendices of this Report.

Costing Caveats

The capital costs given in the Report provide a basic estimate for long term planning. They are intended to help guide priority setting and provide a clearer sense of timing. They are not suitable for planning specific projects as they cannot account for project soft costs (such as taxes, grants, engineering or design, municipal permits, etc.), or for project specific construction costs (such as access to the work (e.g. scaffold), contingencies, hazardous materials, disposal, project management, etc.). Such costs cannot be estimated without more information, including a project scope and preliminary design work. Once a project reaches the planning stages, a reasonable assumption of soft costs should be made based on the

actual needs of the project. It is recommended that this happens well in advance of predicted work to allow time to plan for the funding of the soft costs.

4 Expenditures

There are two main types of activities that relate to expenditures:

- *Renewal* refers to the replacement or refurbishment of an Asset at the end of its useful service life.
- *Maintenance* refers to activities that preserve the Assets, to ensure the Assets will last their predicted service lives and perform as expected.
  - *Major Maintenance* refers to maintenance that occurs at intervals greater than one year, for example, every 18 months, two years, five years. Major Maintenance typically includes activities, such as testing and inspecting, and is considered a capital expense.
  - *Minor Maintenance* includes maintenance activities that occur once a year or more frequently, such as quarterly or monthly.

The costs associated with Major Maintenance and Renewals are included in the Report funding models as required by the Strata Property Act. Costs associated with Minor Maintenance are included in the Owners' operating budget.

4.1 Major Maintenance and Renewal Expenditures

Table 4.1 below summarizes all Major Maintenance and Renewal costs by system, including costs forecasted for the next 30 years. The values are rounded.

TABLE 4.1 CAPITAL EXPENDITURES SUMMARY BY SYSTEM

SYSTEM	10 YEAR CAPITAL COSTS (WITHOUT INFLATION)	10 YEAR CAPITAL COSTS (WITH INFLATION)	30 YEAR CAPITAL COSTS (WITHOUT INFLATION)	30 YEAR CAPITAL COSTS (WITH INFLATION)
Building Enclosure	$1,200,000	$1,400,000	$2,500,000	$3,700,000
Electrical	$170,000	$210,000	$240,000	$320,000
Mechanical	$180,000	$210,000	$610,000	$890,000
Elevator	$190,000	$190,000	$190,000	$190,000
Fire Safety	$32,000	$36,000	$180,000	$290,000
Interior Finishes	$69,000	$80,000	$120,000	$160,000
Amenities	$8,000	$9,000	$15,000	$21,000
Sitework	$11,000	$14,000	$17,000	$23,000
Building Total	**$1,860,000**	**$2,149,000**	**$3,872,000**	**$5,594,000**

Approximately 50% of the Owners' capital expenditures may occur in the next 10 years. The distribution of estimated capital expenditures over the next 10 years is shown in Figure 4.1 below.

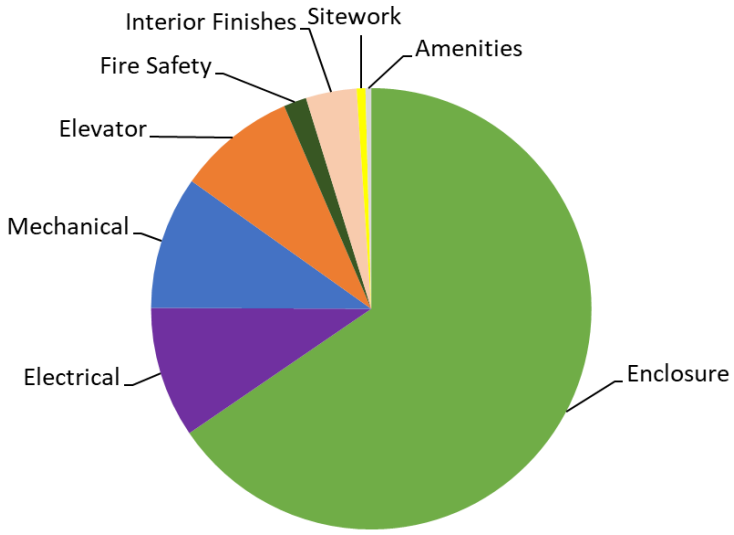

Figure 4.1 Distribution of estimated capital expenditures over 10 years by system.

Section 5 discusses the timing and size of renewal projects forecast for the next 30 years. A detailed list of each Major Maintenance and Renewal activities, including the frequency, costs expressed in CYD, and costs including inflation rates, expressed in FYD are available to the Owners.

5 Major Maintenance and Renewals Planning Horizons

There are three common planning horizons, used for making different types of capital planning decisions:

- ***Strategic*** (30 years): The average service life of many Assets is approximately 25 years (such as roofs) so a long-range view captures most renewal projects. In some cases, an Asset may be replaced more than once in the 30-year horizon.
- ***Tactical*** (5-10 years): Many residential Owners will own their strata lot for less than 10 years; the Tactical Plan captures projects that may occur while current Owners still have an interest in the Strata Corporation.
- ***Operational*** (1 year): The annual operating period encompasses one fiscal cycle (12 months). Typically, the budget is presented and approved at the Annual General Meeting (AGM) and will include any capital expenditures paid from the CRF, as well as the CRF contributions for the year. As a minimum, the decision on the CRF contribution should consider projects forecast for the next five to 10 years.

5.1 Strategic Planning Horizon

Estimated Major Maintenance and Renewal costs over the next 30 years are shown on the graph below (Figure 5.1). The blue bars represent the estimated value of capital costs.

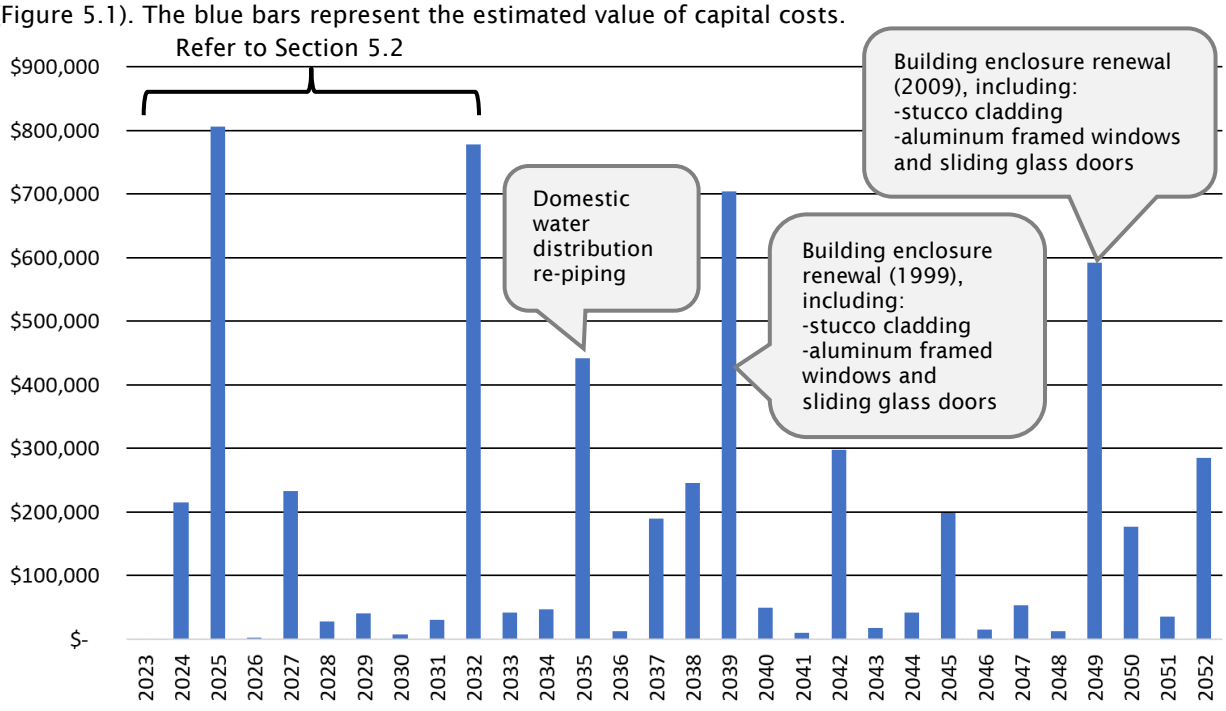

Figure 5.1 Strategic Forecast (30 Years), showing the approximate timing and value of some key capital expenditures.

Each bar on the graph represents a collection of different Major Maintenance and Renewal activities, each with different values. Detailed information about each year, including a description of the Maintenance and Renewal activities and estimated costs, is available in the appendices.

The Strategic Plan represents an estimate of future projects. The actual timing of projects will likely vary. Assets may be replaced earlier or later, depending on the quality of maintenance, in-service conditions, and other factors. The Owners can anticipate changes to the Strategic Plan with each update of the Report.

5.2 Tactical Planning Horizon

The graph below shows the projected major maintenance and renewal costs for the next ten years (Figure 5.2). Commonly, building managers refer to a Five-Year Tactical Plan; however, a 10-Year Plan allows the Owners to see a wider range of projects.

The bars indicate the years in which an event (or bundle of events) is most likely to occur, as well as the total magnitude of Major Maintenance and Renewal costs for that year and the costs broken down by system. The soft costs associated with project implementation, such as site access, design, and contract administration are not included.

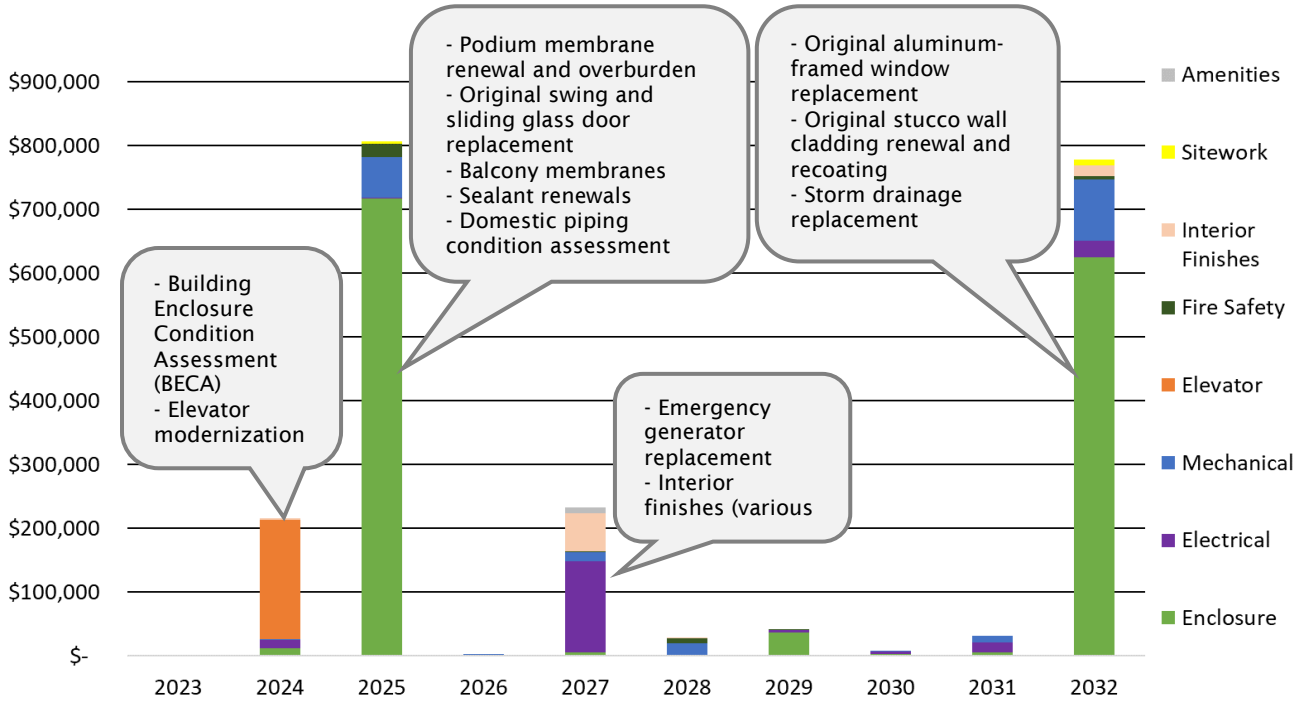

Figure 5.2 Tactical Forecast (10 years), showing the approximate timing and value of some key capital expenditures.

The Tactical Plan above represents one of many possible approaches to planning Major Maintenance and Renewal activities. The Owners can use this initial plan as a tool, a starting point to identify probable projects, priorities, and strategies. The actual cost, timing, and scope of projects will be determined by the Owners and may be reflected in updates to the Report.

To help the Owners start the project planning process, some of the activities forecast for the next 10 years are listed below. Because the timing is somewhat uncertain, Renewals and Major Maintenance activities are grouped by system. The list below is not comprehensive; all Renewals and Major Maintenance activities are included in Appendix B. The list below focuses on renewals likely to cost more than $5,000 in CYD, but also includes maintenance events, assessments, and repairs that are needed to ensure the Assets achieve their full service life.

Building Enclosure

- → Commission a Building Enclosure Condition Assessment (BECA) Report. The BECA would provide the Owners with detail on the existing conditions of the building enclosure Assets, such as the windows and doors, and podium membrane. The Owners may also be interested in learning about assemblies that will help mitigate or adapt to the effects of climate change and discuss which building assets can be considered to help meet impending legislative requirements. The assessment should be completed in advance of the various building enclosure renewals to assist with the planning process.
- → Depending on the findings of the BECA report, the Owners should plan for the renewal of the original podium waterproofing membrane that protects the parkade below. The renewal of the podium waterproofing membrane is forecasted for 2025.
- → Some aluminum-framed swing and sliding glass doors are original to the building and have had localized reported issues as noted on site. The renewal of these doors is forecasted for possible renewal within the Tactical Plan; however, a BECA report is recommended to review the existing conditions and possible renewal strategies.
- → Anticipate renewal of the original exposed urethane balcony membranes as they are typically worn by weathering and occupant use. The Owners may also want to consider renewal of the swing and sliding glass doors, as well as the guardrails at balcony perimeters in conjunction with the balcony membrane renewals.
- → Towards the end of the Tactical Plan, the Owners may require renewal of the original aluminum-framed windows and remaining original stucco wall cladding. The Owners may consider renewing the coating of the previously renewed stucco clad walls in conjunction to allow for consistent aesthetics.

Electrical

- → Engage an electrical consultant to establish and implement inspection, cleaning, and maintenance requirements, including thermographic survey protocol. Refine replacement scope, timing, and cost for major electrical power and distribution assets.
- → Based on its age, the Owners should anticipate replacement of the emergency generator. The Owner should consult with their electrical maintenance contractor to determine its existing condition and estimate its remaining effective service life.

Mechanical

- → Commission a comprehensive third-party testing and inspection of the existing domestic distribution system to confirm the existing conditions and refine the potential renewal year. The domestic distribution re-piping is forecasted shortly after the Tactical Plan.
- → Jetflush or auger the sanitary, storm, and perimeter drainage piping assets and insert video cameras into the main lines to conduct pipe inspection (completed on a 5-year cycle). Based on condition of the piping from the camera scoping, components of piping may be required localized repair or replacement.
- → The Owners should plan for cyclical replacement of the domestic hot water storage tanks, as required.
- → Anticipate replacement of the indoor air handler unit. The Owners should consult with their mechanical service contractor to confirm its existing condition and estimate its remaining effective service life.

Elevators

→ Plan for the modernization of the elevator. In general, renewal projects associated with elevators tend to be completed on a preventative basis, to reduce the risk of breakdowns, and unreliable operation. A comprehensive review of by the Owners' elevator maintenance contractor or elevator consultant is suggested to confirm the existing conditions and refine the potential renewal year.

Ongoing Mechanical, Electrical & Fire Safety

→ Many of the building's mechanical, electrical, and fire safety Assets are assessed on an ongoing basis as a part of maintenance contracts. Major Maintenance and Renewal expenses pertaining to these Asset categories have been indicated throughout the 10-Year Tactical Plan. It should be noted that these have been included for the purposes of cost forecasting; however, the exact timing, the dependability of the equipment, and the upcoming renewal requirements should be considered by the appropriate maintenance contractor. The specific activities can be seen in the appendices.

Interior Finishes

→ Interior renovations are completed to refurbish the interior common areas and are typically renewed at the Owners' discretion. The interior renovation is forecasted for 2027.

5.3 Project Implementation

The projects identified in the previous section represent a preliminary step that is only intended to help the Owners identify, prioritize, and plan projects. Most significant renewal projects identified in the Report will subsequently go through four basic steps before implementing the work: Assessment, Design, Documentation, and Quotation (Figure 5.3).

→ Assessment – Determines what work must be done, what should be done and what could be done in general terms. The evaluation will help the Owners understand the risks and opportunities associated with deferring or implementing renewals work.

→ Design – Refines the recommendations from the evaluation, and defines what work will be done in a specific project. The Design may include recommendations for different project strategies, such as phasing or bundling projects, or may include recommendations for upgrades.

→ Documentation – Describes the project in enough technical detail to get competitive pricing.

→ Quotation – Obtains competitive pricing from different contractors or service providers to perform the work described in the documents, including alternate prices for optional work.

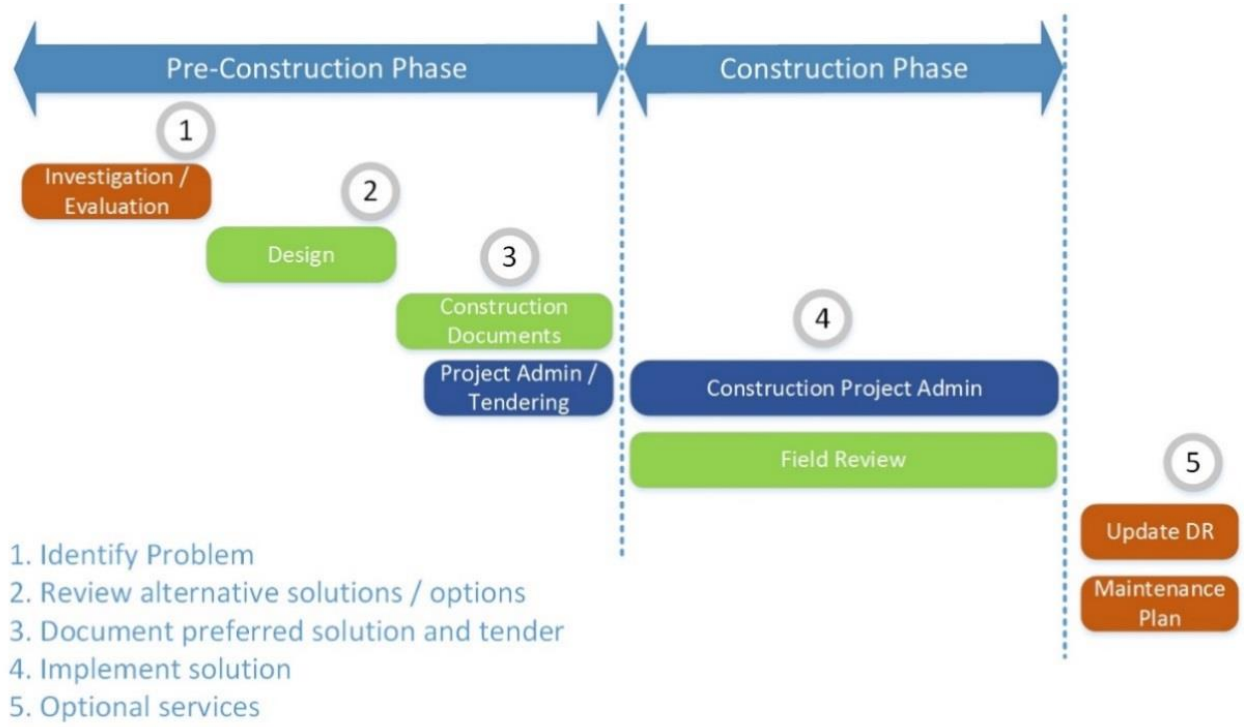

Figure 5.3 Typical phases and sub-phases associated with implementation of a renewal project.

The time period for each step can range from a few days to a few months or more, depending on the scale of the project under consideration. The budget and scope of work will be refined in each step. Most estimates currently included in the Report are considered Class D (±50%) due to the lack of information regarding specific projects and are based on a number of general assumptions regarding scopes of work.

The Owners can implement projects in a variety of ways, including:

- *Targeted Projects*. These projects are localized to particular portions of the building. Different exposure conditions and wear patterns may require that only some sections of the building require renewal at one point in time.
- *Phased Projects*. These projects are carried out in multiple stages rather than as a single coordinated project. Phased projects can reduce the financial burden by spreading the costs over a longer time period.
- *Comprehensive Projects*. These projects are implemented as one coordinated undertaking. Comprehensive projects may allow the Owners to leverage the best economies of scale, shorten the overall duration, and lower the overall costs.
- *Bundled Projects*. These projects bundle or combine various related renewal activities (e.g. renewals that are located in close physical proximity, or that require the same type of trade workers). Bundled projects may allow the Owners to leverage economies of scale and lower the overall costs, improve the quality of the work, and incorporate upgrades.

The scope of the Report does not compare different implementation methods.

6 Funding Scenarios

The physical assessment and financial assessment were used to create a tentative schedule and budget for forecasted major maintenance and renewal projects. Within this section, hypothetical *funding scenarios*, also known as *funding models*, based on different annual contributions to the Contingency Reserve Fund (CRF) are presented.

The Owners can use the funding scenarios to choose an appropriate funding strategy, based on their tolerance for risk and desired standard of care for the property. RDH provides the tools so the Owners can determine a CRF contribution that suits their needs.

6.1 Minimum Funding Requirements

The Strata Property Act Regulations, BC Reg 43/2000, Ch. 6.1. (Figure 6.1), dictates that if the CRF closing balance at the end of the fiscal year is less than 25% of the operating budget for the fiscal year that just ended, then the Owners must contribute the lesser of:

- → Ten percent (10%) of the total amount budgeted for the contribution to the operating fund for the current fiscal year, or
- → The amount required to bring the CRF to at least 25% of the total amount budgeted for the contribution to the operating fund for the current fiscal year.

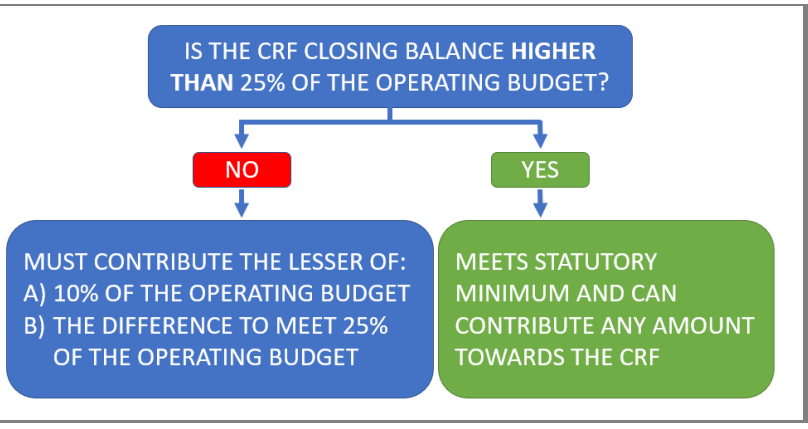

Figure 6.1

Contributions to the CRF per the Strata Property Act Regulations, BC Reg 43/2000, Ch. 6.1.

Table 6.1 below shows the calculation to confirm the Owners meet the minimum requirements set out in the Strata Property Act Regulation.

TABLE 6.1 MINIMUM FUNDING REQUIREMENT CALCULATION	
PARAMETER	VALUE
2022/2023 operating budget (excluding CRF contribution)	$ 133,156
→ 25% of the operating budget	$ 33,289
→ 10% of the operating budget	$ 13,316
2022/2023 CRF opening balance	$ 103,528
2022/2023 CRF Contribution	$ 11,500
Does the CRF closing balance exceed 25% of the operating budget?	Yes
Does the CRF contribution exceed 10% of the operating budget?	No

Although the Owners meet the statutory minimum contribution to the CRF, it is important to note that the statutory guideline is not a good measure of the financial preparedness of the corporation. It is the Report Update, not the operating fund, which provides information about the longer-term repair, maintenance, and replacement costs for the Owners.

The minimum CRF contribution requirement will be updated in November 2023, in which the minimum CRF contribution must be 10% of the operating budget. Currently, the Owners CRF contribution would not meet the minimum requirement.

6.2 Alternative Funding Scenarios

The funding scenarios below compare the financial impact of different funding levels over the next 30 years. The scenarios serve as a sensitivity analysis that allow the Owners to evaluate how changes to the CRF impact the number and size of special levies. The actual size and timing of special levies will be affected by how the Owners choose to implement the renewal projects.

While there are many different scenarios that can be generated, Table 6.2 below compares the following alternatives:

- → ***Current (2022/2023)***. The CRF allocation that was approved by the Owners at the last AGM.
- → ***Alternative***. This funding scenario is based on an initial annual CRF contribution of $25,000 and continues with a 5% annual increase The Alternative Funding Scenario is just one of many possible scenarios for the Owners' consideration.
- → ***Progressive***. This is the annual contribution that would need to be set aside, commencing in the first fiscal year of this Report, to ensure that the reserve balance is sufficient to eliminate or bring special levies over a 30-year period to a minimum. With "Progressive" reserve allocation, older buildings/complexes with underfunded reserves may still require some special levies at some point in their Strategic Plan. The "Progressive" reserve contribution is an optimum target that the Owners could use as a guide. The Progressive reserve allocation is an idealistic target that typically represents an upper bound for the CRF allocation amount.

TABLE 6.2 COMPARISON OF DIFFERENT FUNDING SCENARIOS			
	CURRENT (2022/2023)	ALTERNATIVE	PROGRESSIVE RESERVE
Annual CRF allocation	$11,500	Starting at $25,000+	$161,000
Annual CRF increase	0%	5%	0%
Percentage of Progress reserve	7%	16%+	100%
CRF contribution per average strata lot		Starting at	
Per month	$46	$99+	$639
Per year	$548	$1,190+	$7,667
Approximate number of special levies (over 30 years)	25	16	2
Approximate value of special levies (over 30 years)	$5.2M	$3.8M	$0.9M
Minimum Closing Balance	$25,000		
Assumed Inflation Rate	3%		
Assumed Interest Rate	2%		

The following sections of the Report provide more detailed information about each funding scenario, including a graph showing the closing balance of the CRF, annual CRF contributions, and the approximate value of special levies. Tables with 10 years of cash flow data are also provided.

Appendix E includes 30 years of cash flow data for each funding scenario.

6.3 Current (2022/2023) Funding Scenario

The Current Funding Scenario is based on the CRF contribution approved by the Owners at the last AGM. The scenario is based on a fixed annual CRF contribution (no increases).

TABLE 6.3 CURRENT (2022/**2023**) FUNDING SCENARIO: CASH FLOW TABLE

FISCAL YEAR	OPENING BALANCE	RESERVE CONTRIBUTION	SPECIAL LEVY	RESERVE INCOME	RENEWAL COSTS	CLOSING BALANCE
2023	$103,528	$11,500	$0	$2,071	$0	$117,099
2024	$117,099	$11,500	$109,079	$2,342	$215,020	$25,000
2025	$25,000	$11,500	$794,690	$500	$806,690	$25,000
2026	$25,000	$11,500	$0	$500	$2,200	$34,800
2027	$34,800	$11,500	$210,504	$696	$232,500	$25,000
2028	$25,000	$11,500	$16,080	$500	$28,080	$25,000
2029	$25,000	$11,500	$29,000	$500	$41,000	$25,000
2030	$25,000	$11,500	$0	$500	$8,040	$28,960
2031	$28,960	$11,500	$14,991	$579	$31,030	$25,000
2032	$25,000	$11,500	$766,410	$500	$778,410	$25,000

The graph below shows the annual contribution to the CRF, the closing balance of the CRF, and the size of the special levies forecast for the next 30 years.

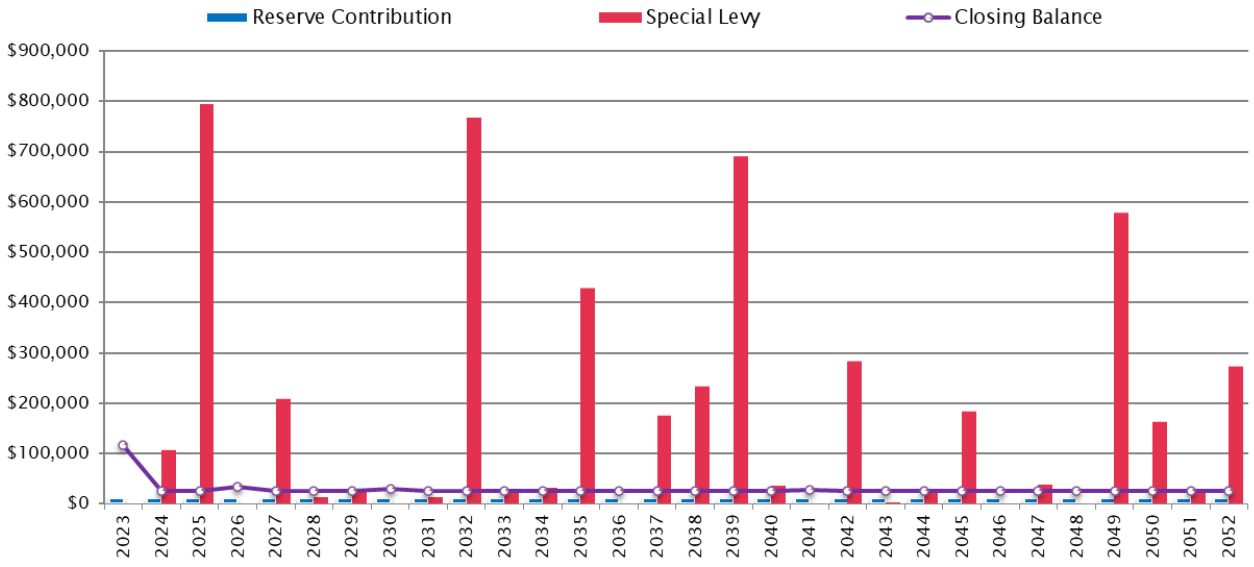

Figure 6.2 CRF balance, contribution, and special levies based on the Current funding.

6.4 Alternative Funding Scenario

Alternative Funding Scenario is based on an initial annual CRF contribution of $25,000, with a 5% annual increase. The initial annual contribution is approximately double the Current contribution.

TABLE 6.4 ALTERNATIVE FUNDING SCENARIO: CASH FLOW TABLE

FISCAL YEAR	OPENING BALANCE	RESERVE CONTRIBUTION	SPECIAL LEVY	RESERVE INCOME	RENEWAL COSTS	CLOSING BALANCE
2023	$103,528	$25,000	$0	$2,071	$0	$130,599
2024	$130,599	$26,250	$80,559	$2,612	$215,020	$25,000
2025	$25,000	$27,563	$778,628	$500	$806,690	$25,000
2026	$25,000	$28,941	$0	$500	$2,200	$52,241
2027	$52,241	$30,388	$173,827	$1,045	$232,500	$25,000
2028	$25,000	$31,907	$0	$500	$28,080	$29,327
2029	$29,327	$33,502	$2,584	$587	$41,000	$25,000
2030	$25,000	$35,178	$0	$500	$8,040	$52,638
2031	$52,638	$36,936	$0	$1,053	$31,030	$59,597
2032	$59,597	$38,783	$703,838	$1,192	$778,410	$25,000

Alternative Funding Scenario eliminates some of the smaller levies, but it is not adequate to offset all the special levies over the 30-year planning horizon. The graph below shows the annual contribution to the CRF, the closing balance of the CRF, and the size of the special levies forecast for the next 30 years.

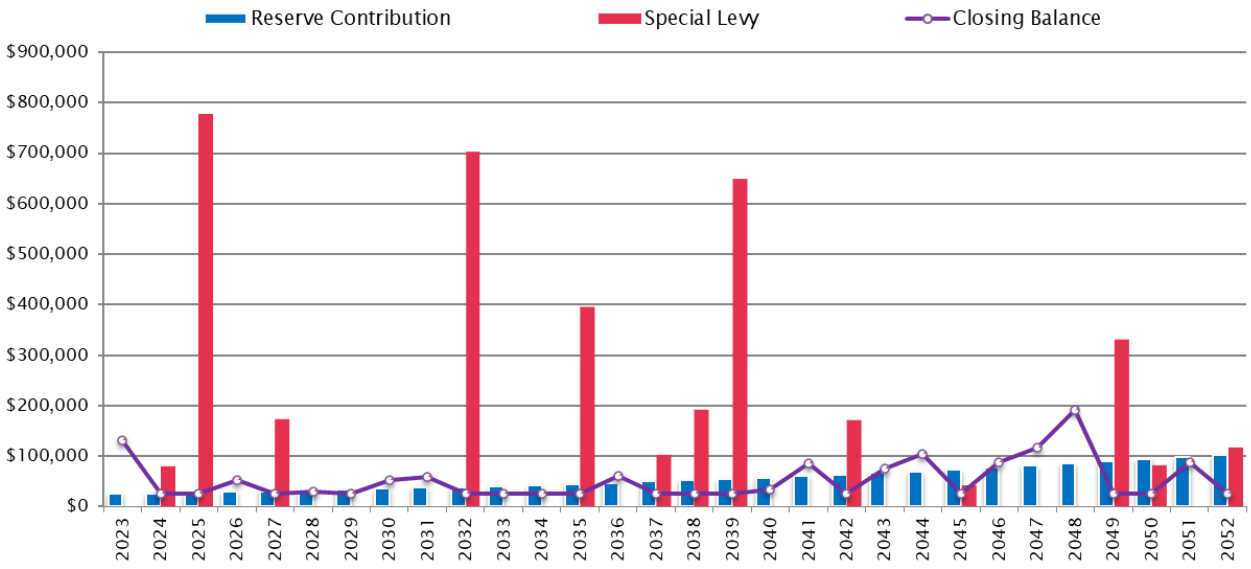

Figure 6.3 CRF balance, contribution, and special levies based on Alternative.

6.5 Progressive Funding Scenario

The Progressive Funding Scenario is based on a fixed annual CRF contribution and represents a theoretical upper limit of CRF funding.

TABLE 6.5 PROGRESSIVE FUNDING SCENARIO: CASH FLOW TABLE

FISCAL YEAR	OPENING BALANCE	RESERVE CONTRIBUTION	SPECIAL LEVY	RESERVE INCOME	RENEWAL COSTS	CLOSING BALANCE
2023	$103,528	$161,000	$0	$2,071	$0	$266,599
2024	$266,599	$161,000	$0	$5,332	$215,020	$217,911
2025	$217,911	$161,000	$448,421	$4,358	$806,690	$25,000
2026	$25,000	$161,000	$0	$500	$2,200	$184,300
2027	$184,300	$161,000	$0	$3,686	$232,500	$116,486
2028	$116,486	$161,000	$0	$2,330	$28,080	$251,736
2029	$251,736	$161,000	$0	$5,035	$41,000	$376,770
2030	$376,770	$161,000	$0	$7,535	$8,040	$537,266
2031	$537,266	$161,000	$0	$10,745	$31,030	$677,981
2032	$677,981	$161,000	$0	$13,560	$778,410	$74,131

The Progressive reserve would offset smaller special levies. However, because of the timing of anticipated renewal projects, a fixed annual contribution will not eliminate all special levies over the 30-year planning horizon. The graph below shows the annual contribution to the CRF, the closing balance of the CRF, and the size of the special levies forecast for the next 30 years.

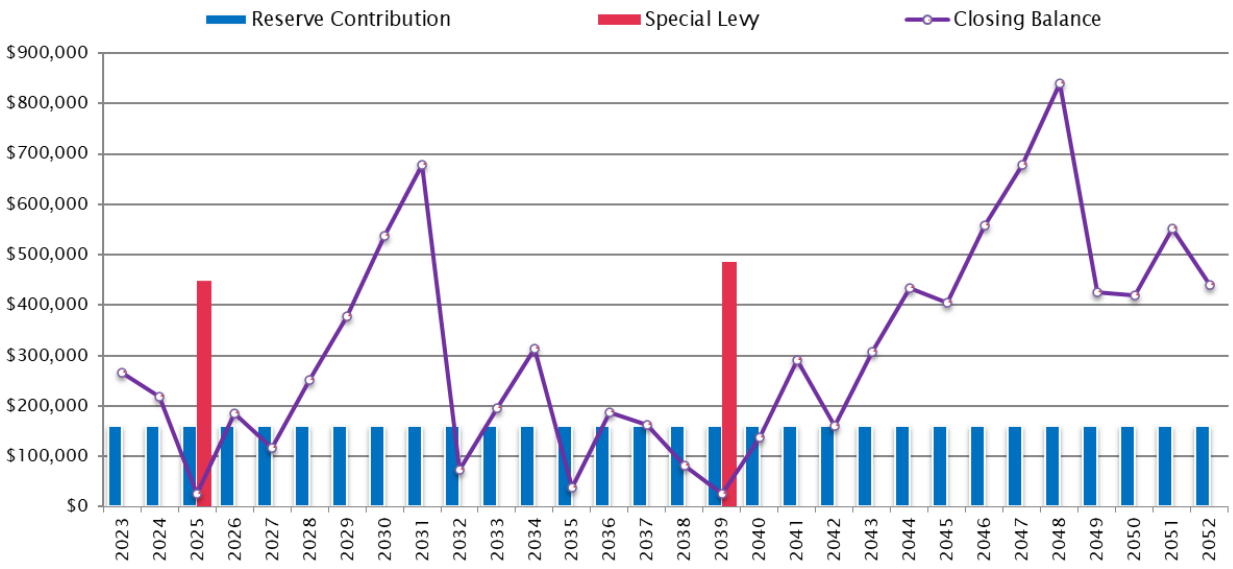

Figure 6.4 CRF balance, contribution and special levies based on a Progressive reserve calculation.

7 Next Steps

The Report identifies the possible Major Maintenance and Renewal expenditures that Chateau Comox may encounter over the next 30 years. Estimated timelines have been provided to assist the Owners with the planning process; however, the Report should be considered a first step when planning for renewals. Funding scenarios have been developed to provide the Owners with an objective basis for determining appropriate CRF contributions.

Chateau Comox is a 31-year-old building that has undergone comprehensive building enclosure rehabilitation projects (1999 and 2009), which included the main roof, exposed exterior wall cladding, various windows and doors, and exposed balconies. Since that time, Chateau Comox has continued to complete localized repairs and renewals; however, as of 2023, various Assets appear to be approaching or have exceeded their anticipated service life, which has contributed to a variety of potential expenditures being forecasted over the next 10 years. Some of these Assets include the original windows, various balconies, the podium waterproofing membrane, and sections of the original stucco wall cladding. As this Report is limited to visual review, the Owners would benefit from completing a Building Enclosure Condition Assessment (BECA) to review the concealed physical conditions of the original assets, which would help to refine the capital expenditure forecasts.

Furthermore, Assets, such as the elevator may also require renewal within the next 10 years. Similar to the building enclosure system, it is recommended that the Owners consider additional investigations of these systems to confirm renewal requirements and update the renewal forecast accordingly.

Other estimated expenditures that occur may over the next 10 years relate to the major maintenance of the Assets, such as cleaning and inspection of drainage and electrical equipment, as well as the cyclical renewal of aging and high-use mechanical equipment. The Owners should continue to be diligent in performing maintenance tasks so assets may achieve their full service life. It is unlikely that the Owners can avoid special levies in this time period; however, there may be opportunities to reduce the scope of work needed or otherwise manage projects to alleviate the financial impact on individual Owners.

In preparation for future renewals, the Owners may wish to build up their CRF, while continuing to perform maintenance of several Assets. By continuing to save early for anticipated large expenditures, the Owners will benefit from accrued interest and financial preparedness, while minimizing the number of special levies.

The recommendations below are intended to aid the Owners in the next steps of the renewals planning process.

Recommendations

- → **Project Planning.** Review the information in Section 5.2, and begin planning for significant projects, including commissioning condition assessments, requesting information, and preparing construction budgets, well in advance of the forecasted date of renewal. The planning process will assist the Owners in refining the actual timing, scope of work, and project budget.
- → **Major Maintenance Planning.** Review Appendix B and C for a detailed checklist of forecasted Major Maintenance activities and Renewals on an annual basis.
- → **Record Keeping.** Continue to record significant renewals, repairs, and maintenance activities. These records will be used to improve the forecast at the time of the next Depreciation Report Update.

- **Contingency Reserve Fund (CRF) Planning.** On a yearly basis, review and update the CRF funding strategy based on the estimated forecasts presented in the Report and update information obtained from assessments, investigations, and quotation.
- **Below-Grade Podium Waterproofing Condition Assessment.** Conduct a condition assessment of the below-grade waterproofing (for the parkade roof or "podium") with a focus on the areas with original membrane. The condition assessment will confirm the estimated remaining service life of the below-grade waterproofing Asset. Update the Report with these findings and recommendations, as may be required.
- **Building Enclosure Condition Assessment (BECA).** Conduct a BECA of the building enclosure prior to or in conjunction with the update to the Depreciation Report in three years' time. The BECA would refine the renewal timing of various Assets, such as the exterior wall cladding, windows and doors, and balcony membranes.
- **Piping Condition Assessment or Evaluation.** Conduct a condition assessment of the domestic water distribution system (common water supply piping) prior to or in conjunction with the update to the Depreciation Report in three years' time. The condition assessment will confirm the estimated remaining service lives of piping. Update the Report with these findings and recommendations, as may be required.
- **Elevator Condition Assessment or Evaluation.** Conduct a comprehensive condition assessment of the elevator prior to the update to the Depreciation Report in three years' time. The condition assessment will confirm the estimated remaining service life of all components of the elevator at Harbourside and will advise when remaining modernization activities may be required. Update the Report with these findings and recommendations, as may be required.
- **Further Investigations.** Conduct additional condition assessments/investigations, as required, to refine the data and confirm assumptions.
- **Updates.** Plan for an update to the Report in three years' time. On a yearly basis, the Strata Corporation should review and update their CRF funding strategy based on the estimated forecasts presented in the Report.

Yours truly,

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Appendix A

Glossary of Terms

Glossary

Annual Contribution – Funds allocated to the Reserve Fund each fiscal year. Sometimes referred to as the Annual Allocation. Determining the appropriate size of the Annual Allocation is aided with a Reserve Study (a Depreciation Report in B.C.).

Asset – An integrated assembly of multiple physical components, which requires periodic maintenance, repair and eventual renewal. Typical examples of assets are: roofs, boilers and hallway carpets.

Catch-up Costs – The costs associated with the accumulated backlog of deferred maintenance associated with the assets.

Chronological Age – The age of an asset relative to its date of installation (current year minus year of installation).

Classes of Cost Estimates – Until a project is actually constructed, a cost estimate represents the best judgement of the professional according to their experience and knowledge and the information available at the time. Its completeness and accuracy is influenced by many factors, including the project status and development stage. Estimates have a limited life and are subject to inflation and fluctuating market conditions. The precision of cost estimating is categorized into the following four classes and are as defined in guidelines prepared by the Association of Professional Engineers and Geoscientists of B.C. The percentage figures in parentheses refer to the level of precision or reliability of the cost estimates.

- → **Class A Estimate** (±10-15%): A detailed estimate based on quantity take-offs from final drawings and specifications. It is used to evaluate tenders or as a basis of cost control during day-labour construction.
- → **Class B Estimate** (±15-25%): An estimate prepared after site investigations and studies have been completed, and the major systems defined. It is based on a project brief and preliminary design. It is used for obtaining effective project approval and for budgetary control.
- → **Class C Estimate** (±25-40%): An estimate prepared with limited site information and based on probable conditions affecting the project. It represents the summation of all identifiable project elemental costs and is used for program planning, to establish a more specific definition of client needs and to obtain preliminary project approval.
- → **Class D Estimate** (±50%): 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.

Closing Balance – Alternatively referred to as the Starting Balance. The balance of funds remaining in the reserve account at the end of a fiscal period (Fiscal year end, calendar year or study period). The Closing Balance becomes the Opening Balance for the subsequent fiscal period.

Contingency Costs – An allowance for unexpected or unforeseen costs that may impact monies required for projects to maintain or replace assets. (Not to be confused with costs of Renewal or Major Maintenance projects which are paid for out of the Reserve Fund (otherwise known the Contingency Reserve Fund.)

Contribution Threshold - A dollar value which dictates the size of the Contingency Reserve Fund (CRF) contribution based on whether the accumulated CRF balance is greater than or less than the specified dollar value. For example, the Strata Property Act indicates that if the closing balance of the CRF at the end of the fiscal year is less than 25% of the operating budget for the next fiscal year, then the CRF contribution for the next fiscal year should be a minimum of 10% of the operating budget. In this case, the threshold is 25% of the operating budget.

Current Dollars – Dollars in the year they were actually received or paid, unadjusted for price changes.

Effective Age – An assessment of the age of an asset relative to its condition and how that condition may have accelerated or decelerated the chronological age of the asset (service life minus remaining service life).

Funding Model – A mathematical model used to establish an appropriate funding level for sustaining the assets in a building. Running a number of scenarios out of the funding model using different parameters (such as inflation rates and interest rates) can serve as a sensitivity analysis to determine the financial impact of different funding levels.

Future Dollars – The projected cost of future asset renewal projects, which accounts for inflation and escalation factors.

Get Ahead Costs – These are costs associated with adaptation of the building to counter the forces of retirement associated with different forms of obsolescence, such as:

- → Functional obsolescence
- → Legal obsolescence
- → Style obsolescence

Some of the costs in this category are discretionary spending that result in either a change or an improvement to the existing strata building. This category includes projects to alter the physical plant for changes in use, codes and standards. Some typical examples include:

- → Energy retrofits
- → Code retrofits
- → Hazardous material abatement
- → Barrier free access retrofits
- → Seismic Upgrades

Keep-up Costs – The monies required for renewal projects as each asset reaches the end of its useful service life. If an asset is not replaced at the end of its useful service life

and is kept in operation, through targeted repairs, then these costs get reclassified into the "catch-up" category.

Major Maintenance – Any maintenance work for common expenses that usually occurs less often than once a year or that do not usually occur. Major maintenance provides for the preservation of assets to ensure that they achieve their full intended service life.

Next Renewal Year - The forecasted date of asset replacement or renewal.

Opening Balance – Alternatively referred to as the Starting Balance. The amount of money in an account at the beginning of a fiscal period. Opening balances are derived from the balance sheet and are used in cash flow calculations in the Funding Model.

Operating Costs – Frequently recurring expenses that arise during the course of a single fiscal year and are paid from the operating budget as opposed to the Reserve Fund.

Operational Plan/Horizon (1 year) – The annual operating period encompasses one fiscal cycle (12 months). The Reserve Contribution in the operating budget should reflect the majority of the projects in the Tactical Plan (5 years) and ideally should also contemplate elements of the Strategic Plan (30 years).

Percent Funded – The ratio, at a particular point of time (typically the beginning of the fiscal year), of the actual or projected Reserve Fund balance to the accrued Reserve Fund balance, expressed as a percentage. For example: If the 100% funded balance is $100,000 and there is $76,000 in the Reserve Fund, the Reserve Fund is 76% funded.

Since funds can typically be allocated from one asset to another with ease, this parameter has no real meaning on an individual reserve component basis. The purpose of this parameter is to identify the relative strength or weakness of the entire Reserve Fund at a particular point in time. The value of this parameter is to provide a more stable measure of Reserve Fund strength, since cash in reserve may mean very different things to different governing bodies or Owner groups.

- → **Poor Level.** When the Percent Funded falls to 0% - 30%, the current reserves may be considered to be at a 'poor' level. At this funding level, Special Levies are common. This is also commonly known as the Unfunded or Special Levy Model. The Owner Group does not have a Reserve Fund balance that will cover expected renewal costs and the only recourse is to raise funds by Special Levies to cover those costs when they become due.
- → **Fair Level.** If the Percent Funded level is 31 to 70% then the current reserve may be considered to be in a mid-range level.
- → **Good Level.** If the Percent Funded level is 70% or higher this is likely to be considered 'strong' because cash flow problems are rare.

Renewal – The replacement of an Asset as it reaches the end of its useful service life.

Renewal Cost – The cost required to replace an Asset, which is paid from the Reserve Fund, Special Levy or combination thereof.

Reserve Contribution – See Annual Contribution.

Reserve Fund – Also known as the Contingency Reserve Fund (CRF). The account in which the accumulated Annual Contributions are deposited and from which costs are withdrawn for Renewal projects and Major Maintenance projects.

Reserve Income – The interest earned from investing the money deposited in the Reserve Fund.

Reserve Study – Also referred to as a Reserve Fund Study or Depreciation Report in BC.

- → A long-range financial planning tool that identifies the current status of the Owners' Reserve Fund and recommends a stable and equitable funding plan to offset the costs of anticipated future major expenditures associated with replacement of the assets and major maintenance.
- → The purpose of the Reserve Study is to provide a plan for appropriate funding for renewal and major maintenance work.
- → While Reserve Studies provide analysis of the timing, costs and funding for renewal projects, they should ideally be supported by a maintenance plan that assists the Owners to plan for maintenance activities so that assets achieve their predicted service lives.

Service Life - The estimated period of time over which an asset (and its components or assembly) provides adequate performance and function.

Special Levy – Also referred to as a "Special Assessment". A financial levy to be paid by the Owner group to finance large-scale projects for major maintenance, repairs, renewal and rehabilitation of an asset, which occur as result of a shortfall in available funds and requires special decision making and approval procedures. A Reserve Study contains funding scenarios that assist the Owners in long-range financial planning.

Statutory Funding Model - A funding model which uses the Strata Property Act and Regulations to determine the minimum amount of money to contribute to the Contingency Reserve Fund on an annual basis.

Strategic Horizon – The longest of the three planning horizons, which typically covers the full study period of 30 years and identifies the long-term needs of the assets.

Style Obsolescence – When an asset is no longer desirable because it has fallen out of popular fashion, its style is obsolete. Some assets, particularly interior furnishings, reflect fashion cycles and can become out-dated.

Tactical Plan/Horizon – A period of planning for asset Renewal projects and Major Maintenance projects, which typically extends five years from the current year.

Appendix B

Asset Inventory

Chateau Comox
Asset Inventory with Keep-Up Costing

ENCL 01 - EXPOSED SBS MEMBRANE ROOF

Location

Main rooftop level over elevator room and stairwells.

Description

SBS modified bitumen membrane at low-slope roof.

Planning Information

Service Life:	25
Installed Year:	2008
Chronological Age:	15
Next Renewal Year:	2033
Effective Age:	15

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace SBS membrane roof assembly and associated component such as drains and flashing.	Renew Assembly	0	25 Yrs	2033	Square Foot	$35	500	100 %	150 %	$26,250

ENCL 02 - PROTECTED SBS MEMBRANE DECK (IRMA ASSEMBLY) WITH TRAFFIC-BEARING SURFACE

Location

7th floor decks (west side).

Description

SBS membrane overlaid with insulation, protection board, and concrete pavers as traffic-bearing surface.

Planning Information

Service Life:	30
Installed Year:	1999
Chronological Age:	24
Next Renewal Year:	2029
Effective Age:	24

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace deck membrane assembly and associated components.	Renew Assembly	0	30 Yrs	2029	Square Foot	$50	40	100 %	200 %	$4,000

ENCL 03 - PROTECTED SBS MEMBRANE ROOF WITH BALLAST (IRMA)

Location

Sections of main rooftop.

Description

SBS membrane overlaid with insulation, filter fabric, and stone ballast.

Planning Information

Service Life:	30
Installed Year:	2008
Chronological Age:	15
Next Renewal Year:	2038
Effective Age:	15

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost

R01	Replace roof membrane assembly and associated components, such as drains and flashing. Ballast may be salvageable.	Renew Assembly	0	30 Yrs	2038	Square Foot	$40	2,200	100 %	100 %	$88,000

ENCL 04 - PROTECTED SBS MEMBRANE ROOF & DECK (IRMA) WITH TRAFFIC-BEARING SURFACE

Location

Sections of main rooftop and east side decks on 8th floor.

Description

SBS membrane overlaid with insulation, protection board, and concrete pavers as traffic-bearing surface.

Planning Information

Service Life:	30
Installed Year:	2008
Chronological Age:	15
Next Renewal Year:	2038
Effective Age:	15

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace roof membrane assembly and associated components. Some of the pavers may be salvageable.	Renew Assembly	0	30 Yrs	2038	Square Foot	$50	1,060	100 %	100 %	$53,000

ENCL 05 - STUCCO CLAD SOFFIT

Location

Underside of balconies and at entry lobby plaza.

Description

Stucco cladding over supporting structure.

Planning Information

Service Life:	40
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2032
Effective Age:	31

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Clean and renew acrylic stucco finish coat as required.	Renew Component	0	10 Yrs	2042	Hundred Square Foot	$180	20	100 %	100 %	$3,600
R02	Replace stucco clad soffit and associated components.	Renew Assembly	0	40 Yrs	2032	Square Foot	$12	2,000	100 %	100 %	$24,000

ENCL 06 - PROTECTED PODIUM MEMBRANE

Location

(Concealed Asset). Waterproofing membrane on top surface of parkade ceiling slab.

Description

Waterproofing membrane at parkade podium with concrete paver and soft landscaping overburden.

Planning Information

Service Life:	30
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2025
Effective Age:	28

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace podium waterproofing membrane.	Renew Assembly	0	30 Yrs	2025	Square Foot	$100	3,700	100 %	100 %	$370,000

ENCL 07 - GUARDRAIL ALUMINUM

Location

Perimeters of decks at main roof level and northeast parkade exit stairwell.

Description

Prefinished aluminum posts and pickets to limit access to the adjacent roofs.

Planning Information

Service Life:	30
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2029
Effective Age:	24

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Remove and re-install sections of guardrail in conjunction with deck waterproofing membrane renewal, including inspect and re-certify guardrail.	Renew Component	0	30 Yrs	2025	Linear Foot	$40	180	20 %	120 %	$1,728
R02	Replace exterior guardrails.	Renew Assembly	0	30 Yrs	2029	Linear Foot	$60	180	100 %	100 %	$10,800

ENCL 08 - GUARDRAIL GLAZED ALUMINUM

Location

Perimeter of decks and balconies.

Description

Side-mounted prefinished aluminum posts and glass infill panels functioning as a protective barrier to prevent accidental falls from one level to another.

Planning Information

Service Life:	30
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2025
Effective Age:	28

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost

J01	Review guardrails for structural adequacy including attachments.	Assessment	0	10 Yrs	2025	Allowance	$6,000	0	100 %	100 %	$0
R01	Remove and re-install sections of guardrail in conjunction with deck waterproofing membrane renewal, including inspect and re-certify guardrail.	Renew Component	0	25 Yrs	2025	Linear Foot	$50	120	20 %	120 %	$1,440
R02	Replace exterior guardrails.	Renew Assembly	0	30 Yrs	2025	Linear Foot	$90	640	100 %	100 %	$57,600

ENCL 09 - CONCRETE WALL WITH ACRYLIC FINISH

Location

Various wall areas on east and west elevations at levels 2 to 8, exterior parkade walls at ground level and mechanical penthouse walls at main rooftop level, and horizontal bands at each floor level.

Description

Poured-in-place concrete walls with acrylic stucco finish and silicone elastomeric coating. Service life refers to the concrete walls; stucco finish renewal is shown as a component of this asset.

Planning Information

Service Life:	75
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2067
Effective Age:	31

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Renew and reapply portions of acrylic coating on concrete walls.	Renew Component	0	10 Yrs	2032	Hundred Square Foot	$450	111	100 %	100 %	$49,950
R02	Concrete wall is durable and not deemed a renewable asset. Maintenance of the concrete substrate is required for the asset to achieve longevity.	Renew Assembly	0	75 Yrs	2067		$0	0	100 %	100 %	$0

ENCL 10 - STUCCO CLAD WALL - DRAINED - 2009

Location

Targeted wall areas on all elevations, including levels 2-8 on north elevation, level 8 on south elevation between windows and at balcony walls.

Description

Acrylic coated stucco applied on furring to create a drained cavity over the exterior sheathing membrane.

Planning Information

Service Life:	40
Installed Year:	2009
Chronological Age:	14
Next Renewal Year:	2049
Effective Age:	14

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
J01	Re-paint stucco surface as required.	Maintenance Level 2	0	10 Yrs	2032	Square Foot	$6.50	1,100	100 %	100 %	$7,150

R01	Replace stucco cladding along with associated flashing and sealants. Consideration should be given to replacement of vent hoods and other accessories that penetrated the cladding at the time of cladding replacement.	Renew Assembly	0	40 Yrs	2049	Square Foot	$42	1,100	100 %	100 %	$46,200

ENCL 11 - STUCCO CLAD WALL - DRAINED - 1999

Location

Targeted wall areas on east and west elevations at levels 2 to 8, with returns around edges on north and south elevations.

Description

Acrylic coated stucco applied on furring to create a drained cavity over the exterior sheathing membrane.

Planning Information

Service Life:	40
Installed Year:	1999
Chronological Age:	24
Next Renewal Year:	2039
Effective Age:	24

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
J01	Re-paint stucco surface as required.	Maintenance Level 2	0	10 Yrs	2032	Square Foot	$6.50	6,200	100 %	100 %	$40,300
R01	Replace stucco cladding along with associated flashing and sealants. Consideration should be given to replacement of vent hoods and other accessories that penetrated the cladding at the time of cladding replacement.	Renew Assembly	0	40 Yrs	2039	Square Foot	$42	6,200	100 %	100 %	$260,400

ENCL 12 - STUCCO CLAD WALL - UNDRAINED - 2009

Location

Protected walls of balconies at levels 2 to 7 on north elevation (does not include concrete walls at perimeter of balconies- see Encl 09).

Description

Acrylic coated stucco applied directly over exterior sheathing membrane.

Planning Information

Service Life:	20
Installed Year:	2009
Chronological Age:	14
Next Renewal Year:	2032
Effective Age:	11

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
J01	Re-paint stucco surface as required.	Maintenance Level 2	0	10 Yrs	2042	Square Foot	$5	460	100 %	100 %	$2,300
R01	Replace stucco cladding along with associated flashing and sealants. Consideration should be given to replacement of vent hoods and other accessories that penetrated the cladding at the time of cladding replacement.	Renew Assembly	0	40 Yrs	2032	Square Foot	$42	460	100 %	100 %	$19,320

ENCL 13 - STUCCO CLAD WALL - UNDRAINED - ORIGINAL

Location

Between windows on south elevation at levels 2 to 7, and east elevation at levels 2 to 8.

Description

Acrylic coated stucco applied directly over exterior sheathing membrane.

Planning Information

Service Life:	20
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2032
Effective Age:	11

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
J01	Re-paint stucco surface as required.	Maintenance Level 2	0	10 Yrs	2042	Square Foot	$5	3,400	100 %	100 %	$17,000
R01	Replace stucco cladding along with associated flashing and sealants. Consideration should be given to replacement of vent hoods and other accessories that penetrated the cladding at the time of cladding replacement.	Renew Assembly	0	40 Yrs	2032	Square Foot	$42	1,050	100 %	100 %	$44,100

ENCL 14 - ALUMINUM FRAMED WINDOW - 2009

Location

Centre stack windows on north elevation at levels 2 to 8, south elevation at level 8, and east & west facing windows on north balconies at levels 2 to 8.

Description

Aluminum framed, thermally broken windows with double insulating glazing units, and awning operators. Window-wall configuration.

Planning Information

Service Life:	40
Installed Year:	2009
Chronological Age:	14
Next Renewal Year:	2049
Effective Age:	14

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
J01	Replace insulating glazing units (IGUs) with condensation or misting between panes of glass.	Maintenance Level 3	10	2 Yrs	2025	Square Foot	$60	1,500	2 %	100 %	$1,800
R01	Replace aluminum framed windows and associated components.	Renew Assembly	0	40 Yrs	2049	Square Foot	$115	1,500	100 %	100 %	$172,500

ENCL 15 - ALUMINUM FRAMED WINDOW - ORIGINAL

Location

Exterior walls on all elevations, except for windows replaced 2009.

Description

Aluminum framed, non-thermally broken windows with double insulating glazing units, and awning operators. Punched and window-wall configurations.

Planning Information

Service Life:	40
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2032
Effective Age:	31

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
J01	Replace insulating glazing units (IGUs) with condensation or misting between panes of glass.	Maintenance Level 3	10	2 Yrs	2025	Square Foot	$60	2,000	2 %	100 %	$2,400
R01	Replace aluminum framed windows and associated components.	Renew Assembly	0	40 Yrs	2032	Square Foot	$115	2,000	100 %	100 %	$230,000

ENCL 16 - ALUMINUM STOREFRONT

Location

Main entry lobby.

Description

Aluminum framed, thermally broken, storefront system with single glazing units, and no operators.

Planning Information

Service Life:	40
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2032
Effective Age:	31

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace insulating glazing units (IGUs) with condensation or misting between panes of glass.	Renew Component	10	2 Yrs	2025	Square Foot	$60	0	2 %	100 %	$0
R02	Replace storefront window system.	Renew Assembly	0	40 Yrs	2032	Square Foot	$100	240	100 %	100 %	$24,000

ENCL 17 - GLASS BLOCK WINDOW

Location

Exterior walls of amenity room and stairwells.

Description

Glass block window.

Planning Information

Service Life:	40
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2032
Effective Age:	31

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
J01	Repoint mortar joints in glass block windows, as required.	Maintenance Level 2	0	5 Yrs	2025	Square Foot	$6	500	20 %	100 %	$600
R01	Replace glass block windows.	Renew Assembly	0	40 Yrs	2032	Square Foot	$78	500	100 %	100 %	$39,000

ENCL 18 - T-BAR SKYLIGHT

Location

Main rooftop level.

Description

Aluminum T-bar supported skylight system with glazed units.

Planning Information

Service Life:	20
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2025
Effective Age:	18

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace skylight and associated flashings.	Renew Assembly	0	20 Yrs	2025	Square Foot	$48	60	100 %	100 %	$2,880

ENCL 19 - ALUMINUM FRAME GLAZED SWING DOOR - 1999

Location

Access to decks on levels 7 and 8.

Description

Aluminum frame swing door with insulating glazing units.

Planning Information

Service Life:	25
Installed Year:	1999
Chronological Age:	24
Next Renewal Year:	2025
Effective Age:	23

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace aluminum frame swing doors, as required.	Renew Assembly	0	25 Yrs	2025	Each	$4,000	4	100 %	100 %	$16,000

ENCL 20 - ALUMINUM FRAME GLAZED SWING DOOR - ORIGINAL

Location

Exterior building access at meeting room and entry lobby.

Description

Aluminum frame swing door with insulating glazing units.

Planning Information

Service Life:	25
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2025
Effective Age:	23

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace aluminum frame swing doors, as required.	Renew Assembly	0	25 Yrs	2025	Each	$4,000	3	100 %	100 %	$12,000

ENCL 21 - ALUMINUM FRAMED SLIDING GLASS DOOR - 2009

Location

East- and west-facing sliding doors of north units.

Description

Sliding glass doors, double insulating glazing units, aluminum framing.

Planning Information

Service Life:	30
Installed Year:	2009
Chronological Age:	14
Next Renewal Year:	2039
Effective Age:	14

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace sliding glass doors and associated components.	Renew Assembly	0	30 Yrs	2039	Each	$5,000	14	100 %	100 %	$70,000

ENCL 22 - ALUMINUM FRAMED SLIDING GLASS DOOR - 2009

Location

North elevation balconies (living room access) at all levels, and south elevation balcony (8th floor only).

Description

Sliding glass doors, double insulating glazing units, aluminum framing.

Planning Information

Service Life:	30
Installed Year:	2009
Chronological Age:	14
Next Renewal Year:	2039
Effective Age:	14

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
J01	Replace insulating glazing units (IGUs) with condensation or misting between panes of glass.	Maintenance Level 3	10	2 Yrs	2025	Square Foot	$35	0	2 %	100 %	$0
R01	Replace sliding glass doors and associated components.	Renew Assembly	0	30 Yrs	2039	Each	$5,000	16	100 %	100 %	$80,000

ENCL 23 - ALUMINUM FRAMED SLIDING GLASS DOOR - ORIGINAL

Location

North elevation balconies (bedroom access) at all levels, and south elevation balconies (ground floor to 7th floor).

Description

Sliding glass doors, double insulating glazing units, aluminum framing.

Planning Information

Service Life:	30
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2025
Effective Age:	28

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
J01	Replace insulating glazing units (IGUs) with condensation or misting between panes of glass.	Maintenance Level 3	10	2 Yrs	2035	Square Foot	$60	0	2 %	100 %	$0
R01	Replace sliding glass doors and associated components.	Renew Assembly	0	30 Yrs	2025	Each	$5,000	26	100 %	100 %	$130,000

ENCL 24 - STEEL SWING DOOR

Location

Exterior building access at the main rooftop (also to mechanical room) and parkade (all exits and stairwells).

Description

Hollow steel slab swing door with glazing.

Planning Information

Service Life:	25
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2025
Effective Age:	23

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Repaint various steel doors as required.	Renew Component	0	8 Yrs	2032	Each	$250	7	50 %	100 %	$875
R02	Replace various steel swing doors, as required.	Renew Assembly	0	25 Yrs	2025	Each	$2,500	7	100 %	100 %	$17,500

ENCL 25 - EXPOSED URETHANE BALCONY MEMBRANE - CONCRETE SUBSTRATE (2009)

Location

North elevation (all levels) and south elevation (8th floor).

Description

Liquid applied urethane membrane applied over concrete balcony. Some balconies have been covered with owner-installed finishes; assume 50% of balconies have exposed membrane that will require renewal.

Planning Information

Service Life:	25
Installed Year:	2009
Chronological Age:	14
Next Renewal Year:	2034
Effective Age:	14

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
J01	Locally repair damaged and delaminated balcony membrane prior to re-application of top coat.	Maintenance Level 3	0	10 Yrs	2025	Square Foot	$14	800	5 %	150 %	$840
R01	Prepare and re-apply membrane top coat.	Renew Component	0	10 Yrs	2025	Square Foot	$10	800	100 %	150 %	$12,000
R02	Replace Exposed Urethane Balcony Membrane and associated component.	Renew Assembly	0	25 Yrs	2034	Square Foot	$22	800	100 %	100 %	$17,600

ENCL 26 - EXPOSED URETHANE BALCONY MEMBRANE - CONCRETE SUBSTRATE (ORIGINAL)

Location

South elevation, floors 2 to 7.

Description

Liquid applied urethane membrane applied over concrete balcony. Some balconies have been covered with owner-installed finishes; assume 50% of balconies have exposed membrane that will require renewal.

Planning Information

Service Life:	25
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2025
Effective Age:	23

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
J01	Repair locally damaged and delaminated balcony membrane prior to re-application of top coat.	Maintenance Level 3	0	10 Yrs	2035	Square Foot	$24	600	5 %	100 %	$720
R01	Prepare and re-apply membrane top coat.	Renew Component	0	10 Yrs	2035	Square Foot	$10	600	100 %	100 %	$6,000
R02	Replace exposed urethane balcony membrane and associated components.	Renew Assembly	0	25 Yrs	2025	Square Foot	$22	600	100 %	150 %	$19,800

ENCL 27 - OPEN-GRID OVERHEAD PARKADE GATE

Location

Parkade access on south side of the building.

Description

Pre-finished metal grid overhead gate for underground parkade.

Planning Information

Service Life:	25
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2025
Effective Age:	23

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replacement of sectional overhead door and associated hardware.	Renew Assembly	0	25 Yrs	2025	Square Foot	$35	150	100 %	100 %	$5,250

ENCL 28 - SLAB-ON-GRADE

Location

Parkade P2 and P3.

Description

Concrete slab on grade.

Planning Information

Service Life:	75
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2067
Effective Age:	31

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
J01	Re-apply traffic demarcation striping and directional signage. Frequency will depend on traffic volume and other factors.	Maintenance Level 1	0	5 Yrs	2025	Allowance	$1,000	1	100 %	100 %	$1,000
R01	Concrete slab is durable and not deemed a renewable asset. Maintenance of the concrete substrate is required for the asset to achieve longevity.	Renew Assembly	0	75 Yrs	2067		$0	0	100 %	100 %	$0

ENCL 29 - UNCOATED PARKING SUSPENDED SLAB

Location

Parkade P1.

Description

Concrete parking garage suspended slab without a traffic membrane.

Planning Information

Service Life:	75
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2067
Effective Age:	31

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
J01	Re-apply traffic demarcation striping and directional signage. Frequency will depend on traffic volume and other factors.	Maintenance Level 1	0	5 Yrs	2025	Allowance	$1,000	1	100 %	100 %	$1,000
R01	Concrete slab is durable and not deemed a renewable asset. Maintenance of the concrete substrate is required for the asset to achieve longevity.	Renew Assembly	0	75 Yrs	2067		$0	0	100 %	100 %	$0

ENCL 30 - GENERAL & INSPECTIONS

Location

Throughout building exterior and site.

Description

Miscellaneous interior and exterior components, such as service penetrations (such as ducts or fireplaces) and interface details, not related to any particular assembly. Includes warranty reviews, and general reviews, and Depreciation Report updates.

Planning Information

Service Life:	75
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2067
Effective Age:	31

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
J01	Update depreciation report.	Maintenance Level 3	0	3 Yrs	2026		$0	1	100 %	100 %	$0
J02	Perform full condition assessment of all enclosure systems.	Assessment	15	5 Yrs	2024	Allowance	$12,000	1	100 %	100 %	$12,000
R01	This is not a renewable asset.	Renew Assembly	0	75 Yrs	2067		$0	0	100 %	100 %	$0

ENCL 31 - SEALANT

Location

At various joints, penetrations, and material interfaces throughout the building exterior.

Description

Sealant of various types located at joints between building enclosure assemblies, as well as around components and penetrations within building enclosure assemblies.

Planning Information

Service Life:	10
Installed Year:	2009
Chronological Age:	14
Next Renewal Year:	2025
Effective Age:	8

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace sealants at interfaces between building enclosure assemblies, and at penetrations through assemblies in accordance with sealant renewals plan.	Renew Assembly	0	10 Yrs	2025	Per Suite	$1,000	21	100 %	100 %	$21,000

ENCL 32 - STEEL STAIR

Location

Access to elevator room at main rooftop level.

Description

Painted exterior steel-framed staircase with integrated handrails.

Planning Information

Service Life:	40
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2038
Effective Age:	25

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Repaint steel stairs.	Renew Component	0	8 Yrs	2025	Allowance	$500	1	100 %	100 %	$500
R02	Replace steel stairs.	Renew Assembly	0	50 Yrs	2038	Allowance	$15,000	1	100 %	100 %	$15,000

ELEC 01 - EMERGENCY GENERATOR

Location

Above the parkade at southeast corner of the site.

Description

Onan Genset generator to provide emergency power.

Planning Information

Service Life:	35
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2027
Effective Age:	31

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost

R01	Replace generator hoses.	Renew Component	0	10 Yrs	2024	Allowance	$1,500	1	100 %	100 %	$1,500
R02	Rebuild emergency generator.	Renew Component	0	17 Yrs	2026	Allowance	$15,000	0	100 %	100 %	$0
R03	Replace generator battery packs.	Renew Component	0	4 Yrs	2024	Each	$300	0	100 %	100 %	$0
R04	Replace emergency generator and transfer switch.	Renew Assembly	0	35 Yrs	2027	Each	$120,000	1	100 %	100 %	$120,000

ELEC 02 - ELECTRICAL DISTRIBUTION

Location

Equipment in parkade P1 electrical room with wiring to suites and common areas throughout the building.

Description

Siemens distribution switchgear, panelboards, breakers and wiring to several local sub-panels and mechanical loads.

Planning Information

Service Life: 40
Installed Year: 1992
Chronological Age: 31
Next Renewal Year: 2032
Effective Age: 31

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
J01	Visually inspect all panels for wear, alignment, rust, stiffness, loose bolts, discoloration and other signs of distress. Ensure breakers are not warm to the touch.	Maintenance Level 3	0	2 Yrs	2024		$0	0	100 %	100 %	$0
J02	Visually inspect wiring, where accessible, for signs of distress.	Maintenance Level 3	0	2 Yrs	2024		$0	0	100 %	100 %	$0
J03	Conduct infrared scanning to verify that terminations are sound and operating temperatures of all conducting parts are within allowable limits. Correct any conditions contributing to overheating if it occurs.	Maintenance Level 3	0	3 Yrs	2024		$2,500	1	100 %	100 %	$2,500
J04	Clean and test main breakers and central distribution panel board.	Maintenance Level 3	0	3 Yrs	2024		$5,000	0	100 %	100 %	$0
R01	Cyclical replacement of components of the electrical distribution equipment, as required.	Renew Assembly	0	30 Yrs	2032	Allowance	$20,000	1	100 %	100 %	$20,000

ELEC 03 - EXTERIOR LIGHT FIXTURES

Location

Throughout building exterior, and balconies, decks, ground level exterior doors and walkways.

Description

A variety of wall- and ceiling-mounted exterior fixtures, including marine-style and spot-lights.

Planning Information

Service Life: 20
Installed Year: 2009
Chronological Age: 14
Next Renewal Year: 2029
Effective Age: 14

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost

J01	Perform survey of actual lighting use and lighting levels to determine lighting needs. Consider updating fixtures or lighting controls to optimize light levels and energy costs.	Assessment	0	3 Yrs	2024		$0	0	100 %	100 %	$0
R01	Replace exterior light fixtures, as required, for aesthetic purposes, to match ballast replacement cycles, or technological obsolescence.	Renew Assembly	0	20 Yrs	2029	Each	$100	30	100 %	100 %	$3,000

ELEC 04 - EXTERIOR LIGHT FIXTURES - LAMPS POST

Location

Entry plaza.

Description

Exterior lamps post fixtures.

Planning Information

Service Life: 30
Installed Year: 1992
Chronological Age: 31
Next Renewal Year: 2025
Effective Age: 28

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace lamp coverings as required.	Renew Component	0	10 Yrs	2032	Each	$50	4	100 %	100 %	$200
R02	Replace lamp posts, excluding field wiring.	Renew Assembly	0	30 Yrs	2025	Each	$500	4	100 %	100 %	$2,000

ELEC 05 - INTERIOR LIGHT FIXTURES

Location

Throughout interior common areas, including lobbies, hallways, meeting rooms, service rooms, and the parkade.

Description

A variety of interior fixtures, including ceiling-mounted pot lights, entry lobby chandelier, and ceiling-mounted fluorescent tube fixtures.

Planning Information

Service Life: 20
Installed Year: 2017
Chronological Age: 6
Next Renewal Year: 2037
Effective Age: 6

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
J01	Perform survey of actual lighting use and lighting levels to determine lighting needs. Consider updating fixtures, lighting controls or interior finishes (e.g. painting) to optimize light levels and energy costs.	Assessment	0	3 Yrs	2024		$0	0	100 %	100 %	$0
R01	Replace various interior light fixtures, as required, for aesthetic purposes, to match ballast replacement cycles, or technological obsolescence.	Renew Assembly	0	20 Yrs	2037	Each	$150	85	100 %	100 %	$12,750

ELEC 06 - ENTERPHONE SYSTEM

Location

Enterphone panel at main entry lobby and processor in parkade electrical room.

Description

Linear enterphone, surface-mounted, enterphone panel with associated key pads and display panels.

Planning Information

Service Life:	25
Installed Year:	2017
Chronological Age:	6
Next Renewal Year:	2042
Effective Age:	6

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace enterphone panels, excluding field wiring.	Renew Assembly	0	25 Yrs	2042	Each	$6,000	1	100 %	100 %	$6,000

ELEC 07 - PROXIMITY ACCESS CONTROL

Location

Adjacent to parkade overhead gate.

Description

Local proximity access control system for to control parkade overhead door, including fob/card devices and readers. Receiving unit replaced 2011; chronological age represents average asset age.

Planning Information

Service Life:	12
Installed Year:	2004
Chronological Age:	19
Next Renewal Year:	2024
Effective Age:	11

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Modernize components of the proximity access control system, excluding field wiring, as required by technological obsolescence.	Renew Assembly	0	15 Yrs	2024	Per Suite	$400	21	100 %	100 %	$8,400

ELEC 08 - SECURITY SURVEILLANCE

Location

Strategically located throughout the building.

Description

Cameras, multiplexer, monitors, and storage media to deter and track activity on and within building premises.

Planning Information

Service Life:	14
Installed Year:	2017
Chronological Age:	6
Next Renewal Year:	2031
Effective Age:	6

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Service the multiplex unit, update software as required.	Renew Component	0	5 Yrs	2027	Allowance	$5,000	0	100 %	100 %	$0

R02	Modernize components of the security surveillance system, excluding field wiring, as required by technological obsolescence.	Renew Assembly	0	14 Yrs	2031	Each	$1,200	10	100 %	100 %	$12,000

MECH 01 - GAS DETECTION - PARKING GARAGE

Location

Column-mounted in parkade.

Description

MSA electronic sensing devices for detection of dangerous gases, carbon monoxide (CO) and to activate the exhaust fans accordingly.

Planning Information

Service Life: 10
Installed Year: 2017
Chronological Age: 6
Next Renewal Year: 2027
Effective Age: 6

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Cyclical replacement of gas detection sensors.	Renew Assembly	0	10 Yrs	2027	Each	$1,200	3	100 %	100 %	$3,600

MECH 02 - HEAT TRACING - FREEZE PROTECTION

Location

Along various pipes exposed to freezing throughout the parkade.

Description

Self regulating heater cable with parallel circuit heater strip and outer thermoplastic elastomer jacket.

Planning Information

Service Life: 15
Installed Year: 1992
Chronological Age: 31
Next Renewal Year: 2025
Effective Age: 13

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Cyclical replacement of components of electric heat tracing cable, including control module and pipe insulation.	Renew Assembly	0	15 Yrs	2025	Allowance	$5,000	1	100 %	100 %	$5,000

MECH 03 - CONTROLS - HVAC INSTRUMENTATION

Location

Common areas and service rooms throughout the building.

Description

Thermostats, programmable thermostats, flow gauges, thermometers, metering equipment, gauges, and other field devices to monitor and regulate pressure and temperature in the HVAC and plumbing distribution systems.

Planning Information

Service Life: 20
Installed Year: 1992
Chronological Age: 31
Next Renewal Year: 2025
Effective Age: 18

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost

R01	Cyclical replacement of miscellaneous HVAC instrumentation, as required.	Renew Assembly	0	3 Yrs	2025	Allowance	$500	1	100 %	100 %	$500

MECH 04 - DRAINAGE - SANITARY

Location

(Concealed asset). From fixtures in suites to the city connection at the property line.

Description

Cast iron DWV piping, with mechanical joints, p-traps, and fittings.

Planning Information

Service Life: 50
Installed Year: 1992
Chronological Age: 31
Next Renewal Year: 2042
Effective Age: 31

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
J01	Insert video cameras into main lines to conduct pipe inspection.	Maintenance Level 3	0	5 Yrs	2025	Allowance	$1,500	1	100 %	100 %	$1,500
J02	Auger lateral drain lines.	Maintenance Level 3	0	10 Yrs	2025		$2,000	1	100 %	100 %	$2,000
R01	Repair components of sanitary drainage distribution system, as required.	Renew Assembly	0	50 Yrs	2042	Allowance	$30,000	1	100 %	100 %	$30,000

MECH 05 - DRAINAGE - STORM - EXTERIOR SYSTEM

Location

At walkways and ground floor decks.

Description

Cast iron underground tight piping forming part of a drainage system around perimeter of building, intended for hard surface area drainage.

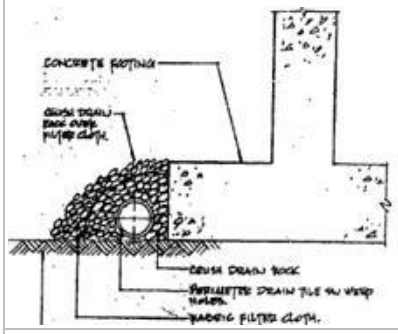
Planning Information

Service Life: 40
Installed Year: 1992
Chronological Age: 31
Next Renewal Year: 2032
Effective Age: 31

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Repair and replace components of exterior drainage system, as required.	Renew Assembly	0	40 Yrs	2032	Linear Foot	$40	250	100 %	100 %	$10,000

MECH 06 - DRAINAGE - PERIMETER AND FOUNDATION



Location

(Concealed Asset- picture indicates location of piping identified on construction drawings). Below-grade perimeter of foundation footings.

Description

Perforated piping forming part of a sub-surface foundation drainage system around perimeter of building.

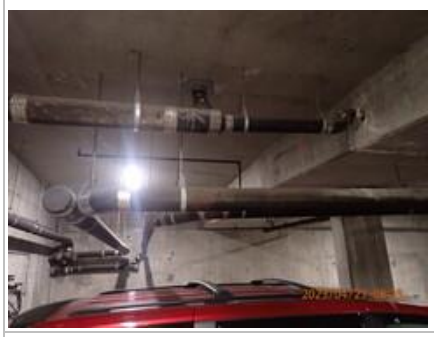
Planning Information

Service Life:	40
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2032
Effective Age:	31

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Video inspect and clean the perimeter and foundation drainage.	Renew Component	0	10 Yrs	2025	Allowance	$1,500	1	100 %	100 %	$1,500
R02	Repair and/replace components of perimeter drainage system, as required.	Renew Assembly	0	40 Yrs	2032	Linear Foot	$40	380	100 %	100 %	$15,200

MECH 07 - DRAINAGE - STORM - INTERNAL



Location

Throughout parkade.

Description

Trench drains, catch basins and associated piping systems for rainwater runoff.

Planning Information

Service Life:	40
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2032
Effective Age:	31

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Repair and/replace components of storm water drainage distribution system, as required.	Renew Assembly	0	40 Yrs	2032	Allowance	$40,000	1	100 %	100 %	$40,000

MECH 08 - FIXTURES - TOILETS

Location

Washrooms in locker room.

Description

Floor mounted toilet.

Planning Information

Service Life:	20
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2027
Effective Age:	16

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Cyclical replacement of toilets, as required.	Renew Assembly	0	20 Yrs	2027	Each	$1,000	1	100 %	100 %	$1,000

MECH 09 - FIXTURES - TAPS & SINKS

Location

Washrooms in locker room and kitchenette in meeting room.

Description

Vitreous china and stainless steel sinks and plumbing supply fixtures.

Planning Information

Service Life:	25
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2027
Effective Age:	21

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Cyclical replacement of sinks and faucets, as required.	Renew Assembly	0	20 Yrs	2027	Each	$1,000	2	100 %	100 %	$2,000

MECH 10 - PIPING - DOMESTIC WATER DISTRIBUTION

Location

Throughout the building, from service rooms to common areas and individual suites.

Description

Mixture of K and L copper for vertical/horizontal mains system and distribution piping within the suites. Soldered connections. Epoxy-lined 2011.

Planning Information

Service Life:	35
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2035
Effective Age:	23

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
J01	Check that pipe hangars are properly fastened and dissimilar metals are isolated from one another.	Maintenance Level 3	0	5 Yrs	2024		$0	0	100 %	100 %	$0
J02	Check piping and supports for mechanical damage, proper clearance, adequate insulation, and labeling.	Maintenance Level 3	0	5 Yrs	2024		$0	0	100 %	100 %	$0
J03	Check integrity of all soldered pipe connections and couplings.	Maintenance Level 3	0	5 Yrs	2024		$500	0	100 %	100 %	$0
J04	Comprehensive third party testing and inspection of the copper domestic water distribution system.	Assessment	0	20 Yrs	2025	Allowance	$12,500	1	100 %	100 %	$12,500
R01	Replace components of domestic plumbing distribution system, including domestic valves.	Renew Assembly	0	28 Yrs	2035	Per Suite	$12,500	21	100 %	100 %	$262,500

MECH 11 - PIPING - GAS DISTRIBUTION

Location

From utility-owned meter on south side of the site to rooftop mechanical room and individual suites.

Description

Gas distribution system consisting of threaded sch 40 steel piping from meter to appliance.

Planning Information

Service Life:	50
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2042
Effective Age:	31

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Cyclical replacement of fittings and valves, as required.	Renew Assembly	0	20 Yrs	2042	Gross Floor Area	$0.50	27,600	30 %	100 %	$4,140

MECH 12 - PUMP - DHW - RECIRCULATION

Location

Rooftop mechanical room.

Description

Armstrong 1/12 HP, pipe-mounted bronze body domestic hot water recirculation pumps. Recirculating hot water from heaters throughout system.

Planning Information

Service Life:	10
Installed Year:	2012
Chronological Age:	11
Next Renewal Year:	2024
Effective Age:	9

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Cyclical replacement of recirculating pumps, as required.	Renew Assembly	0	10 Yrs	2024	Each	$1,500	1	100 %	100 %	$1,500

MECH 13 - PUMPS - STORM LIFT AND CONTROL PANEL

Location

Parkade P3 bike storage room.

Description

Northwest Tech Con, Duplex, storm sump pumps and control panels for storm water runoff and sub-surface drainage.

Planning Information

Service Life:	15
Installed Year:	2021
Chronological Age:	2
Next Renewal Year:	2036
Effective Age:	2

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Overhaul storm sump pumps.	Renew Component	0	5 Yrs	2026	Allowance	$2,000	1	100 %	100 %	$2,000
R02	Cyclic replacement of sump pump storm lift and control panels.	Renew Assembly	0	15 Yrs	2036	Each	$4,000	1	100 %	100 %	$4,000

MECH 14 - TANK - DHW - HEATING - GAS FIRED

Location

Rooftop mechanical room.

Description

Bradford White DM80T2503N 250,000 BTU natural gas fired domestic water heaters, for domestic hot water to plumbing fixtures in the suites.

Planning Information

Service Life:	12
Installed Year:	2016
Chronological Age:	7
Next Renewal Year:	2028
Effective Age:	7

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace domestic hot water heater.	Renew Assembly	0	12 Yrs	2028	Each	$8,000	2	100 %	100 %	$16,000

MECH 15 - VALVES - CROSS CONNECTION & BACKFLOW PREVENTION

Location

Parkade P2 level, adjacent to sprinkler room.

Description

Various types and sizes of backflow prevention valves, including vacuum breakers, double check, reduced pressure valves on systems.

Planning Information

Service Life:	20
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2027
Effective Age:	16

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Cyclical replacement of cross connection & back flow prevention valves, as required.	Renew Assembly	0	20 Yrs	2027	Allowance	$6,000	1	100 %	100 %	$6,000

MECH 16 - VALVES - PLUMBING FLOW CONTROL AND DIRECTIONAL

Location

Throughout plumbing distribution.

Description

Various types and sizes of valves, including pressure reducing valves, isolation valves, two-way and three way valves, circuit flow control valves and check valves to regulate the flow of water through domestic plumbing systems.

Planning Information

Service Life:	20
Installed Year:	2011
Chronological Age:	12
Next Renewal Year:	2031
Effective Age:	12

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Cyclical replacement of valves, as required.	Renew Assembly	0	20 Yrs	2031	Allowance	$6,000	1	100 %	100 %	$6,000

MECH 17 - BASEBOARD - ELECTRIC

Location

Lobbies, hallways, amenity rooms, and washrooms.

Description

Standard grade, wall mounted, electric convector baseboard heaters with electrical fins for localized space heating and integral thermostat control.

Planning Information

Service Life:	40
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2032
Effective Age:	31

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Cyclical replacement of electric baseboard heaters, as required.	Renew Assembly	0	40 Yrs	2032	Each	$450	25	50 %	100 %	$5,625

MECH 18 - COIL - ELECTRIC - DUCT HEATER

Location

Interior supply fans.

Description

PM Wright, 2 KW, electric duct heater.

Planning Information

Service Life:	17
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2025
Effective Age:	15

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Cyclical replacement of electric duct heaters.	Renew Assembly	0	17 Yrs	2025	Each	$1,000	4	100 %	100 %	$4,000

MECH 19 - EXHAUST FAN - PARKADE - PROPELLOR

Location

Parkade P1 and P3, electrical room, and elevator room.

Description

Belt driven propellor exhaust fan mounted in exterior wall with backdraft damper.

Planning Information

Service Life:	20
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2025
Effective Age:	18

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Rebuild parkade exhaust fans, as required.	Renew Assembly	0	20 Yrs	2025	Each	$1,000	4	100 %	100 %	$4,000

MECH 20 - INDOOR AIR HANDLER - GAS FIRED

Location

Rooftop mechanical room.

Description

Engineered Air UP5-11-200 indoor unit, belt-driven, 200 MBTU, centrifugal fan with natural gas fired heating to supply tempered make-up air to the interior spaces.

Planning Information

Service Life:	20
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2025
Effective Age:	18

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Cyclical rebuild or replacement of make-up air units.	Renew Assembly	0	20 Yrs	2025	Each	$25,000	1	100 %	100 %	$25,000

MECH 21 - SUPPLY FAN - INLINE DUCT BLOWER

Location

Ceiling of meeting room and locker room.

Description

Delhi 207 3/4 HP centrifugal fan suspended from structure. Supply fan in locker room (pictured) is not operational.

Planning Information

Service Life:	20
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2025
Effective Age:	18

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Rebuild supply fan, as required.	Renew Assembly	0	20 Yrs	2025	Each	$1,000	1	100 %	100 %	$1,000

MECH 22 - OVERHEAD GATE MOTOR

Location

Adjacent to parkade overhead door.

Description

AO Smith AC motor and commercial-grade overhead sectional door controlled by an electric operator. Chronological age refers to assumed age.

Planning Information

Service Life:	8
Installed Year:	2014
Chronological Age:	9
Next Renewal Year:	2025
Effective Age:	6

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace motor and drive unit.	Renew Assembly	0	7 Yrs	2025	Each	$2,500	1	100 %	100 %	$2,500

ELEV 01 - TRACTION ELEVATORS, OVERHEAD GEARED

Location

Elevator machine room at roof level.

Description

Geared overhead traction elevator with Northern Relay/Microprocessor controls, DC motor generator, Northern Elevator 280 OH geared machine, 2000 lbs, 350 fpm rated speed.

Planning Information

Service Life:	25
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2024
Effective Age:	24

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
J01	Check and test the overload devices.	Maintenance Level 3	0	2 Yrs	2024		$0	0	100 %	100 %	$0
J02	With test weights, load each elevator to contract capacity and operate the elevator in both directions, making single and two floor runs as well as runs for the full travel.	Maintenance Level 3	0	2 Yrs	2024		$0	0	100 %	100 %	$0
J03	Conduct full load performance test.	Maintenance Level 3	0	2 Yrs	2024		$0	0	100 %	100 %	$0
R01	Replace elevator hoist ropes.	Renew Component	0	15 Yrs	2024		$25,000	0	100 %	100 %	$0
R02	Replace elevator controls and drive.	Renew Component	0	20 Yrs	2032		$300,000	0	100 %	100 %	$0
R03	Replace elevator geared machine, controls and drive system. Note: Fire alarm upgrades may be required if this asset is implemented. See related FIre Protection system assets.	Renew Assembly	0	30 Yrs	2024	Each	$140,000	1	100 %	100 %	$140,000

ELEV 02 - ELEVATOR CABS & HOISTWAY

Location

Elevator cab and travelling hoistway.

Description

Single speed side opening door, plastic car and hall pushbuttons, one (1) car operating panel with plastic pushbuttons, mechanical safety edge with dual lights (dual lights are not functional) door protection, ECI-895 door operator, stainless steel car door and front return, mirrors with stainless steel reveals on walls, plastic laminate ceiling, tile flooring, tubular stainless steel handrails on all non-access walls, firefighter's emergency operation, standby power provisions, hand-held voice communication device (in cabinet), no seismic provisions.

Planning Information

Service Life:	25
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2024
Effective Age:	24

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost

R01	Replace finishes in elevator cab.	Renew Component	0	30 Yrs	2024	Allowance	$12,000	1	100 %	100 %	$12,000
R02	Replace door detector.	Renew Component	0	20 Yrs	2024		$3,500	1	100 %	100 %	$3,500
R03	Replace elevator operating and signal fixtures (to be completed in conjunction with asset 1).	Renew Assembly	0	30 Yrs	2024	Each	$30,000	1	100 %	100 %	$30,000

FIRE 01 - FIRE ALARM PANEL - CONVENTIONAL

Location

Main entry lobby.

Description

Siemens microprocessor and supervised unit with annunciator and display.

Planning Information

Service Life: 20
Installed Year: 2017
Chronological Age: 6
Next Renewal Year: 2037
Effective Age: 6

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace battery packs.	Renew Component	0	5 Yrs	2024	Each	$250	2	100 %	100 %	$500
R02	Replace fire alarm annunciator panels and control panel, excluding field wiring and field devices.	Renew Assembly	0	20 Yrs	2037	Allowance	$20,000	1	100 %	100 %	$20,000

FIRE 02 - FIRE DETECTION & ALARM

Location

Throughout building interior, including common area and suites.

Description

Smoke detectors, heat detectors, flow switches, tamper switches, horns, pull stations and other fixed apparatus field devices to detect fire and smoke conditions and initiate timely response.

Planning Information

Service Life: 20
Installed Year: 2017
Chronological Age: 6
Next Renewal Year: 2037
Effective Age: 6

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Cyclical replacement of speakers, heat detectors, smoke detectors and related modules, excluding field wiring.	Renew Assembly	0	20 Yrs	2037	Square Foot	$2	38,700	100 %	100 %	$77,400

FIRE 03 - DRY SPRINKLER COMPRESSOR

Location

Parkade P2 sprinkler room.

Description

Swan compressor with fractional HP motor to maintain the pressure of air in the dry fire sprinkler lines.

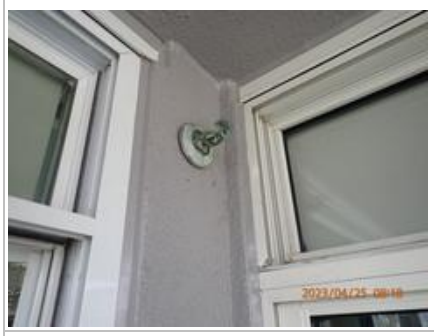
Planning Information

Service Life:	14
Installed Year:	2013
Chronological Age:	10
Next Renewal Year:	2027
Effective Age:	10

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace fire sprinkler compressor.	Renew Assembly	0	14 Yrs	2027	Each	$2,000	1	100 %	100 %	$2,000

FIRE 04 - DRY SPRINKLERS - WET SYSTEM



Location

Exterior balcony walls.

Description

Dry sidewall sprinklers on a wet distribution system, extending from a heated space to unheated coverage area.

Planning Information

Service Life:	30
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2025
Effective Age:	28

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace all heads, or submit representative sample of heads for testing by recognised testing agency, to the satisfaction of the authority having jurisdiction, in accordance with NFPA 25.	Renew Assembly	0	30 Yrs	2025	Each	$150	28	100 %	100 %	$4,200

FIRE 05 - FIRE HOSE CABINET

Location

Interior hallways.

Description

Fire hose and extinguisher cabinet, wall mounted with swinging glass door.

Planning Information

Service Life:	20
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2025
Effective Age:	18

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost

R01	Replace fire hoses.	Renew Assembly	0	40 Yrs	2025	Each	$1,000	8	100 %	100 %	$8,000

FIRE 06 - PORTABLE FIRE EXTINGUISHER

Location

Service rooms.

Description

Wall mounted, manually operated, 5lbs ABC type, pressurized vessels for controlled discharge of chemicals to extinguish small fires. Chronological age represents average asset age.

Planning Information

Service Life:	24
Installed Year:	2008
Chronological Age:	15
Next Renewal Year:	2032
Effective Age:	15

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Cyclical replacement of fire extinguishers.	Renew Assembly	0	12 Yrs	2032	Each	$200	5	100 %	100 %	$1,000

FIRE 07 - SPRINKLER SYSTEM - WET

Location

Throughout interior heated spaces.

Description

Pendant sprinkler heads, flow switches and indicating devices, gauges, steel distribution lines.

Planning Information

Service Life:	100
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2092
Effective Age:	31

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
J01	Sprinkler Piping - Conduct flow test on piping, both exposed and underground.	Maintenance Level 3	0	5 Yrs	2024		$500	0	100 %	100 %	$0
J02	Sprinkler Heads - Test extra high temperature on sprinkler heads.	Maintenance Level 3	0	5 Yrs	2024		$500	0	100 %	100 %	$0
R01	Replace all heads, or submit representative sample of heads for testing by recognised testing agency, to the satisfaction of the authority having jurisdiction, in accordance with NFPA 25.	Renew Component	50	10 Yrs	2042	Square Foot	$0.30	27,700	100 %	100 %	$8,310
R02	Replace entire system including risers, branch piping, valves, heads, swaybracing, and all related trim, back to Sprinkler Room.	Renew Assembly	0	100 Yrs	2092	Square Foot	$1	27,700	100 %	100 %	$27,700

FIRE 08 - SPRINKLER SYSTEM - DRY

Location

Service rooms and throughout the parkade.

Description

Exposed dry sprinklers, upright and sidewall sprinkler heads, steel piping.

Planning Information

Service Life:	60
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2052
Effective Age:	31

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
J01	Sprinkler Piping - Conduct flow test on piping, both exposed and underground.	Maintenance Level 3	0	5 Yrs	2024	Allowance	$500	0	100 %	100 %	$0
J02	Sprinkler Heads - Test extra high temperature on sprinkler heads.	Maintenance Level 3	0	5 Yrs	2024	Allowance	$500	0	100 %	100 %	$0
R01	Replace all heads, or submit representative sample of heads for testing by recognised testing agency, to the satisfaction of the authority having jurisdiction, in accordance with NFPA 25.	Renew Component	50	10 Yrs	2042	Square Foot	$0.30	11,100	100 %	100 %	$3,330
R02	Replace entire system including risers, branch piping, valves, heads, swaybracing, and all related trim, back to Sprinkler Room.	Renew Assembly	0	60 Yrs	2052	Square Foot	$1	11,100	100 %	100 %	$11,100

FIRE 09 - SPRINKLER VALVE ASSEMBLY - DRY

Location

Parkade P2 sprinkler room.

Description

Reliable 4" dry sprinkler valve, trim and gauges, steel piping.

Planning Information

Service Life:	40
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2032
Effective Age:	31

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Phased replacement of sprinkler zone control valves, as required.	Renew Component	0	20 Yrs	2025		$2,500	0	100 %	100 %	$0
R02	Replace gaskets in dry sprinkler valves.	Renew Component	0	20 Yrs	2025		$600	0	100 %	100 %	$0
R03	Rebuild dry sprinkler valves.	Renew Component	0	20 Yrs	2025	Allowance	$4,000	1	100 %	100 %	$4,000
R04	Replace sprinkler valves, as required.	Renew Assembly	0	40 Yrs	2032	Each	$3,000	1	100 %	100 %	$3,000

FIRE 10 - EXHAUST FAN - SMOKE BLOWER

Location

Adjacent to rooftop mechanical room.

Description

Delhi 610 1/4 hp centrifugal blower fan for smoke exhaust.

Planning Information

Service Life:	20
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2025
Effective Age:	18

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Rebuild of smoke exhaust fan, as required.	Renew Assembly	0	20 Yrs	2025	Each	$3,000	1	100 %	100 %	$3,000

FIRE 11 - EMERGENCY EGRESS EQUIPMENT

Location

Throughout interior common areas, including lobbies, hallways, and the parkade.

Description

Illuminated exit signs. Chronological age represents average asset age.

Planning Information

Service Life:	20
Installed Year:	2008
Chronological Age:	15
Next Renewal Year:	2028
Effective Age:	15

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Cyclical replacement of LED exit signs.	Renew Assembly	0	15 Yrs	2028	Each	$150	40	100 %	100 %	$6,000

FINISH 01 - FLOOR TILE - LOBBY

Location

Floor of entry lobby.

Description

Textured floor tile on thin set mortar with grout.

Planning Information

Service Life:	40
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2032
Effective Age:	31

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Renew tile floor.	Renew Assembly	0	40 Yrs	2032	Square Foot	$22	280	100 %	100 %	$6,160

FINISH 02 - FLOOR TILE - WASHROOMS

Location

Floor of washrooms in locker room

Description

Floor tile on thin set mortar with grout.

Planning Information

Service Life:	40
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2032
Effective Age:	31

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Renew washroom tile floor.	Renew Assembly	0	40 Yrs	2032	Square Foot	$22	90	100 %	100 %	$1,980

FINISH 03 - SHEET CARPET - LEVELS 2, 6-8

Location

Floor of hallways at levels 2, 6, 7, and 8.

Description

Synthetic textile sheet carpet over floor substrate. Different carpet types in each hallway.

Planning Information

Service Life:	15
Installed Year:	2012
Chronological Age:	11
Next Renewal Year:	2027
Effective Age:	11

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Renew carpet.	Renew Assembly	0	15 Yrs	2027	Square Foot	$8	580	100 %	100 %	$4,640

FINISH 04 - SHEET CARPET - LEVELS 3-5

Location

Floor of hallways at levels 3, 4, and 5.

Description

Synthetic textile sheet carpet over floor substrate. Chronological age represents assumed asset age.

Planning Information

Service Life:	15
Installed Year:	2002
Chronological Age:	21
Next Renewal Year:	2027
Effective Age:	11

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Renew carpet.	Renew Assembly	0	15 Yrs	2027	Square Foot	$8	430	100 %	100 %	$3,440

FINISH 05 - SHEET CARPET - LOBBY

Location

Floor of entry lobby.

Description

Synthetic textile sheet carpet over floor substrate.

Planning Information

Service Life:	15
Installed Year:	2003
Chronological Age:	20
Next Renewal Year:	2027
Effective Age:	11

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Renew carpet.	Renew Assembly	0	15 Yrs	2027	Square Foot	$8	260	100 %	100 %	$2,080

FINISH 06 - SHEET CARPET - MEETING ROOM

Location

Floor of meeting room.

Description

Synthetic textile sheet carpet over floor substrate.

Planning Information

Service Life:	15
Installed Year:	2017
Chronological Age:	6
Next Renewal Year:	2032
Effective Age:	6

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Renew carpet.	Renew Assembly	0	15 Yrs	2032	Square Foot	$8	460	100 %	100 %	$3,680

FINISH 07 - CERAMIC TILE - LOBBY

Location

Walls of entry lobby.

Description

Ceramic tile on mortar bed and substrate with grout and sealant at interfaces.

Planning Information

Service Life:	25
Installed Year:	2003
Chronological Age:	20
Next Renewal Year:	2028
Effective Age:	20

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace ceramic wall tiles.	Renew Assembly	0	25 Yrs	2028	Square Foot	$10	130	100 %	100 %	$1,300

FINISH 08 - CERAMIC TILE - WASHROOMS

Location

Walls of showers in locker room.

Description

Ceramic tile on mortar bed and substrate with grout and sealant at interfaces.

Planning Information

Service Life:	25
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2027
Effective Age:	21

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace ceramic wall tiles.	Renew Assembly	0	25 Yrs	2027	Square Foot	$10	90	100 %	120 %	$1,080

FINISH 09 - PAINT

Location

Walls of entry lobby, hallways, washrooms, and meeting room.

Description

Primers and multiple pigmented coating finishes applied to interior gypsum wallboard. Chronological age refers to assumed average age.

Planning Information

Service Life:	10
Installed Year:	2017
Chronological Age:	6
Next Renewal Year:	2027
Effective Age:	6

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Repaint interior wall in high traffic area, as required.	Renew Component	0	5 Yrs	2024	Square Foot	$1.25	4,900	25 %	100 %	$1,531.25
R02	Repaint wall surface including preparation of substrate.	Renew Assembly	0	10 Yrs	2027	Square Foot	$1.50	4,900	100 %	100 %	$7,350

FINISH 10 - ACOUSTIC CEILING TILE

Location

Ceiling of hallways, amenity rooms, and washrooms.

Description

Suspended grid of metal T channels with infill acoustic tiles that form a drop ceiling.

Planning Information

Service Life:	50
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2042
Effective Age:	31

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace various acoustic ceiling tiles, as required.	Renew Component	0	25 Yrs	2027	Hundred Square Foot	$250	16	50 %	100 %	$2,000

R02	Replace suspended frame and acoustic ceiling tiles.	Renew Assembly	0	50 Yrs	2042	Square Foot	$5	1,600	100 %	100 %	$8,000

FINISH 11 - CARPENTRY AND MILLWORK

Location

Washrooms in locker room and kitchenette in meeting room.

Description

Laminate counter-tops and composite cabinets.

Planning Information

Service Life: 30
Installed Year: 1992
Chronological Age: 31
Next Renewal Year: 2027
Effective Age: 26

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace damaged components of carpentry and millwork, as required.	Renew Assembly	0	30 Yrs	2027	Linear Foot	$120	15	100 %	100 %	$1,800

FINISH 12 - INTERIOR SWING DOOR - GENERAL

Location

Interior access to suites, stairwells, amenity rooms, and service rooms.

Description

A variety of wood and steel interior swing doors.

Planning Information

Service Life: 30
Installed Year: 1992
Chronological Age: 31
Next Renewal Year: 2027
Effective Age: 26

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
J01	Repaint door and frame in high-traffic locations as required.	Maintenance Level 3	0	8 Yrs	2027	Each	$125	59	15 %	100 %	$1,106.25
R01	Replace various interior swing door as required.	Renew Assembly	0	30 Yrs	2027	Each	$500	59	100 %	100 %	$29,500

AMEN 01 - WOOD STORAGE LOCKER

Location

Storage locker room at the ground floor.

Description

Wood framed general purpose storage locker with swing door and hardware.

Planning Information

Service Life: 30
Installed Year: 2012
Chronological Age: 11
Next Renewal Year: 2042
Effective Age: 11

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost

R01	Reconstruct wood storage lockers, as required.	Renew Assembly	0	30 Yrs	2042	Allowance	$2,000	1	100 %	100 %	$2,000

AMEN 02 - CENTRAL MAILBOXES

Location

Main entry lobby.

Description

Flush, front loading common mailboxes with brushed aluminum finish and extruded aluminum trim.

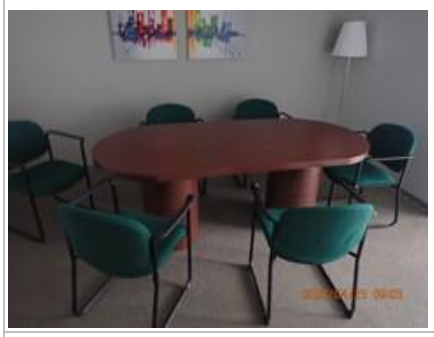
Planning Information

Service Life: 30
Installed Year: 1992
Chronological Age: 31
Next Renewal Year: 2027
Effective Age: 26

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace central mail boxes as required.	Renew Assembly	0	30 Yrs	2027	Each	$3,000	1	100 %	100 %	$3,000

AMEN 03 - FURNITURE & ACCESSORIES



Location

Entry lobby and meeting room.

Description

A variety of chairs and tables. Chronological age refers to assumed average age.

Planning Information

Service Life: 15
Installed Year: 2000
Chronological Age: 23
Next Renewal Year: 2027
Effective Age: 11

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace furniture and accessories as required.	Renew Assembly	0	15 Yrs	2027	Allowance	$5,000	1	100 %	100 %	$5,000

SITE 01 - CONCRETE PAVING

Location

Parkade entry ramp, lobby plaza, and walkways on east and west sides of the building.

Description

Concrete pavement, cast with control and construction joints, onto compacted gravel base.

Planning Information

Service Life: 40
Installed Year: 1992
Chronological Age: 31
Next Renewal Year: 2032
Effective Age: 31

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace sections of concrete paving, as required.	Renew Assembly	0	40 Yrs	2032	Square Foot	$7	2,500	30 %	100 %	$5,250

SITE 02 - METAL GATE - GARBAGE ROOM

Location

Access to garbage room and parkade P3 stairwell on south elevation.

Description

Metal framed gates with mesh infill.

Planning Information

Service Life:	40
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2032
Effective Age:	31

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Replace metal gates.	Renew Assembly	0	40 Yrs	2032	Each	$500	3	100 %	100 %	$1,500

SITE 03 - METAL GATE & FRAME - EXTERIOR STAIRS

Location

Exterior stairwell access on east and west elevations.

Description

Painted metal gate and frame to restrict access.

Planning Information

Service Life:	40
Installed Year:	2010
Chronological Age:	13
Next Renewal Year:	2050
Effective Age:	13

Calculation Option: Option A: Dependent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
J01	Repaint metal gate as required.	Maintenance Level 2	0	10 Yrs	2032	Allowance	$500	1	100 %	100 %	$500
R01	Replace metal gate and frame.	Renew Assembly	0	40 Yrs	2050	Each	$500	2	100 %	100 %	$1,000

SITE 04 - SOFT LANDSCAPING

Location

Planters on north and south sides of the site.

Description

Flowers, bushes, hedges, and small trees (up to 30').

Planning Information

Service Life:	15
Installed Year:	1992
Chronological Age:	31
Next Renewal Year:	2025
Effective Age:	13

Calculation Option: Option B: Independent

Ref ID	Maintenance Description	Task	Delay (Yr)	Freq.	Next Event	Unit Type	Unit Cost	No. of Unit	% of Total	Diff. Factor	Estimated Cost
R01	Renovate sections of the soft landscaping, as required.	Renew Assembly	0	15 Yrs	2025	Square Foot	$6	2,200	30 %	100 %	$3,960

Appendix C

10-Year Tactical Plan

Chateau Comox

10 Year Costing - 2023 through 2032

	Description	Task	Frequency	Next Event	Cost (CYD)	Cost (FYD)
Year 2023						

	Description	Task	Frequency	Next Event	Cost (CYD)	Cost (FYD)
Year 2024						
Enclosure						
Encl 30 - General & Inspections						
J02	Perform full condition assessment of all enclosure systems.	Assessment	5 Yrs	2024	$12,000	$12,000
Electrical						
Elec 01 - Emergency Generator						
R01	Replace generator hoses.	Renew Component	10 Yrs	2024	$1,500	$1,500
R03	Replace generator battery packs.	Renew Component	4 Yrs	2024	$0	$0
Elec 02 - Electrical Distribution						
J01	Visually inspect all panels for wear, alignment, rust, stiffness, loose bolts, discoloration and other signs of distress. Ensure breakers are not warm to the touch.	Maintenance Level 3	2 Yrs	2024	$0	$0
J02	Visually inspect wiring, where accessible, for signs of distress.	Maintenance Level 3	2 Yrs	2024	$0	$0
J03	Conduct infrared scanning to verify that terminations are sound and operating temperatures of all conducting parts are within allowable limits. Correct any conditions contributing to overheating if it occurs.	Maintenance Level 3	3 Yrs	2024	$2,500	$2,600
J04	Clean and test main breakers and central distribution panel board.	Maintenance Level 3	3 Yrs	2024	$0	$0
Elec 03 - Exterior Light Fixtures						
J01	Perform survey of actual lighting use and lighting levels to determine lighting needs. Consider updating fixtures or lighting controls to optimize light levels and energy costs.	Assessment	3 Yrs	2024	$0	$0
Elec 05 - Interior Light Fixtures						
J01	Perform survey of actual lighting use and lighting levels to determine lighting needs. Consider updating fixtures, lighting controls or interior finishes (e.g. painting) to optimize light levels and energy costs.	Assessment	3 Yrs	2024	$0	$0
Elec 07 - Proximity Access Control						
R01	Modernize components of the proximity access control system, excluding field wiring, as required by technological obsolescence.	Renew Assembly	15 Yrs	2024	$8,400	$8,700
Mechanical						
Mech 10 - Piping - Domestic Water Distribution						
J01	Check that pipe hangars are properly fastened and dissimilar metals are isolated from one another.	Maintenance Level 3	5 Yrs	2024	$0	$0
J02	Check piping and supports for mechanical damage, proper clearance, adequate insulation, and labeling.	Maintenance Level 3	5 Yrs	2024	$0	$0

	Description	Task	Frequency	Next Event	Cost (CYD)	Cost (FYD)
J03	Check integrity of all soldered pipe connections and couplings.	Maintenance Level 3	5 Yrs	2024	$0	$0
Mech 12 - Pump - DHW - Recirculation						
R01	Cyclical replacement of recirculating pumps, as required.	Renew Assembly	10 Yrs	2024	$1,500	$1,500
Elevator						
Elev 01 - Traction Elevators, Overhead Geared						
J01	Check and test the overload devices.	Maintenance Level 3	2 Yrs	2024	$0	$0
J02	With test weights, load each elevator to contract capacity and operate the elevator in both directions, making single and two floor runs as well as runs for the full travel.	Maintenance Level 3	2 Yrs	2024	$0	$0
J03	Conduct full load performance test.	Maintenance Level 3	2 Yrs	2024	$0	$0
R01	Replace elevator hoist ropes.	Renew Component	15 Yrs	2024	$0	$0
R03	Replace elevator geared machine, controls and drive system. Note: Fire alarm upgrades may be required if this asset is implemented. See related FIre Protection system assets.	Renew Assembly	30 Yrs	2024	$140,000	$140,000
Elev 02 - Elevator Cabs & Hoistway						
R01	Replace finishes in elevator cab.	Renew Component	30 Yrs	2024	$12,000	$12,000
R02	Replace door detector.	Renew Component	20 Yrs	2024	$3,500	$3,600
R03	Replace elevator operating and signal fixtures (to be completed in conjunction with asset 1).	Renew Assembly	30 Yrs	2024	$30,000	$31,000
Fire Safety						
Fire 01 - Fire Alarm Panel - Conventional						
R01	Replace battery packs.	Renew Component	5 Yrs	2024	$500	$520
Fire 07 - Sprinkler System - Wet						
J01	Sprinkler Piping - Conduct flow test on piping, both exposed and underground.	Maintenance Level 3	5 Yrs	2024	$0	$0
J02	Sprinkler Heads - Test extra high temperature on sprinkler heads.	Maintenance Level 3	5 Yrs	2024	$0	$0
Fire 08 - Sprinkler System - Dry						
J01	Sprinkler Piping - Conduct flow test on piping, both exposed and underground.	Maintenance Level 3	5 Yrs	2024	$0	$0
J02	Sprinkler Heads - Test extra high temperature on sprinkler heads.	Maintenance Level 3	5 Yrs	2024	$0	$0
Interior Finishes						
Finish 09 - Paint						
R01	Repaint interior wall in high traffic area, as required.	Renew Component	5 Yrs	2024	$1,531.25	$1,600

	Description	Task	Frequency	Next Event	Cost (CYD)	Cost (FYD)
Year 2025						
Enclosure						
Encl 06 - Protected Podium Membrane						
R01	Replace podium waterproofing membrane.	Renew Assembly	30 Yrs	2025	$370,000	$390,000
Encl 07 - Guardrail Aluminum						
R01	Remove and re-install sections of guardrail in conjunction with deck waterproofing membrane renewal, including inspect and re-certify guardrail.	Renew Component	30 Yrs	2025	$1,728	$1,800
Encl 08 - Guardrail Glazed Aluminum						
J01	Review guardrails for structural adequacy including attachments.	Assessment	10 Yrs	2025	$0	$0
R01	Remove and re-install sections of guardrail in conjunction with deck waterproofing membrane renewal, including inspect and re-certify guardrail.	Renew Component	25 Yrs	2025	$1,440	$1,500
R02	Replace exterior guardrails.	Renew Assembly	30 Yrs	2025	$57,600	$61,000
Encl 14 - Aluminum Framed Window - 2009						
J01	Replace insulating glazing units (IGUs) with condensation or misting between panes of glass.	Maintenance Level 3	2 Yrs	2025	$1,800	$1,900
Encl 15 - Aluminum Framed Window - Original						
J01	Replace insulating glazing units (IGUs) with condensation or misting between panes of glass.	Maintenance Level 3	2 Yrs	2025	$2,400	$2,500
Encl 16 - Aluminum Storefront						
R01	Replace insulating glazing units (IGUs) with condensation or misting between panes of glass.	Renew Component	2 Yrs	2025	$0	$0
Encl 17 - Glass Block Window						
J01	Repoint mortar joints in glass block windows, as required.	Maintenance Level 2	5 Yrs	2025	$600	$640
Encl 18 - T-Bar Skylight						
R01	Replace skylight and associated flashings.	Renew Assembly	20 Yrs	2025	$2,880	$3,100
Encl 19 - Aluminum Frame Glazed Swing Door - 1999						
R01	Replace aluminum frame swing doors, as required.	Renew Assembly	25 Yrs	2025	$16,000	$17,000
Encl 20 - Aluminum Frame Glazed Swing Door - Original						
R01	Replace aluminum frame swing doors, as required.	Renew Assembly	25 Yrs	2025	$12,000	$13,000
Encl 22 - Aluminum Framed Sliding Glass Door - 2009						
J01	Replace insulating glazing units (IGUs) with condensation or misting between panes of glass.	Maintenance Level 3	2 Yrs	2025	$0	$0
Encl 23 - Aluminum Framed Sliding Glass Door - Original						
R01	Replace sliding glass doors and associated components.	Renew Assembly	30 Yrs	2025	$130,000	$140,000
Encl 24 - Steel Swing Door						
R02	Replace various steel swing doors, as required.	Renew Assembly	25 Yrs	2025	$17,500	$19,000
Encl 25 - Exposed Urethane Balcony Membrane - Concrete Substrate (2009)						
J01	Locally repair damaged and delaminated balcony membrane prior to re-application of top coat.	Maintenance Level 3	10 Yrs	2025	$840	$890
R01	Prepare and re-apply membrane top coat.	Renew Component	10 Yrs	2025	$12,000	$13,000

	Description	Task	Frequency	Next Event	Cost (CYD)	Cost (FYD)
Encl 26 - Exposed Urethane Balcony Membrane - Concrete Substrate (Original)						
R02	Replace exposed urethane balcony membrane and associated components.	Renew Assembly	25 Yrs	2025	$19,800	$21,000
Encl 27 - Open-grid Overhead Parkade Gate						
R01	Replacement of sectional overhead door and associated hardware.	Renew Assembly	25 Yrs	2025	$5,250	$5,600
Encl 28 - Slab-on-Grade						
J01	Re-apply traffic demarcation striping and directional signage. Frequency will depend on traffic volume and other factors.	Maintenance Level 1	5 Yrs	2025	$1,000	$1,100
Encl 29 - Uncoated Parking Suspended Slab						
J01	Re-apply traffic demarcation striping and directional signage. Frequency will depend on traffic volume and other factors.	Maintenance Level 1	5 Yrs	2025	$1,000	$1,100
Encl 31 - Sealant						
R01	Replace sealants at interfaces between building enclosure assemblies, and at penetrations through assemblies in accordance with sealant renewals plan.	Renew Assembly	10 Yrs	2025	$21,000	$22,000
Encl 32 - Steel Stair						
R01	Repaint steel stairs.	Renew Component	8 Yrs	2025	$500	$530
Electrical						
Elec 04 - Exterior Light Fixtures - Lamps Post						
R02	Replace lamp posts, excluding field wiring.	Renew Assembly	30 Yrs	2025	$2,000	$2,100
Mechanical						
Mech 02 - Heat Tracing - Freeze Protection						
R01	Cyclical replacement of components of electric heat tracing cable, including control module and pipe insulation.	Renew Assembly	15 Yrs	2025	$5,000	$5,300
Mech 03 - Controls - HVAC Instrumentation						
R01	Cyclical replacement of miscellaneous HVAC instrumentation, as required.	Renew Assembly	3 Yrs	2025	$500	$530
Mech 04 - Drainage - Sanitary						
J01	Insert video cameras into main lines to conduct pipe inspection.	Maintenance Level 3	5 Yrs	2025	$1,500	$1,600
J02	Auger lateral drain lines.	Maintenance Level 3	10 Yrs	2025	$2,000	$2,100
Mech 06 - Drainage - Perimeter and Foundation						
R01	Video inspect and clean the perimeter and foundation drainage.	Renew Component	10 Yrs	2025	$1,500	$1,600
Mech 10 - Piping - Domestic Water Distribution						
J04	Comprehensive third party testing and inspection of the copper domestic water distribution system.	Assessment	20 Yrs	2025	$12,500	$13,000
Mech 18 - Coil - Electric - Duct Heater						
R01	Cyclical replacement of electric duct heaters.	Renew Assembly	17 Yrs	2025	$4,000	$4,200
Mech 19 - Exhaust Fan - Parkade - Propellor						
R01	Rebuild parkade exhaust fans, as required.	Renew Assembly	20 Yrs	2025	$4,000	$4,200
Mech 20 - Indoor Air Handler - Gas Fired						
R01	Cyclical rebuild or replacement of make-up air units.	Renew Assembly	20 Yrs	2025	$25,000	$27,000

	Description	Task	Frequency	Next Event	Cost (CYD)	Cost (FYD)
Mech 21 - Supply Fan - Inline Duct Blower						
R01	Rebuild supply fan, as required.	Renew Assembly	20 Yrs	2025	$1,000	$1,100
Mech 22 - Overhead Gate Motor						
R01	Replace motor and drive unit.	Renew Assembly	7 Yrs	2025	$2,500	$2,700
Fire Safety						
Fire 04 - Dry Sprinklers - Wet System						
R01	Replace all heads, or submit representative sample of heads for testing by recognised testing agency, to the satisfaction of the authority having jurisdiction, in accordance with NFPA 25.	Renew Assembly	30 Yrs	2025	$4,200	$4,500
Fire 05 - Fire Hose Cabinet						
R01	Replace fire hoses.	Renew Assembly	40 Yrs	2025	$8,000	$8,500
Fire 09 - Sprinkler Valve Assembly - Dry						
R01	Phased replacement of sprinkler zone control valves, as required.	Renew Component	20 Yrs	2025	$0	$0
R02	Replace gaskets in dry sprinkler valves.	Renew Component	20 Yrs	2025	$0	$0
R03	Rebuild dry sprinkler valves.	Renew Component	20 Yrs	2025	$4,000	$4,200
Fire 10 - Exhaust Fan - Smoke Blower						
R01	Rebuild of smoke exhaust fan, as required.	Renew Assembly	20 Yrs	2025	$3,000	$3,200
Sitework						
Site 04 - Soft Landscaping						
R01	Renovate sections of the soft landscaping, as required.	Renew Assembly	15 Yrs	2025	$3,960	$4,200

	Description	Task	Frequency	Next Event	Cost (CYD)	Cost (FYD)
Year 2026						
Enclosure						
Encl 30 - General & Inspections						
J01	Update depreciation report.	Maintenance Level 3	3 Yrs	2026	$0	$0
Electrical						
Elec 01 - Emergency Generator						
R02	Rebuild emergency generator.	Renew Component	17 Yrs	2026	$0	$0
Elec 02 - Electrical Distribution						
J01	Visually inspect all panels for wear, alignment, rust, stiffness, loose bolts, discoloration and other signs of distress. Ensure breakers are not warm to the touch.	Maintenance Level 3	2 Yrs	2026	$0	$0
J02	Visually inspect wiring, where accessible, for signs of distress.	Maintenance Level 3	2 Yrs	2026	$0	$0
Mechanical						
Mech 13 - Pumps - Storm Lift and Control Panel						
R01	Overhaul storm sump pumps.	Renew Component	5 Yrs	2026	$2,000	$2,200

	Description	Task	Frequency	Next Event	Cost (CYD)	Cost (FYD)
Elevator						
Elev 01 - Traction Elevators, Overhead Geared						
J01	Check and test the overload devices.	Maintenance Level 3	2 Yrs	2026	$0	$0
J02	With test weights, load each elevator to contract capacity and operate the elevator in both directions, making single and two floor runs as well as runs for the full travel.	Maintenance Level 3	2 Yrs	2026	$0	$0
J03	Conduct full load performance test.	Maintenance Level 3	2 Yrs	2026	$0	$0

	Description	Task	Frequency	Next Event	Cost (CYD)	Cost (FYD)
Year 2027						
Enclosure						
Encl 14 - Aluminum Framed Window - 2009						
J01	Replace insulating glazing units (IGUs) with condensation or misting between panes of glass.	Maintenance Level 3	2 Yrs	2027	$1,800	$2,000
Encl 15 - Aluminum Framed Window - Original						
J01	Replace insulating glazing units (IGUs) with condensation or misting between panes of glass.	Maintenance Level 3	2 Yrs	2027	$2,400	$2,700
Encl 16 - Aluminum Storefront						
R01	Replace insulating glazing units (IGUs) with condensation or misting between panes of glass.	Renew Component	2 Yrs	2027	$0	$0
Encl 22 - Aluminum Framed Sliding Glass Door - 2009						
J01	Replace insulating glazing units (IGUs) with condensation or misting between panes of glass.	Maintenance Level 3	2 Yrs	2027	$0	$0
Electrical						
Elec 01 - Emergency Generator						
R04	Replace emergency generator and transfer switch.	Renew Assembly	35 Yrs	2027	$120,000	$140,000
Elec 02 - Electrical Distribution						
J03	Conduct infrared scanning to verify that terminations are sound and operating temperatures of all conducting parts are within allowable limits. Correct any conditions contributing to overheating if it occurs.	Maintenance Level 3	3 Yrs	2027	$2,500	$2,800
J04	Clean and test main breakers and central distribution panel board.	Maintenance Level 3	3 Yrs	2027	$0	$0
Elec 03 - Exterior Light Fixtures						
J01	Perform survey of actual lighting use and lighting levels to determine lighting needs. Consider updating fixtures or lighting controls to optimize light levels and energy costs.	Assessment	3 Yrs	2027	$0	$0
Elec 05 - Interior Light Fixtures						
J01	Perform survey of actual lighting use and lighting levels to determine lighting needs. Consider updating fixtures, lighting controls or interior finishes (e.g. painting) to optimize light levels and energy costs.	Assessment	3 Yrs	2027	$0	$0
Elec 08 - Security Surveillance						
R01	Service the multiplex unit, update software as required.	Renew Component	5 Yrs	2027	$0	$0

	Description	Task	Frequency	Next Event	Cost (CYD)	Cost (FYD)
Mechanical						
Mech 01 - Gas Detection - Parking Garage						
R01	Cyclical replacement of gas detection sensors.	Renew Assembly	10 Yrs	2027	$3,600	$4,100
Mech 08 - Fixtures - Toilets						
R01	Cyclical replacement of toilets, as required.	Renew Assembly	20 Yrs	2027	$1,000	$1,100
Mech 09 - Fixtures - Taps & Sinks						
R01	Cyclical replacement of sinks and faucets, as required.	Renew Assembly	20 Yrs	2027	$2,000	$2,300
Mech 15 - Valves - Cross Connection & Backflow Prevention						
R01	Cyclical replacement of cross connection & back flow prevention valves, as required.	Renew Assembly	20 Yrs	2027	$6,000	$6,800
Fire Safety						
Fire 03 - Dry Sprinkler Compressor						
R01	Replace fire sprinkler compressor.	Renew Assembly	14 Yrs	2027	$2,000	$2,300
Interior Finishes						
Finish 03 - Sheet Carpet - Levels 2, 6-8						
R01	Renew carpet.	Renew Assembly	15 Yrs	2027	$4,640	$5,200
Finish 04 - Sheet Carpet - Levels 3-5						
R01	Renew carpet.	Renew Assembly	15 Yrs	2027	$3,440	$3,900
Finish 05 - Sheet Carpet - Lobby						
R01	Renew carpet.	Renew Assembly	15 Yrs	2027	$2,080	$2,300
Finish 08 - Ceramic Tile - Washrooms						
R01	Replace ceramic wall tiles.	Renew Assembly	25 Yrs	2027	$1,080	$1,200
Finish 09 - Paint						
R02	Repaint wall surface including preparation of substrate.	Renew Assembly	10 Yrs	2027	$7,350	$8,300
Finish 10 - Acoustic Ceiling Tile						
R01	Replace various acoustic ceiling tiles, as required.	Renew Component	25 Yrs	2027	$2,000	$2,300
Finish 11 - Carpentry and Millwork						
R01	Replace damaged components of carpentry and millwork, as required.	Renew Assembly	30 Yrs	2027	$1,800	$2,000
Finish 12 - Interior Swing Door - General						
J01	Repaint door and frame in high-traffic locations as required.	Maintenance Level 3	8 Yrs	2027	$1,106.25	$1,200
R01	Replace various interior swing door as required.	Renew Assembly	30 Yrs	2027	$29,500	$33,000
Amenities						
Amen 02 - Central Mailboxes						
R01	Replace central mail boxes as required.	Renew Assembly	30 Yrs	2027	$3,000	$3,400
Amen 03 - Furniture & Accessories						
R01	Replace furniture and accessories as required.	Renew Assembly	15 Yrs	2027	$5,000	$5,600

	Description	Task	Frequency	Next Event	Cost (CYD)	Cost (FYD)
Year 2028						
Electrical						
Elec 01 - Emergency Generator						
R03	Replace generator battery packs.	Renew Component	4 Yrs	2028	$0	$0
Elec 02 - Electrical Distribution						
J01	Visually inspect all panels for wear, alignment, rust, stiffness, loose bolts, discoloration and other signs of distress. Ensure breakers are not warm to the touch.	Maintenance Level 3	2 Yrs	2028	$0	$0
J02	Visually inspect wiring, where accessible, for signs of distress.	Maintenance Level 3	2 Yrs	2028	$0	$0
Mechanical						
Mech 03 - Controls - HVAC Instrumentation						
R01	Cyclical replacement of miscellaneous HVAC instrumentation, as required.	Renew Assembly	3 Yrs	2028	$500	$580
Mech 14 - Tank - DHW - Heating - Gas Fired						
R01	Replace domestic hot water heater.	Renew Assembly	12 Yrs	2028	$16,000	$19,000
Elevator						
Elev 01 - Traction Elevators, Overhead Geared						
J01	Check and test the overload devices.	Maintenance Level 3	2 Yrs	2028	$0	$0
J02	With test weights, load each elevator to contract capacity and operate the elevator in both directions, making single and two floor runs as well as runs for the full travel.	Maintenance Level 3	2 Yrs	2028	$0	$0
J03	Conduct full load performance test.	Maintenance Level 3	2 Yrs	2028	$0	$0
Fire Safety						
Fire 11 - Emergency Egress Equipment						
R01	Cyclical replacement of LED exit signs.	Renew Assembly	15 Yrs	2028	$6,000	$7,000
Interior Finishes						
Finish 07 - Ceramic Tile - Lobby						
R01	Replace ceramic wall tiles.	Renew Assembly	25 Yrs	2028	$1,300	$1,500

	Description	Task	Frequency	Next Event	Cost (CYD)	Cost (FYD)
Year 2029						
Enclosure						
Encl 02 - Protected SBS Membrane Deck (IRMA Assembly) with Traffic-Bearing Surface						
R01	Replace deck membrane assembly and associated components.	Renew Assembly	30 Yrs	2029	$4,000	$4,800
Encl 07 - Guardrail Aluminum						
R02	Replace exterior guardrails.	Renew Assembly	30 Yrs	2029	$10,800	$13,000
Encl 14 - Aluminum Framed Window - 2009						
J01	Replace insulating glazing units (IGUs) with condensation or misting between panes of glass.	Maintenance Level 3	2 Yrs	2029	$1,800	$2,100
Encl 15 - Aluminum Framed Window - Original						
J01	Replace insulating glazing units (IGUs) with condensation or misting between panes of glass.	Maintenance Level 3	2 Yrs	2029	$2,400	$2,900
Encl 16 - Aluminum Storefront						
R01	Replace insulating glazing units (IGUs) with condensation or misting between panes of glass.	Renew Component	2 Yrs	2029	$0	$0
Encl 22 - Aluminum Framed Sliding Glass Door - 2009						
J01	Replace insulating glazing units (IGUs) with condensation or misting between panes of glass.	Maintenance Level 3	2 Yrs	2029	$0	$0
Encl 30 - General & Inspections						
J01	Update depreciation report.	Maintenance Level 3	3 Yrs	2029	$0	$0
J02	Perform full condition assessment of all enclosure systems.	Assessment	5 Yrs	2029	$12,000	$14,000
Electrical						
Elec 03 - Exterior Light Fixtures						
R01	Replace exterior light fixtures, as required, for aesthetic purposes, to match ballast replacement cycles, or technological obsolescence.	Renew Assembly	20 Yrs	2029	$3,000	$3,600
Mechanical						
Mech 10 - Piping - Domestic Water Distribution						
J01	Check that pipe hangars are properly fastened and dissimilar metals are isolated from one another.	Maintenance Level 3	5 Yrs	2029	$0	$0
J02	Check piping and supports for mechanical damage, proper clearance, adequate insulation, and labeling.	Maintenance Level 3	5 Yrs	2029	$0	$0
J03	Check integrity of all soldered pipe connections and couplings.	Maintenance Level 3	5 Yrs	2029	$0	$0
Fire Safety						
Fire 01 - Fire Alarm Panel - Conventional						
R01	Replace battery packs.	Renew Component	5 Yrs	2029	$500	$600
Fire 07 - Sprinkler System - Wet						
J01	Sprinkler Piping - Conduct flow test on piping, both exposed and underground.	Maintenance Level 3	5 Yrs	2029	$0	$0
J02	Sprinkler Heads - Test extra high temperature on sprinkler heads.	Maintenance Level 3	5 Yrs	2029	$0	$0
Fire 08 - Sprinkler System - Dry						
J01	Sprinkler Piping - Conduct flow test on piping, both exposed and underground.	Maintenance Level 3	5 Yrs	2029	$0	$0

	Description	Task	Frequency	Next Event	Cost (CYD)	Cost (FYD)
J02	Sprinkler Heads - Test extra high temperature on sprinkler heads.	Maintenance Level 3	5 Yrs	2029	$0	$0

	Description	Task	Frequency	Next Event	Cost (CYD)	Cost (FYD)
Year 2030						
Enclosure						
Encl 17 - Glass Block Window						
J01	Repoint mortar joints in glass block windows, as required.	Maintenance Level 2	5 Yrs	2030	$600	$740
Encl 28 - Slab-on-Grade						
J01	Re-apply traffic demarcation striping and directional signage. Frequency will depend on traffic volume and other factors.	Maintenance Level 1	5 Yrs	2030	$1,000	$1,200
Encl 29 - Uncoated Parking Suspended Slab						
J01	Re-apply traffic demarcation striping and directional signage. Frequency will depend on traffic volume and other factors.	Maintenance Level 1	5 Yrs	2030	$1,000	$1,200
Electrical						
Elec 02 - Electrical Distribution						
J01	Visually inspect all panels for wear, alignment, rust, stiffness, loose bolts, discoloration and other signs of distress. Ensure breakers are not warm to the touch.	Maintenance Level 3	2 Yrs	2030	$0	$0
J02	Visually inspect wiring, where accessible, for signs of distress.	Maintenance Level 3	2 Yrs	2030	$0	$0
J03	Conduct infrared scanning to verify that terminations are sound and operating temperatures of all conducting parts are within allowable limits. Correct any conditions contributing to overheating if it occurs.	Maintenance Level 3	3 Yrs	2030	$2,500	$3,100
J04	Clean and test main breakers and central distribution panel board.	Maintenance Level 3	3 Yrs	2030	$0	$0
Elec 03 - Exterior Light Fixtures						
J01	Perform survey of actual lighting use and lighting levels to determine lighting needs. Consider updating fixtures or lighting controls to optimize light levels and energy costs.	Assessment	3 Yrs	2030	$0	$0
Elec 05 - Interior Light Fixtures						
J01	Perform survey of actual lighting use and lighting levels to determine lighting needs. Consider updating fixtures, lighting controls or interior finishes (e.g. painting) to optimize light levels and energy costs.	Assessment	3 Yrs	2030	$0	$0
Mechanical						
Mech 04 - Drainage - Sanitary						
J01	Insert video cameras into main lines to conduct pipe inspection.	Maintenance Level 3	5 Yrs	2030	$1,500	$1,800
Elevator						
Elev 01 - Traction Elevators, Overhead Geared						
J01	Check and test the overload devices.	Maintenance Level 3	2 Yrs	2030	$0	$0

	Description	Task	Frequency	Next Event	Cost (CYD)	Cost (FYD)
J02	With test weights, load each elevator to contract capacity and operate the elevator in both directions, making single and two floor runs as well as runs for the full travel.	Maintenance Level 3	2 Yrs	2030	$0	$0
J03	Conduct full load performance test.	Maintenance Level 3	2 Yrs	2030	$0	$0

	Description	Task	Frequency	Next Event	Cost (CYD)	Cost (FYD)
Year 2031						
Enclosure						
Encl 14 - Aluminum Framed Window - 2009						
J01	Replace insulating glazing units (IGUs) with condensation or misting between panes of glass.	Maintenance Level 3	2 Yrs	2031	$1,800	$2,300
Encl 15 - Aluminum Framed Window - Original						
J01	Replace insulating glazing units (IGUs) with condensation or misting between panes of glass.	Maintenance Level 3	2 Yrs	2031	$2,400	$3,000
Encl 16 - Aluminum Storefront						
R01	Replace insulating glazing units (IGUs) with condensation or misting between panes of glass.	Renew Component	2 Yrs	2031	$0	$0
Encl 22 - Aluminum Framed Sliding Glass Door - 2009						
J01	Replace insulating glazing units (IGUs) with condensation or misting between panes of glass.	Maintenance Level 3	2 Yrs	2031	$0	$0
Electrical						
Elec 08 - Security Surveillance						
R02	Modernize components of the security surveillance system, excluding field wiring, as required by technological obsolescence.	Renew Assembly	14 Yrs	2031	$12,000	$15,000
Mechanical						
Mech 03 - Controls - HVAC Instrumentation						
R01	Cyclical replacement of miscellaneous HVAC instrumentation, as required.	Renew Assembly	3 Yrs	2031	$500	$630
Mech 13 - Pumps - Storm Lift and Control Panel						
R01	Overhaul storm sump pumps.	Renew Component	5 Yrs	2031	$2,000	$2,500
Mech 16 - Valves - Plumbing Flow Control and Directional						
R01	Cyclical replacement of valves, as required.	Renew Assembly	20 Yrs	2031	$6,000	$7,600

	Description	Task	Frequency	Next Event	Cost (CYD)	Cost (FYD)
Year 2032						
Enclosure						
Encl 05 - Stucco Clad Soffit						
R02	Replace stucco clad soffit and associated components.	Renew Assembly	40 Yrs	2032	$24,000	$31,000
Encl 09 - Concrete Wall with Acrylic Finish						
R01	Renew and reapply portions of acrylic coating on concrete walls.	Renew Component	10 Yrs	2032	$49,950	$65,000
Encl 10 - Stucco Clad Wall - Drained - 2009						
J01	Re-paint stucco surface as required.	Maintenance Level 2	10 Yrs	2032	$7,150	$9,300
Encl 11 - Stucco Clad Wall - Drained - 1999						
J01	Re-paint stucco surface as required.	Maintenance Level 2	10 Yrs	2032	$40,300	$53,000
Encl 12 - Stucco Clad Wall - Undrained - 2009						
R01	Replace stucco cladding along with associated flashing and sealants. Consideration should be given to replacement of vent hoods and other accessories that penetrated the cladding at the time of cladding replacement.	Renew Assembly	40 Yrs	2032	$19,320	$25,000
Encl 13 - Stucco Clad Wall - Undrained - Original						
R01	Replace stucco cladding along with associated flashing and sealants. Consideration should be given to replacement of vent hoods and other accessories that penetrated the cladding at the time of cladding replacement.	Renew Assembly	40 Yrs	2032	$44,100	$58,000
Encl 15 - Aluminum Framed Window - Original						
R01	Replace aluminum framed windows and associated components.	Renew Assembly	40 Yrs	2032	$230,000	$300,000
Encl 16 - Aluminum Storefront						
R02	Replace storefront window system.	Renew Assembly	40 Yrs	2032	$24,000	$31,000
Encl 17 - Glass Block Window						
R01	Replace glass block windows.	Renew Assembly	40 Yrs	2032	$39,000	$51,000
Encl 24 - Steel Swing Door						
R01	Repaint various steel doors as required.	Renew Component	8 Yrs	2032	$875	$1,100
Encl 30 - General & Inspections						
J01	Update depreciation report.	Maintenance Level 3	3 Yrs	2032	$0	$0
Electrical						
Elec 01 - Emergency Generator						
R03	Replace generator battery packs.	Renew Component	4 Yrs	2032	$0	$0
Elec 02 - Electrical Distribution						
J01	Visually inspect all panels for wear, alignment, rust, stiffness, loose bolts, discoloration and other signs of distress. Ensure breakers are not warm to the touch.	Maintenance Level 3	2 Yrs	2032	$0	$0
J02	Visually inspect wiring, where accessible, for signs of distress.	Maintenance Level 3	2 Yrs	2032	$0	$0
R01	Cyclical replacement of components of the electrical distribution equipment, as required.	Renew Assembly	30 Yrs	2032	$20,000	$26,000

	Description	Task	Frequency	Next Event	Cost (CYD)	Cost (FYD)
Elec 04 - Exterior Light Fixtures - Lamps Post						
R01	Replace lamp coverings as required.	Renew Component	10 Yrs	2032	$200	$260
Elec 08 - Security Surveillance						
R01	Service the multiplex unit, update software as required.	Renew Component	5 Yrs	2032	$0	$0
Mechanical						
Mech 05 - Drainage - Storm - Exterior System						
R01	Repair and replace components of exterior drainage system, as required.	Renew Assembly	40 Yrs	2032	$10,000	$13,000
Mech 06 - Drainage - Perimeter and Foundation						
R02	Repair and/replace components of perimeter drainage system, as required.	Renew Assembly	40 Yrs	2032	$15,200	$20,000
Mech 07 - Drainage - Storm - Internal						
R01	Repair and/replace components of storm water drainage distribution system, as required.	Renew Assembly	40 Yrs	2032	$40,000	$52,000
Mech 17 - Baseboard - Electric						
R01	Cyclical replacement of electric baseboard heaters, as required.	Renew Assembly	40 Yrs	2032	$5,625	$7,300
Mech 22 - Overhead Gate Motor						
R01	Replace motor and drive unit.	Renew Assembly	7 Yrs	2032	$2,500	$3,300
Elevator						
Elev 01 - Traction Elevators, Overhead Geared						
J01	Check and test the overload devices.	Maintenance Level 3	2 Yrs	2032	$0	$0
J02	With test weights, load each elevator to contract capacity and operate the elevator in both directions, making single and two floor runs as well as runs for the full travel.	Maintenance Level 3	2 Yrs	2032	$0	$0
J03	Conduct full load performance test.	Maintenance Level 3	2 Yrs	2032	$0	$0
R02	Replace elevator controls and drive.	Renew Component	20 Yrs	2032	$0	$0
Fire Safety						
Fire 06 - Portable Fire Extinguisher						
R01	Cyclical replacement of fire extinguishers.	Renew Assembly	12 Yrs	2032	$1,000	$1,300
Fire 09 - Sprinkler Valve Assembly - Dry						
R04	Replace sprinkler valves, as required.	Renew Assembly	40 Yrs	2032	$3,000	$3,900
Interior Finishes						
Finish 01 - Floor Tile - Lobby						
R01	Renew tile floor.	Renew Assembly	40 Yrs	2032	$6,160	$8,000
Finish 02 - Floor Tile - Washrooms						
R01	Renew washroom tile floor.	Renew Assembly	40 Yrs	2032	$1,980	$2,600
Finish 06 - Sheet Carpet - Meeting Room						
R01	Renew carpet.	Renew Assembly	15 Yrs	2032	$3,680	$4,800
Finish 09 - Paint						
R01	Repaint interior wall in high traffic area, as required.	Renew Component	5 Yrs	2032	$1,531.25	$2,000

	Description	Task	Frequency	Next Event	Cost (CYD)	Cost (FYD)
Sitework						
Site 01 - Concrete Paving						
R01	Replace sections of concrete paving, as required.	Renew Assembly	40 Yrs	2032	$5,250	$6,900
Site 02 - Metal Gate - Garbage Room						
R01	Replace metal gates.	Renew Assembly	40 Yrs	2032	$1,500	$2,000
Site 03 - Metal Gate & Frame - Exterior Stairs						
J01	Repaint metal gate as required.	Maintenance Level 2	10 Yrs	2032	$500	$650

Appendix D

Disclosures and Disclaimers

Disclosures and Disclaimers

Condition of the Assets

The method of determining the physical condition of the assets is based on a visual review of a representative sampling of the assets in readily accessible locations, discussions with facility representatives, and review of readily available reference documents. No destructive testing or exploratory openings are carried out on any of the assets and the equipment is not disassembled, operated, or subject to re-commissioning tests. The physical review is not a full "condition assessment" since operating, testing, or exploratory openings are excluded from the scope of services.

Cost Estimating for Assets

- All estimates of costs are provided in future year dollars.
- All estimates of costs are Class D estimates intended for planning purposes and not for accounting or tender use. See Glossary of Terms for definition of Class D estimates.
- Actual costs will vary depending on several factors. The estimates assume economies of scale will be achieved by bundling work tasks together into larger renewal, repair, or rehabilitation projects. Small tasks performed individually may exceed the estimates presented.
- Soft costs, such as consulting services and contingency allowances are not included in the budget estimates. When developing cost estimates for projects in greater detail for budgeting, each project should include appropriate soft costs - such as Owner contingency, permit fees, engineering fees, etc. Depending on the sizes, scope and timing of individual projects, the magnitude of the soft costs will vary.
- Construction costs are subject to the vagaries of the marketplace. At the time of tender, costs may vary depending on the time of the year, contractor availability, and other factors.
- The estimates must be updated over time, further developed for scope of work and confirmed by competitive tender before any contracts are awarded.
- Detailed repair specifications are required to be prepared in order to confirm scopes of work and costs.
- The estimates do not include allowances for site specific access requirements or environmental concerns, which should be addressed on a project-by-project basis.
- Consideration may sometimes need to be given to costs arising from the impact of projects on occupancy use and facility operations.
- Replacement costs are typically based on like-for-like with a similar asset unless code or other circumstances require the replacement cost to include an upgrade.

Maintenance of the Assets:

The maintenance checklists are not exhaustive and are intended as a framework for the ongoing refinement of the maintenance program.

- Work must only be carried out by appropriately qualified personnel who have the necessary and sufficient knowledge about the maintenance tasks and maintenance intervals.
- The manufacturers' latest printed instructions should take precedence in the event of any conflict with the maintenance checklists.
- The Owners' maintenance staff and/or service contractors are responsible to verify what is contained in the manufacturers' documentation regarding recommended maintenance procedures and intervals.
- The maintenance checklists and maintenance intervals should be reviewed annually and adjusted, as required, to reflect the service environment, feedback from contractors, etc.

Specialist and Non-Specialist Reviews

Our personnel collect the asset inventory data for all the different systems, including mechanical, plumbing, fire safety, elevator, electrical, interior finishes, and sitework. Our scope of services is to identify the assets within each system, determine their age and report on their reasonable service life-cycles according to accepted industry standards. RDH personnel do not make observations with regard to specialty building system conditions unless specifically addressed in our proposal.

Forecasting the Useful Service Life of Assets

The service life of assets can be affected by a variety of circumstances, including the following:

- The quality of the maintenance conducted on an asset will affect the service life of the asset. Poor maintenance can lead to a reduced service life and may result in the premature failure of an asset.
- Insurable losses (force majeure), such as earthquakes, fires, and floods can shorten the life of an asset. These events are not considered in a Depreciation Report.
- Asset service life in a Depreciation Report is determined according to accepted industry standards.

Funding Models

The funding models for Depreciation Reports are based on a 30-year horizon and use "future year dollars termed" methodology. This methodology projects the costs (in future year dollars) over the planning horizon and not beyond the terminus year of the planning horizon. The current year is the starting year of the planning horizon. The term,

therefore, matches the initial horizon and does not respect a shifting horizon. This means that in year 1 the funding scenarios will look forward for 30 years.

For example, in 2012 the model looks forward to 2042. In year two, it will be accurate for 29 years, as it is only looking forward to year 2042. When an update study is performed in three years, the revised funding scenarios will look forward 30 years from 2015 to 2045. Renewal and major maintenance projects that occur beyond the 30-year planning horizon are not considered in the scenarios; that is, those projects that occur beyond 30 years are unfunded in the funding scenarios.

Appendix E

Funding Scenario Cash Flow Tables

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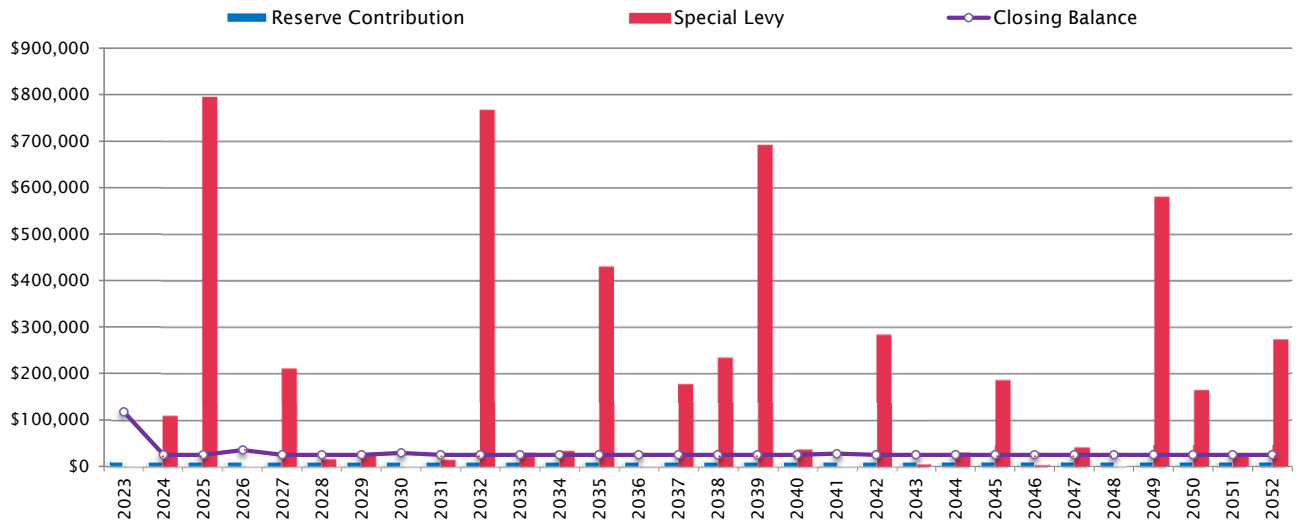
Current Funding Model

Chateau Comox

Fixed Annual Contribution of $11,500		Starting Reserve Balance	$103,528
Building	Chateau Comox	Minimum Closing Balance	$25,000
Interest/Investment Rate	2.0%	Annual Reserve Contribution	$11,500
Planning Horizon	30	Reserve Contribution Increase	0.0%
Number of Units	21	Monthly Avg. Unit Contribution	$46

Year	Opening Balance	Reserve Contribution	Special Levy	Reserve Income	Renewal Costs	Closing Balance
2023	$103,528	$11,500	$0	$2,071	$0	$117,099
2024	$117,099	$11,500	$109,079	$2,342	$215,020	$25,000
2025	$25,000	$11,500	$794,690	$500	$806,690	$25,000
2026	$25,000	$11,500	$0	$500	$2,200	$34,800
2027	$34,800	$11,500	$210,504	$696	$232,500	$25,000
2028	$25,000	$11,500	$16,080	$500	$28,080	$25,000
2029	$25,000	$11,500	$29,000	$500	$41,000	$25,000
2030	$25,000	$11,500	$0	$500	$8,040	$28,960
2031	$28,960	$11,500	$14,991	$579	$31,030	$25,000
2032	$25,000	$11,500	$766,410	$500	$778,410	$25,000
2033	$25,000	$11,500	$29,470	$500	$41,470	$25,000
2034	$25,000	$11,500	$34,580	$500	$46,580	$25,000
2035	$25,000	$11,500	$429,900	$500	$441,900	$25,000
2036	$25,000	$11,500	$500	$500	$12,500	$25,000
2037	$25,000	$11,500	$177,770	$500	$189,770	$25,000
2038	$25,000	$11,500	$234,000	$500	$246,000	$25,000
2039	$25,000	$11,500	$691,700	$500	$703,700	$25,000
2040	$25,000	$11,500	$36,930	$500	$48,930	$25,000
2041	$25,000	$11,500	$0	$500	$9,900	$27,100
2042	$27,100	$11,500	$283,888	$542	$298,030	$25,000
2043	$25,000	$11,500	$5,200	$500	$17,200	$25,000
2044	$25,000	$11,500	$29,430	$500	$41,430	$25,000
2045	$25,000	$11,500	$186,100	$500	$198,100	$25,000
2046	$25,000	$11,500	$3,480	$500	$15,480	$25,000
2047	$25,000	$11,500	$40,800	$500	$52,800	$25,000
2048	$25,000	$11,500	$0	$500	$12,000	$25,000
2049	$25,000	$11,500	$579,700	$500	$591,700	$25,000
2050	$25,000	$11,500	$164,400	$500	$176,400	$25,000
2051	$25,000	$11,500	$24,000	$500	$36,000	$25,000
2052	$25,000	$11,500	$273,270	$500	$285,270	$25,000
		$345,000	$5,165,872	$18,730	$5,608,130	



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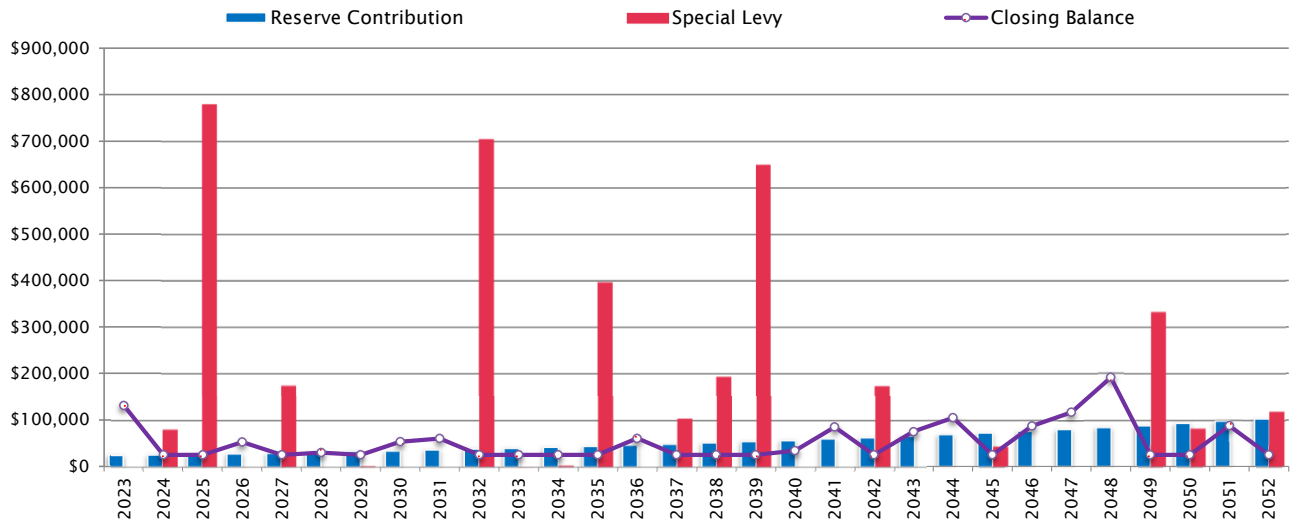
Alternative Funding Model

Chateau Comox

5% Annually Increasing Contribution, starting at $25,000		Starting Reserve Balance	$103,528
Building	Chateau Comox	Minimum Closing Balance	$25,000
Interest/Investment Rate	2.0%	Annual Reserve Contribution	$25,000
Planning Horizon	30	Reserve Contribution Increase	5.0%
Number of Units	21	Monthly Avg. Unit Contribution	$99

Year	Opening Balance	Reserve Contribution	Special Levy	Reserve Income	Renewal Costs	Closing Balance
2023	$103,528	$25,000	$0	$2,071	$0	$130,599
2024	$130,599	$26,250	$80,559	$2,612	$215,020	$25,000
2025	$25,000	$27,563	$778,628	$500	$806,690	$25,000
2026	$25,000	$28,941	$0	$500	$2,200	$52,241
2027	$52,241	$30,388	$173,827	$1,045	$232,500	$25,000
2028	$25,000	$31,907	$0	$500	$28,080	$29,327
2029	$29,327	$33,502	$2,584	$587	$41,000	$25,000
2030	$25,000	$35,178	$0	$500	$8,040	$52,638
2031	$52,638	$36,936	$0	$1,053	$31,030	$59,597
2032	$59,597	$38,783	$703,838	$1,192	$778,410	$25,000
2033	$25,000	$40,722	$248	$500	$41,470	$25,000
2034	$25,000	$42,758	$3,322	$500	$46,580	$25,000
2035	$25,000	$44,896	$396,504	$500	$441,900	$25,000
2036	$25,000	$47,141	$0	$500	$12,500	$60,141
2037	$60,141	$49,498	$103,928	$1,203	$189,770	$25,000
2038	$25,000	$51,973	$193,527	$500	$246,000	$25,000
2039	$25,000	$54,572	$648,628	$500	$703,700	$25,000
2040	$25,000	$57,300	$0	$500	$48,930	$33,870
2041	$33,870	$60,165	$0	$677	$9,900	$84,813
2042	$84,813	$63,174	$173,347	$1,696	$298,030	$25,000
2043	$25,000	$66,332	$0	$500	$17,200	$74,632
2044	$74,632	$69,649	$0	$1,493	$41,430	$104,344
2045	$104,344	$73,132	$43,537	$2,087	$198,100	$25,000
2046	$25,000	$76,788	$0	$500	$15,480	$86,808
2047	$86,808	$80,627	$0	$1,736	$52,800	$116,372
2048	$116,372	$84,659	$0	$2,327	$12,000	$191,358
2049	$191,358	$88,892	$332,623	$3,827	$591,700	$25,000
2050	$25,000	$93,336	$82,564	$500	$176,400	$25,000
2051	$25,000	$98,003	$0	$500	$36,000	$87,503
2052	$87,503	$102,903	$118,113	$1,750	$285,270	$25,000
		$1,660,971	$3,835,775	$32,855	$5,608,130	



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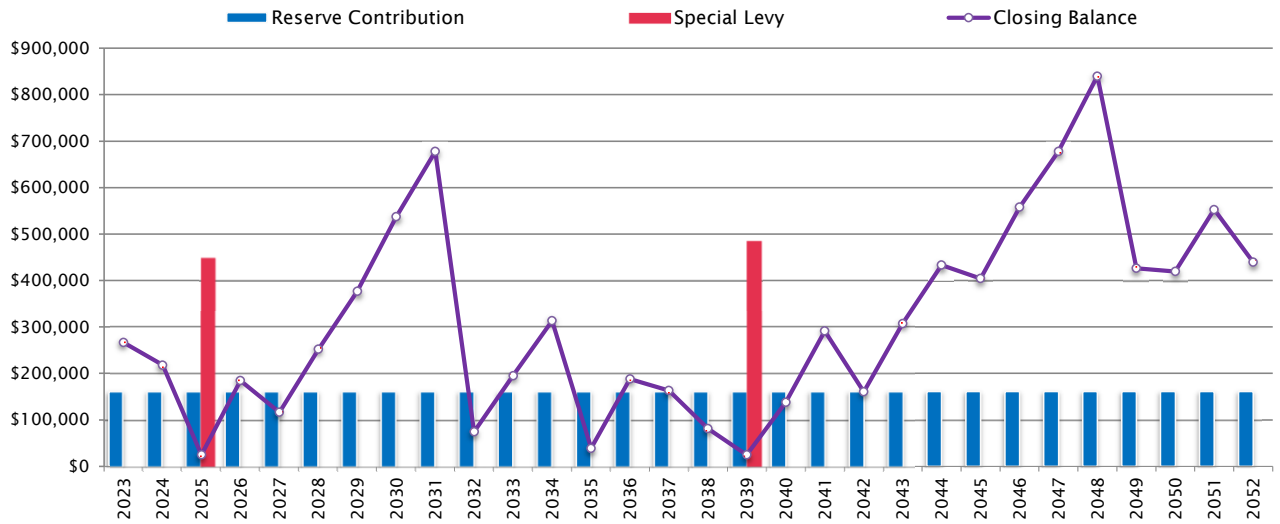
Making Buildings Better

Progressive Funding Model

Chateau Comox

Fixed Annual Contribution of $161,000		Starting Reserve Balance	$103,528
Building	Chateau Comox	Minimum Closing Balance	$25,000
Interest/Investment Rate	2.0%	Annual Reserve Contribution	$161,000
Planning Horizon	30	Reserve Contribution Increase	0.0%
Number of Units	21	Monthly Avg. Unit Contribution	$639

Year	Opening Balance	Reserve Contribution	Special Levy	Reserve Income	Renewal Costs	Closing Balance
2023	$103,528	$161,000	$0	$2,071	$0	$266,599
2024	$266,599	$161,000	$0	$5,332	$215,020	$217,911
2025	$217,911	$161,000	$448,421	$4,358	$806,690	$25,000
2026	$25,000	$161,000	$0	$500	$2,200	$184,300
2027	$184,300	$161,000	$0	$3,686	$232,500	$116,486
2028	$116,486	$161,000	$0	$2,330	$28,080	$251,736
2029	$251,736	$161,000	$0	$5,035	$41,000	$376,770
2030	$376,770	$161,000	$0	$7,535	$8,040	$537,266
2031	$537,266	$161,000	$0	$10,745	$31,030	$677,981
2032	$677,981	$161,000	$0	$13,560	$778,410	$74,131
2033	$74,131	$161,000	$0	$1,483	$41,470	$195,143
2034	$195,143	$161,000	$0	$3,903	$46,580	$313,466
2035	$313,466	$161,000	$0	$6,269	$441,900	$38,836
2036	$38,836	$161,000	$0	$777	$12,500	$188,112
2037	$188,112	$161,000	$0	$3,762	$189,770	$163,105
2038	$163,105	$161,000	$0	$3,262	$246,000	$81,367
2039	$81,367	$161,000	$484,706	$1,627	$703,700	$25,000
2040	$25,000	$161,000	$0	$500	$48,930	$137,570
2041	$137,570	$161,000	$0	$2,751	$9,900	$291,421
2042	$291,421	$161,000	$0	$5,828	$298,030	$160,220
2043	$160,220	$161,000	$0	$3,204	$17,200	$307,224
2044	$307,224	$161,000	$0	$6,144	$41,430	$432,939
2045	$432,939	$161,000	$0	$8,659	$198,100	$404,497
2046	$404,497	$161,000	$0	$8,090	$15,480	$558,107
2047	$558,107	$161,000	$0	$11,162	$52,800	$677,470
2048	$677,470	$161,000	$0	$13,549	$12,000	$840,019
2049	$840,019	$161,000	$0	$16,800	$591,700	$426,119
2050	$426,119	$161,000	$0	$8,522	$176,400	$419,242
2051	$419,242	$161,000	$0	$8,385	$36,000	$552,627
2052	$552,627	$161,000	$0	$11,053	$285,270	$439,409
		$4,830,000	$933,127	$180,884	$5,608,130	



Appendix F

RDH Qualifications

Maintenance and Planning (MaP)

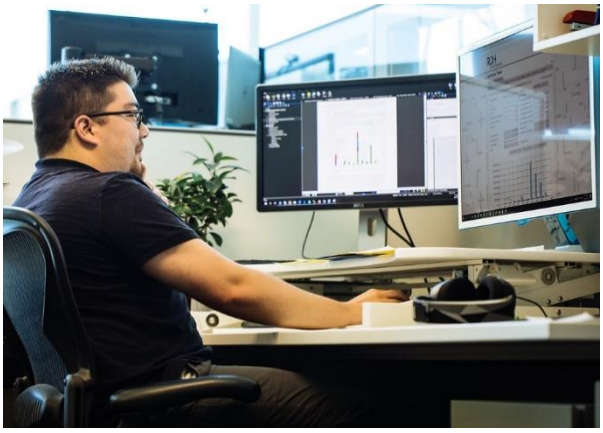
Our Maintenance and Planning (MaP) group works with your owner group to plan and develop strategies for the long- and short-term needs of your building—everything from roof maintenance to boiler replacement. As the acronym suggests, our services are designed so that we can provide you with a comprehensive roadMaP for the management of your assets.

RDH staff have broad practical experience assisting building owners with all aspects of planning for the long-term stewardship of their building(s). Our reserve fund analysts, engineers, architects, and technologists have a wide variety of formal training—including building science, structural engineering, and mechanical engineering. We believe that by using a team approach, we can ensure an appropriate level of thoroughness and quality. We have prepared hundreds of Depreciation Reports and are recognized as industry leaders.

Depreciation Reports

A Depreciation Report is a long-range financial planning tool. It's used to identify funding requirements for costs associated with future repair, renewal, and replacement projects. The report establishes where you need to focus resources and is a good place to start developing your roadMaP.

The first step in preparing the report is to compile an inventory of all of your building's assets (roofs, boilers, carpets, etc.). Using the inventory as a foundation, we estimate the remaining life of each asset, forecast the replacement costs in future year dollars, and display the financial analysis with graphs and cash flow tables.



Principals

Mark Will | B.A. Econ.
Principal, Vancouver Regional Manager

- B.A., Economics
- Has worked in project management since 1997
- Member of the Board of Directors, Condominium Home Owner's Association (CHOA)
- Member of Professional Association of Managing Agents (PAMA)

Jason Dunn | B.Arch.Sc., CCCA
Principal, Senior Project Manager

- B.Arch.Sc., Building Science Option
- Certified Construction Contract Administrator, CSC
- Has worked in building science consulting since 2004

Associates and Project Managers

Brandon Carreira | Dipl.T.
Project Manager

- MaP Service Area Leader
- Dipl.T., Architectural & Building Engineering Technology (Building Science Option)
- Has worked in maintenance and planning consulting since 2011
- Prepared 150+ Depreciation Reports and has been involved with 200+ MaP projects

Jesse Listoen | Dipl.T.
Associate, Estimator

- Dipl.T., Architectural & Building Engineering Technology (Building Science Option)
- Has 5+ years experience in maintenance and planning consulting
- Has been involved in the preparation of 70+ Depreciation Reports

Josh Chambers | RSE, RRO
Associate, Project Manager

- B.Tech., Construction Management Program
- Red Seal Endorsement (RSE), Industry Training Authority
- Registered Roof Observer (RRO), Roof Consultants Institute Inc.
- Has worked in maintenance and planning consulting since 2021
- Joined RDH as a Building Science Technologist in 2015

Len Sakuragi | P.Eng.
Associate, Building Science Engineer

- → B.A.Sc., Mechanical Engineering
- → Has worked in maintenance and planning consulting since 2020
- → Registered Professional Engineer, Engineers, and Geoscientists of BC

Michael Grummett | P.Eng.
Associate, Building Science Engineer

- → B.Eng., Structural Engineering
- → Has worked in maintenance and planning consulting since 2015
- → Registered Professional Engineer, Engineers, and Geoscientists of BC

Robyn Edgar | P.Eng.
Associate, Building Science Engineer

- → Associate Certificate (hons), Project Management
- → B.A.Sc. (with Distinction), Civil Engineering
- → Has worked in maintenance and planning consulting since 2019
- → Has 10 years of building science experience
- → Registered Professional Engineer, Engineers, and Geoscientists of BC

Technical Staff

Alex Seto | Dipl.T.
Building Science Technologist

- → Dipl.T., Architectural & Building Engineering Technology (Building Science Option)
- → Has worked in maintenance and planning consulting since 2012

Joseph Hildebrandt | B.A.Sc., EIT
Building Science Engineer (EIT)

- → B.A.Sc., Mechanical Engineering (Thermofluids Option)
- → Has worked in maintenance and planning consulting since 2020

Joshua Villanueva | Dipl.T.

Building Science Technologist

→ Diploma in Architectural and Building Technology
→ Has worked in maintenance and planning consulting since 2021

Preston Wu | Dipl.T.

Building Science Technologist

→ Dipl.T., Architectural & Building Engineering Technology (Building Science Option)
→ Has worked in maintenance and planning consulting since 2016

Riley Doyle | B.A.Sc., EIT

Building Science Engineer (EIT)

→ B.A.Sc., Mechanical Engineering
→ Has worked in maintenance and planning consulting since 2022

Torrance Beamish | B.F.A., Dipl.T.

Building Science Technologist

→ Dipl.T., Architectural & Building Engineering Technology (Building Science Option)
→ Has worked in maintenance and planning consulting since 2017

Yan Marineau-Brachmann | B.A.Sc.

Building Science Engineer (EIT)

→ B.A.Sc., Civil Engineering
→ Has worked in maintenance and planning consulting since 2018

Administrators and Client Support

Aurelie Stoeckel
Project Assistant

- → Master's degree in Management
- → Prepares Maintenance and Planning estimates and proposals

Lyka Alodaga
Project Assistant

- → Certificate, Administrative Professional
- → Has worked in administration within engineering/architectural firms since 2018

Vanessa Jumawan
Maintenance and Planning Coordinator

- → Has worked in administration within engineering/architecture since 2008
- → Maintenance and Planning Proposal Coordinator, prepares Maintenance and Planning estimates and proposals

Software Support and Programmer

Matthew Branch | P.Eng.
Software Developer

- → B.Sc., Civil Engineering
- → Registered Professional Engineer, Engineers and Geoscientists of BC
- → Has worked in engineering data analysis since 2000

Acknowledgements

Serge Desmarais | B.Arch. Architect AIBC, CP
Principal (In Memoriam), Senior Building Science Specialist

- → RDH gratefully acknowledges the contributions of Serge Desmarais as the building science technical lead for the MaP group.
- → Registered Architect AIBC, Certified Professional
- → 30+ years' experience in building design and construction capital renewal projects
- → RDH 2004–2017
- → Worked in administration within engineering/architecture firms since 2004

Appendix G

Insurance Certificate

Ref. No. 320009865364

CERTIFICATE OF INSURANCE

Aon Reed Stenhouse Inc.
401 West Georgia Street, Suite 1200
PO Box 3228 STN. TERMINAL
Vancouver BC V6B 3X8
tel 604-688-4442 *fax* 604-682-4026

Re: Evidence of Insurance:

To Whom It May Concern
Suite 400, 4333 Still Creek Drive
Burnaby, BC V5C 6S6

Insurance as described herein has been arranged on behalf of the Insured named herein under the following policy(ies) and as more fully described by the terms, conditions, exclusions and provisions contained in the said policy(ies) and any endorsements attached thereto.

Insured

RDH Building Science Inc.
Suite 400, 4333 Still Creek Drive
Burnaby, BC V5C 6S6

Coverage

Commercial General Liability	**Insurer**	Zurich Insurance Company Ltd	
Policy #	8850746-04		
Effective	01-Jul-2023	**Expiry**	01-Jul-2024
Limits of Liability	Bodily Injury & Property Damage, Each Occurrence $1,000,000 Products and Completed Operations, Aggregate $2,000,000 Non-Owned Automobile Liability $1,000,000 Legal Liability for Damage to Hired Automobiles $100,000 Policy may be subject to a general aggregate and other aggregates where applicable		
Architects & Engineers Professional Liability	**Insurer**	Lloyd's Underwriters	
Policy #	PSDEF2200249		
Effective	01-Jul-2023	**Expiry**	01-Jul-2024
	Per Claim $1,000,000 Policy Term Aggregate $2,000,000		

Terms and / or Additional Coverage

Commercial General Liability includes:
General Aggregate: $2,000,000

THE POLICY CONTAINS A CLAUSE THAT MAY LIMIT THE AMOUNT PAYABLE
OR, IN THE CASE OF AUTOMOBILE INSURANCE,
THE POLICY CONTAINS A PARTIAL PAYMENT OF LOSS CLAUSE
THIS CERTIFICATE DOES NOT AMEND, EXTEND, OR ALTER THE COVERAGE AFFORDED BY THE POLICY

AON

Ref. No. 320009865364

CERTIFICATE OF INSURANCE

THIS CERTIFICATE CONSTITUTES A STATEMENT OF THE FACTS AS OF THE DATE OF ISSUANCE AND ARE SO REPRESENTED AND WARRANTED ONLY TO THE INSURED. OTHER PERSONS RELYING ON THIS CERTIFICATE DO SO AT THEIR OWN RISK.

Dated : 30-June-2023

Aon Reed Stenhouse Inc

THE POLICY CONTAINS A CLAUSE THAT MAY LIMIT THE AMOUNT PAYABLE
OR, IN THE CASE OF AUTOMOBILE INSURANCE,

THE POLICY CONTAINS A PARTIAL PAYMENT OF LOSS CLAUSE
THIS CERTIFICATE DOES NOT AMEND, EXTEND, OR ALTER THE COVERAGE AFFORDED BY THE POLICY

AON