Depreciation Report Update | Project R-01119.053

Ocean Park Gardens, 1725 128th Street, Surrey, BC

To: The Owners, Strata Plan LMS1367
c/o Ms. Jane Sutor, Property Manager
Fraser Campbell Property Management Company
#210, 5500 – 152nd Street
Surrey BC V3S 5T9

Site Visit: April 30, 2021
Submitted: February 1, 2022 by
RDH Building Science Inc.
4333 Still Creek Drive #400
Burnaby BC V5C 6S6

Contents

Appendices

1 Introduction

RDH Building Science Inc. (RDH) was retained by the Owners, Fraser Campbell Property Management Company (the Owners) to prepare a Depreciation Report Update (the Report) for the building known as Ocean Park Gardens, which is located at 1725 128th Street, Surrey, BC. The Report considers the common property and limited common property components (the Assets) that the Strata Corporation is 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 paving).

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 four 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 previous Depreciation Report Update, which was issued on January 31, 2018. As part of our work for this Report, a site visit was completed on April 30 2021, and the financial data is based on the 2020/2021 fiscal year. A draft Report was distributed to the Strata Council and Strata Management on October 7, 2021. Feedback from the Strata Council was incorporated, and the updated finalized Report was distributed on February 1, 2022.

Depreciation Reports and updates are 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 Depreciation Report Update. 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 Strata Corporation can choose to update portions of the report more frequently, at their discretion, to reflect changes to their financial status and completed work.

2 Ocean Park Gardens

Ocean Park Gardens is a residential strata building constructed in 1994. The low-rise building is of wood-framed constructed and situated over a single level, below-grade concrete parkade.

The principal systems in the building include the building enclosure (the separation of the interior from exterior space), electrical (the electrical, communications and security equipment), mechanical (heating and plumbing), elevator, 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 Ocean Park Gardens are summarized in Table 2.1 below.

TABLE 2.1 KEY PHYSICAL PARAMETERS

Figure 2.1 Elevation photograph of Ocean Park Gardens

Date of first occupancy (approx.)	1994
Gross floor area (ft²) (approx.)	101,300
Total area of Unit Entitlement	51,772
Stories above-grade	5
Total number of strata lots	33

Figure 2.2 Aerial photograph of Ocean Park Gardens (©2021 Google).

3 Assessments

Depreciation Reports and Updates combine two distinct types of analysis: a *physical assessment,* and a *financial assessment.* The assessments are used to determine what the Strata Corporation owns, what condition the Assets are in, what the strata is responsible for, and the *capital costs* associated with the Assets.

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

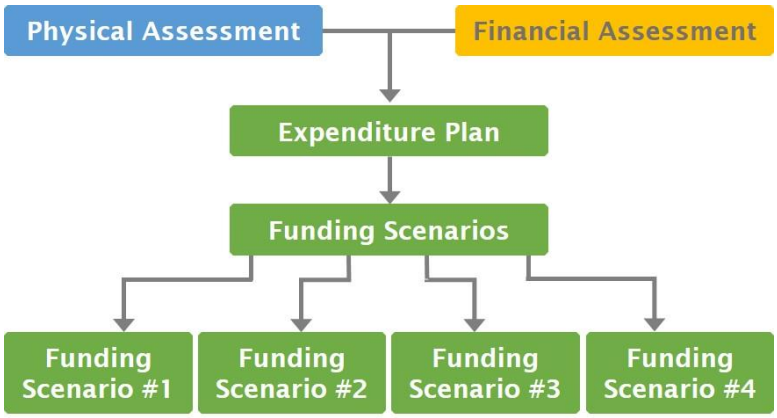


Figure 3.1

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 including a summary of key information.

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 Strata Corporation is 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 Strata Corporation owns and must repair and maintain. The Asset Inventory is included as an appendix to this Report.

Some Assets have been identified as Placeholders. Placeholder Assets are included in the Asset Inventory for reference purposes; however, they are not included in the financial analysis and do not affect the funding models or other financial calculations. Placeholder Assets are identified based on typical agreements with utilities, the Strata Corporation bylaws, and information provided by the Strata Manager and Council. A summary of placeholder Assets is provided in Table 3.1 below.

TABLE 3.1 SUMMARY OF PLACEHOLDER ASSETS

ASSET	PARTY RESPONSIBLE FOR CAPITAL EXPENDITURES
MECH 21 – Hytec Domestic Water Treatment Equipment	→ It is our understanding that the equipment is leased from Hytec Water Management Ltd.
FIRE 04 – Fire Hydrant	→ It is our understanding that the hydrants are owned by the city.

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 AGM minutes,
- 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.

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 Strata Corporation; the original drawings; and any previous investigation reports commissioned by the Strata Corporation. It is expected that the Strata Corporation will need more detailed reviews as Assets approach the end of their service lives. 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 Strata and interviewing Strata Corporation representatives. The history is summarized in Table 3.2 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 3.2 MAINTENANCE AND RENEWALS HISTORY

Building Enclosure

- 2021 – Replaced foundation protection on the southeast of the building
- 2020 – Replaced exposed BUR membrane roof over main entrance
- 2019 – Commissioned a review of the condition of the stucco cladding
- 2018 & 2019 – Roof maintenance work as recommended by review of the condition of the roofs by Abney roofing
- 2018 – Commissioned a review of the condition of the flat roofs and flashing at all levels
- 2018 – Automated main entry aluminum storefront door
- 2017 – Replaced one steel swing door
- 2016 – Repainted, repaired, and cleaned stucco on the west side of the building
- As required – Cleaning of stucco wall cladding

Elevator

- 2020 – Installed corner guards at elevator entry

TABLE 3.2 MAINTENANCE AND RENEWALS HISTORY
Fire Safety → 2019 – Dry sprinkler system tested and winterized
Sitework → 2021 – Mortar joints repaired and repointed on stone retaining wall → 2019 – Installed handrails at ground level patios → 2019 – Irrigation system winterized and maintained → 2018 – Repairs to greenhouse and shed → 2017 – Localized repair, replacement and re-leveling of interlocking unit pavers → 2016 –Replaced deteriorated lower wooden wall sections in the Greenhouse, Tool Shed and Gazebo → 2016 – Above structure repainted → 2016 – Replaced/rebuilt a portion of the arbour in the garden

On April 30, 2021, a representative of RDH visited the site to visually review the Assets. In addition, sub consultants reviewed the elevator. While the Depreciation Report Update 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 3.3 includes examples of some observations made during the review.

TABLE 3.3 OBSERVATIONS BY SYSTEM	
SYSTEM	OBSERVATION
Building Enclosure	→ There are areas of localized cracking and efflorescence at the concrete walls adjacent to the parkade ramp.
Site work	→ There are areas of localized cracking of the concrete paving throughout the site.

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 (2% per year) to the current costs.

The future value of major maintenance and renewals 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 Strata Corporation. Table 3.4 below summarizes the key financial parameters reviewed as part of the financial assessment.

TABLE 3.4 KEY FINANCIAL PARAMETERS		
PARAMETER	PREVIOUS STUDY (2017/2018)	UPDATE STUDY (2020/2021)
Fiscal year end	August 31	
Building reproduction cost	$13,090,800	$15,785,000
Operating budget (excluding CRF contribution)	$218,765	$243,220
Annual CRF contribution	$55,217	$59,000
Opening CRF Balance	$348,034	$465,171
Accumulated CRF Balance*	N/A	$476,882

**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 accumulated CRF balance is current as of August 2021.*

Depreciation Reports and Updates include 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 Depreciation Report Update 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 Depreciation Report Update 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)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.

Costing Caveats

The capital costs given in the Depreciation Reports and Updates 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

Maintenance refers to activities that preserve the Assets, to ensure the Assets will last their predicted service lives and perform as expected. *Renewal* refers to the replacement or refurbishment of an Asset at the end of its useful service life.

Major Maintenance refers to maintenance that occurs at intervals greater than one year, for example, every 18 months, two years, five years, etc. (less frequently than once a year). 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 M*ajor Maintenance and Renewals* are included in the Depreciation Report Update funding models, as required by the Strata Property Act. Costs associated with Minor Maintenance are included in the Strata Corporation's operating budget.

4.1 Major Maintenance and Renewals 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)
Enclosure	$2,000,000	$2,300,000	$5,400,000	$7,200,000
Electrical	$39,000	$43,000	$120,000	$160,000
Mechanical	$570,000	$660,000	$950,000	$1,200,000
Elevator	$200,000	$230,000	$320,000	$470,000
Fire Safety	$88,000	$97,000	$210,000	$280,000
Interior Finishes	$2,900	$3,000	$91,000	$130,000
Amenities	$19,000	$20,000	$45,000	$59,000
Sitework	$140,000	$170,000	$540,000	$790,000
Building Total	**$3,058,900**	**$3,523,000**	**$7,676,000**	**$10,289,000**

Approximately 40% of the Strata Corporation's 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.

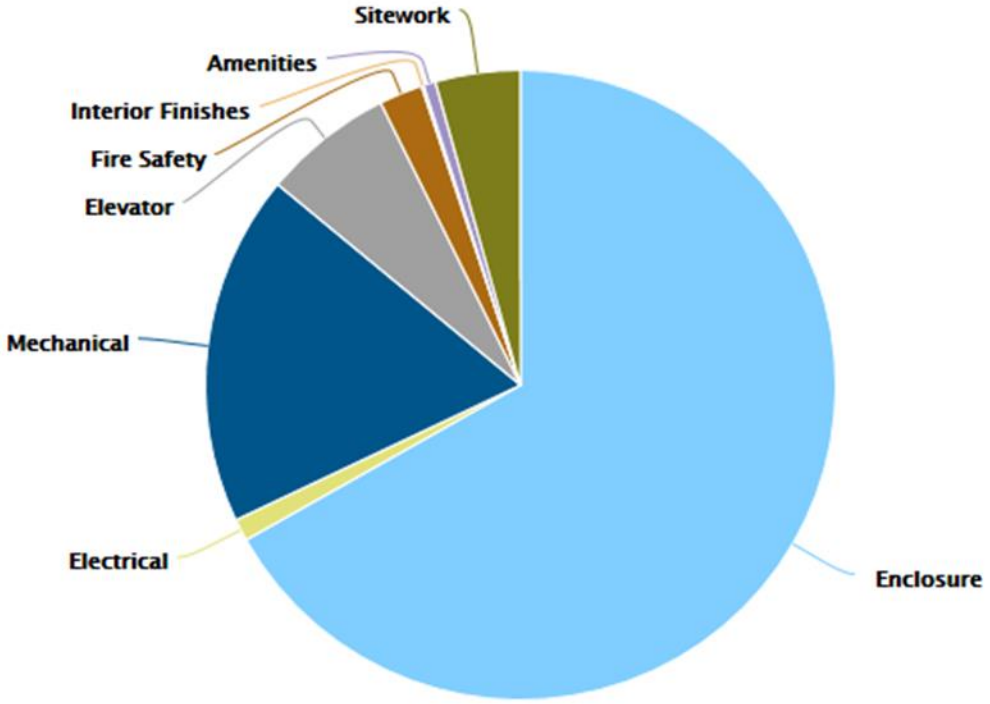


Figure 4.1 Distribution of estimated capital expenditures over 10 years by system.

Section 5 discusses the timing and size of renewals projects forecast for the next 30 years. A detailed list of each Major Maintenance and Renewals activity, including the frequency, costs expressed in Current Year Dollars (CYD), and costs including inflation rates, expressed in Future Year Dollars (FYD) are available to Strata Corporation 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 of 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.

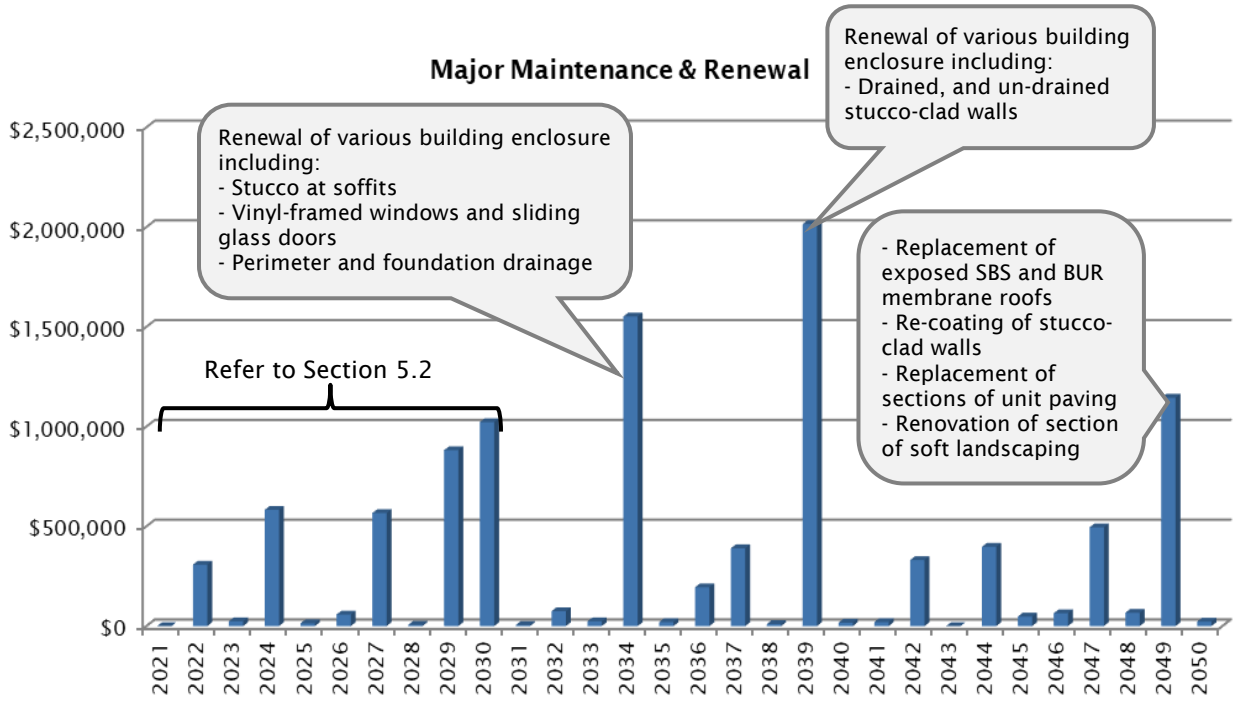


Figure 5.1 Strategic Forecast (30 Years), showing the approximate timing and value of some key capital expenditures.

Each bar on the graph represents a collection of different major maintenance and renewals activities, each with different values. Detailed information about each year, including a description of the maintenance and renewal activities and estimated costs, is also available through the Appendices of this Report.

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 Strata Corporation can anticipate changes to the Strategic Plan with each update of the Depreciation Report.

5.2 Tactical Planning Horizon

The graph below shows the projected major maintenance and renewal costs for the next 10 years (Figure 5.2). Commonly, building managers refer to a 5-year tactical plan; however, a 10-year plan allows the Strata Corporation 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.

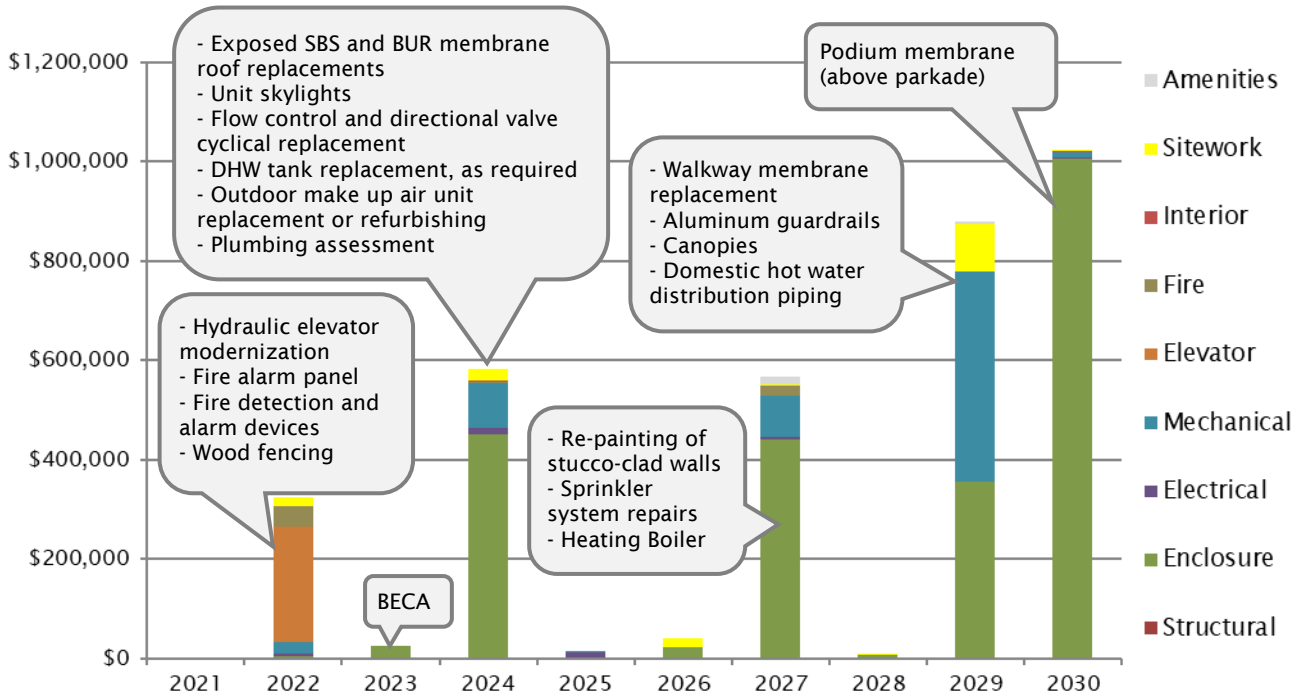


Figure 5.2 Tactical Forecast (10 years), showing the approximate timing and value of some key capital expenditures.

The Tactical Plan above represents one of many possible approaches to planning major maintenance and renewals activities. The Strata Corporation 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 Strata Corporation and may be reflected in updates to the Depreciation Report.

To help the Strata Corporation 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 into 3-year planning periods. The list below is not comprehensive; however, all renewals and major maintenance activities are included in Appendix H. The list 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.

2021 to 2023

Building Enclosure

- Encl 20 General and Inspections – Commission a Building Enclosure Condition Assessment (BECA) Report to confirm the existing conditions, including concealed conditions, of the building enclosure Assets focussing on the roof membranes, the podium waterproofing membrane, windows, and balconies. The assessment should be completed in advance of the various building enclosure renewals to assist with the planning process.
- Encl 06 Concealed Podium Waterproof Membrane – Complete localized repairs to the underside of the parking garage slab, as required to extend the service life of the podium waterproofing membrane above (shown on a 3-year cycle).
- Replacement of failed insulating glazing units (IGUs), with misting between panes of glass on the following Assets (shown on a 2-year cycle):
  - Encl 13 Vinyl Framed Windows
  - Encl 16 Vinyl Framed Sliding Glass Doors

Mechanical

- Jetflush or auger drainage piping Assets and insert video cameras into the main lines to conduct pipe inspection (completed on a 5-year cycle). Some affected Assets include:
  - Mech 07 Perimeter and Foundation Drainage
  - Mech 12 Sanitary Drainage
  - Mech 16 Storm Drainage

Elevator

- Elev 01, 02 Elevator and Cab – Modernization of the elevator including replacement of the elevator controls, tank/pump unit and control valve, door operators, and various other components. In general, renewal projects associated with the elevator tend to be completed on a preventative basis, to reduce the risk of break downs, and unreliable operation. A comprehensive review by the elevator maintenance contractor or elevator consultant is suggested to confirm existing conditions and refine the potential renewal year.

Fire Safety

- Anticipate replacing or modernizing various fire safety Assets, as required due to technological obsolescence. The Strata should consult with their fire safety maintenance contractor to confirm the age and dependability of the equipment and confirm upcoming renewal requirements. The fire safety Assets would include:
  - Fire 01 Fire Alarm Panel Fire
  - Fire 02 Fire Detection and Alarm Fire
  - Fire 03 Dry Sprinkler Compressor
  - Fire 05 Portable Fire Extinguishers

Sitework

- Site 01 Wood Fencing – Replace wood perimeter fencing, as required.

2024 to 2026

Building Enclosure

- Anticipate replacing or repairing various building enclosure roofing Assets. The Strata should consult with the roofing company that previously conducted roof inspections, or commission a new inspection with a roofing or building enclosure consultant prior to roofing renewals. The building enclosure Assets would include:
  - Encl 01 Exposed SBS Membrane Roof
  - Encl 02 Exposed BUR Membrane Roof
  - Encl 04 Protected Roof Membrane with Traffic-Bearing Surface
  - Encl 12 Unit Skylights

Mechanical

- Mech 14 Domestic Hot Water Distribution Piping – 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.
- Mech 33 Make Up Air Unit – Rebuild or refurbish make-up air unit in coordination with roof renewals.

Sitework

- Site 06 Water Feature – Replacement of pond liner, as required.

2027 to 2030

Building Enclosure

- Re-painting and renewal of various building enclosure Assets, including:
  - Encl 05 Soffit with Acrylic Finish Coat
  - Encl 09 Exposed Stucco Clad Wall – Drained
  - Encl 10 Enclosed Stucco Clad Wall – Undrained
  - Various doors
  - Sealants
- Encl 03 Protected Membrane Walkway and Roof Deck with Traffic Bearing Surface – Plan for the renewal of the original walkway membranes and associated components, as required.
- Encl 06 Concealed Podium Waterproof Membrane – Depending on the findings of a condition assessment, and the effectiveness of targeted repairs from the underside of the podium slab, the Owners should begin planning for the renewal of the podium waterproofing membrane that protects the parkade.
- Encl 07 Aluminum Guardrail & Encl 08 Glazed Aluminum Guardrail – Replace exterior guardrails in coordination with walkway and balcony membrane renewals, as required.
- Encl 18 Canopy – Replace canopies, as required.
- Encl 17 Exposed Vinyl Balcony Membrane – Plan for the replacement of vinyl balcony membranes.

Mechanical

- → Mech 05 Snowmelt System – Replace components of radiant in-slab snowmelt system, as needed.
- → Mech 06 Gas-Fired DHW Heater – Replace domestic hot water heater, as required.
- → Mech 14 Piping – Domestic Hot Water Distribution – Replace components of domestic plumbing distribution system, including domestic valves. Extent and timing of renewal will be dependent on the third-party testing of the domestic water distribution piping recommended in the Tactical Plan.
- → Mech 26 Heating Boiler – Cyclical replacement of heating boilers, as required.

Fire Safety

- → Fire 09 Dry Sprinklers – Wet System – Cyclical replacement of sprinkler heads, as required.

Sitework

- → Site 04 Interlocking Unit Paving – Rebuild sections of interlocking paving, including sub-grade, as required. Work to be completed in coordination with podium membrane renewal.

5.3 Project Implementation

The projects identified in the previous section represent a preliminary step that is only intended to help the Strata Corporation identify, prioritize, and plan projects. Most significant renewal projects identified in the Depreciation 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 Strata Corporation 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.

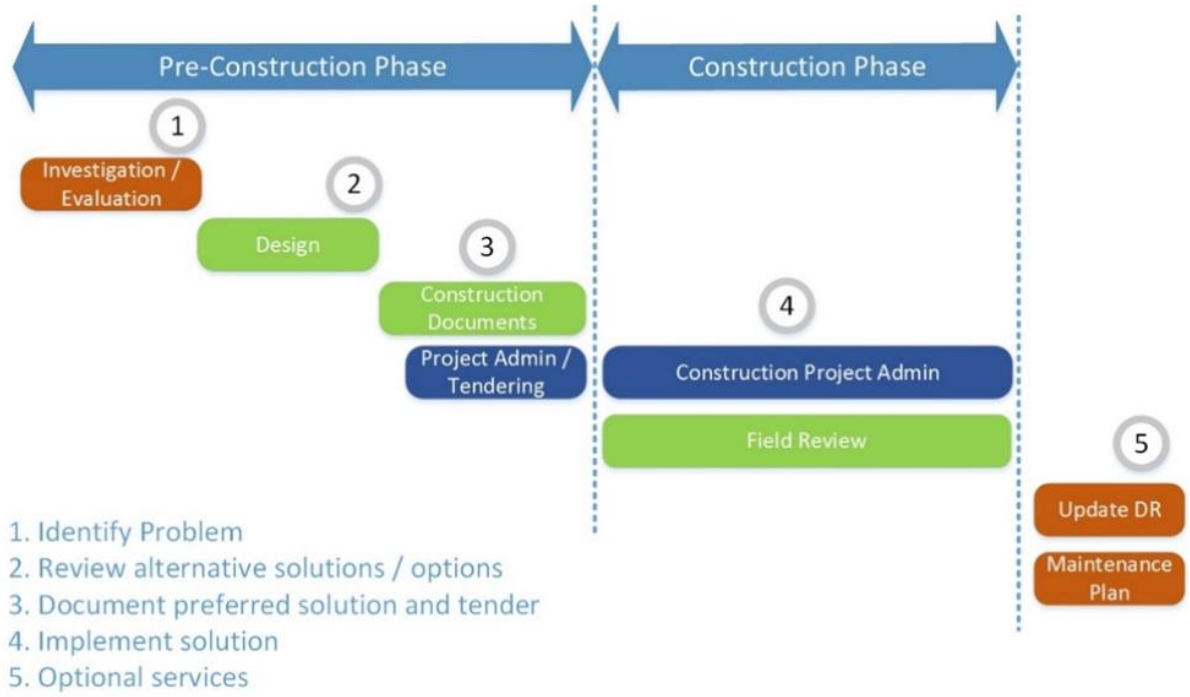


Figure 5.3 Typical phases and sub-phases associated with implementation of a renewals project.

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 Depreciation Report Update 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 Strata Corporation 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 renewals 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 Strata Corporation to leverage economies of scale and lower the overall costs, improve the quality of the work, and incorporate upgrades.

The scope of the Depreciation Report Update 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 Strata Corporation 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 dictates that if the CRF closing balance is less than 25% of the operating fund, then the Strata Corporation must contribute either the difference between the balance and 25% of the operating fund, or up to 10% of the operating fund (*Strata Property Act Regulation*, BC Reg 43/2000, Ch. 6.1). Table 6.1 below shows the calculation to confirm the Strata Corporation meets the minimum requirements set out in the Strata Property Act Regulation.

TABLE 6.1 MINIMUM FUNDING REQUIREMENT CALCULATION

PARAMETER	VALUE
2021 operating budget (excluding CRF contribution)	$ 243,200
→ 25% of the operating budget	$ 60,800
→ 10% of the operating budget	$ 24,320
2020 CRF closing balance	$ 465,171
2021 CRF Contribution	$ 59,000
Does the CRF closing balance exceed 25% of the operating budget?	Yes
Does the CRF contribution exceed 10% of the operating budget?	Yes

Although the Strata Corporation exceeds 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.

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 Strata Corporation to evaluate how changes to the Contingency Reserve Fund impact the number and size of special levies. The actual size and timing of special levies will be affected by how the Strata Corporation chooses to implement the renewal projects.

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

- → ***Current (2021)***. The CRF allocation that was approved by the Owners at the last AGM. The Current allocation is also known as the Status Quo.
- → ***Alternative #1***. An increase from the Status Quo that begins with the current contribution of $59,000 and continues with a 5% annual increase in subsequent years.
- → ***Alternative #2***. An increase from the Status Quo that begins with a contribution of $90,000 and continues with a 3% annual increase in subsequent years. The Alternatives are just two of many possible scenarios for a new funding level in the next fiscal year.
- → ***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 Stratas 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 a Strata Corporation could use as a guide.

TABLE 6.2 COMPARISON OF DIFFERENT FUNDING SCENARIOS

	CURRENT	ALTERNATIVE #1	ALTERNATIVE #2	PROGRESSIVE RESERVE
Annual CRF allocation	$59,000	Starting at $59,000 +	Starting at $90,000 +	$271,000
Annual CRF increase	0 %	5 %	3 %	0 %
Percent of progressive reserve	22 %	22 % +	33 % +	100 %
CRF contribution per unit of unit entitlement		Starting at	Starting at	
Per month	$0.09	$0.09 +	$0.14 +	$0.44
Per year	$1.14	$1.14 +	$1.74 +	$5.23
CRF contribution per average strata lot		Starting at	Starting at	
Per month	$149	$149 +	$227+	$684
Per year	$1,788	$1,788 +	$2,727+	$8,212
Approximate number of special levies (over 30 years)	13	8	8	3
Approximate value of special levies (over 30 years)	$8.1M	$6.1M	$5.7M	$1.9M
Minimum Closing Balance	$5,000			
Assumed Inflation Rate	2 %			
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 (2021) 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 (2021) FUNDING SCENARIO: CASH FLOW TABLE

FISCAL YEAR	OPENING BALANCE	RESERVE CONTRIBUTION	SPECIAL LEVY	RESERVE INCOME	RENEWAL COSTS	CONTINGENCY COSTS	CLOSING BALANCE
2021	$476,882	$59,000	$0	$9,538	$720	$1,000	$543,700
2022	$543,700	$59,000	$0	$10,874	$323,180	$1,000	$289,394
2023	$289,394	$59,000	$0	$5,788	$24,000	$1,000	$329,182
2024	$329,182	$59,000	$193,155	$6,584	$581,920	$1,000	$5,000
2025	$5,000	$59,000	$0	$100	$14,100	$1,000	$49,000
2026	$49,000	$59,000	$0	$980	$40,550	$1,000	$67,430
2027	$67,430	$59,000	$444,651	$1,349	$566,430	$1,000	$5,000
2028	$5,000	$59,000	$0	$100	$6,190	$1,000	$56,910
2029	$56,910	$59,000	$768,642	$1,138	$879,690	$1,000	$5,000
2030	$5,000	$59,000	$964,500	$100	$1,022,600	$1,000	$5,000

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.

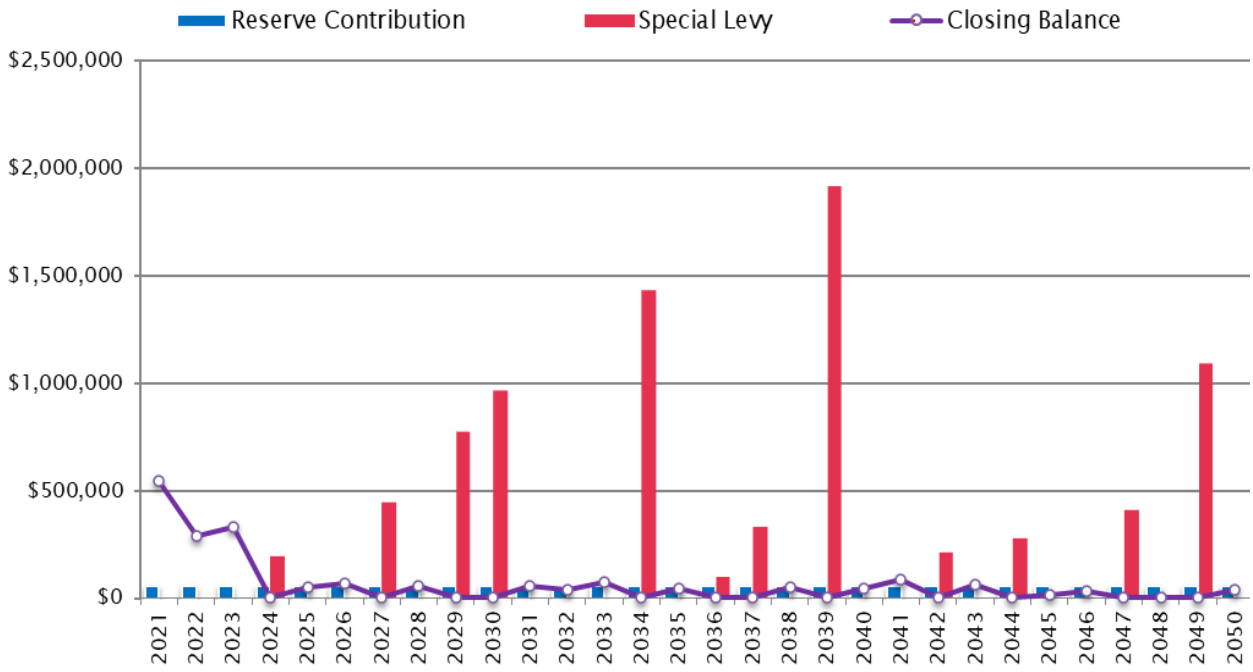


Figure 6.1 CRF balance, contribution, and special levies based on the current funding.

.

6.4 Alternative Funding Scenario #1

Alternative Funding Scenario #1 is based on an initial annual CRF contribution of $59,000, with a five percent (5%) annual increase.

TABLE 6.4 ALTERNATIVE FUNDING SCENARIO #1: CASH FLOW TABLE

FISCAL YEAR	OPENING BALANCE	RESERVE CONTRIBUTION	SPECIAL LEVY	RESERVE INCOME	RENEWAL COSTS	CONTINGENCY COSTS	CLOSING BALANCE
2021	$476,882	$59,000	$0	$9,538	$720	$1,000	$543,700
2022	$543,700	$61,950	$0	$10,874	$323,180	$1,000	$292,344
2023	$292,344	$65,047	$0	$5,847	$24,000	$1,000	$338,238
2024	$338,238	$68,300	$174,617	$6,765	$581,920	$1,000	$5,000
2025	$5,000	$71,715	$0	$100	$14,100	$1,000	$61,715
2026	$61,715	$75,301	$0	$1,234	$40,550	$1,000	$96,700
2027	$96,700	$79,066	$394,731	$1,934	$566,430	$1,000	$5,000
2028	$5,000	$83,019	$0	$100	$6,190	$1,000	$80,929
2029	$80,929	$87,170	$715,973	$1,619	$879,690	$1,000	$5,000
2030	$5,000	$91,528	$931,972	$100	$1,022,600	$1,000	$5,000

Alternative Funding Scenario #1 reduces 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.

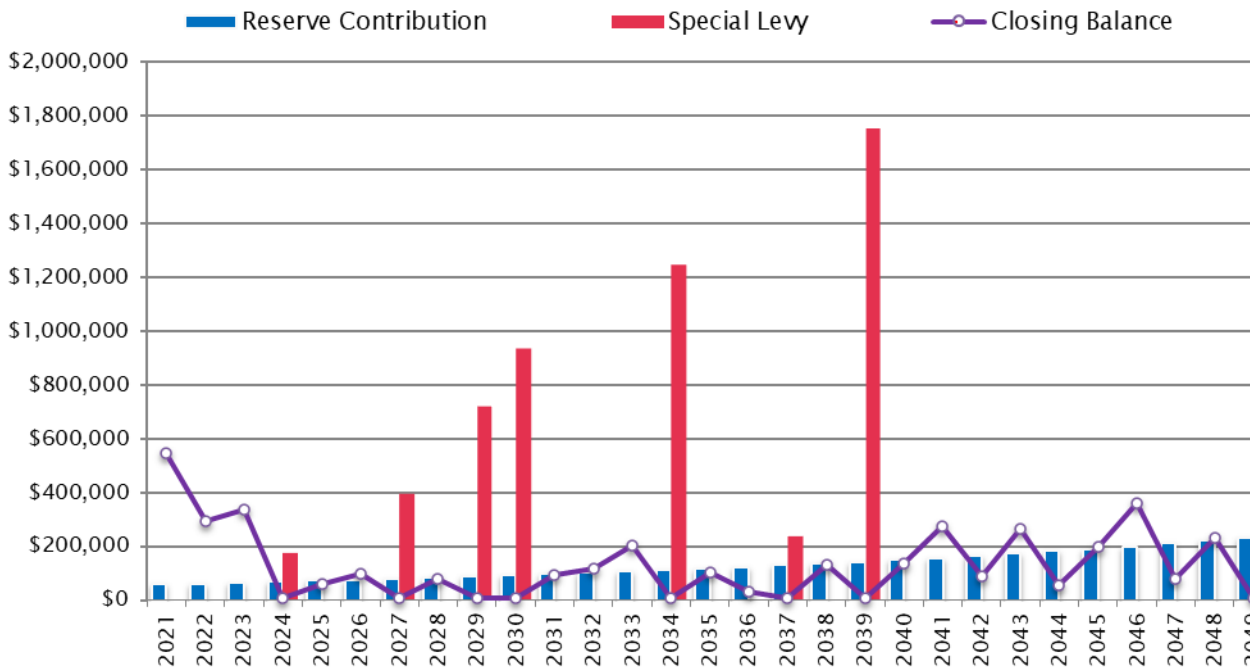


Figure 6.2 CRF balance, contribution, and special levies based on Alternative #1.

6.5 Alternative Funding Scenario #2

Alternative Funding Scenario #2 is based on a further increased initial CRF contribution of $90,000, with a 3% annual increase. The initial contribution is approximately a 50% increase of the current contribution.

TABLE 6.5 ALTERNATIVE FUNDING SCENARIO #2: CASH FLOW TABLE

FISCAL YEAR	OPENING BALANCE	RESERVE CONTRIBUTION	SPECIAL LEVY	RESERVE INCOME	RENEWAL COSTS	CONTINGENCY COSTS	CLOSING BALANCE
2021	$476,882	$90,000	$0	$9,538	$720	$1,000	$574,700
2022	$574,700	$92,700	$0	$11,494	$323,180	$1,000	$354,714
2023	$354,714	$95,481	$0	$7,094	$24,000	$1,000	$432,289
2024	$432,289	$98,345	$48,640	$8,646	$581,920	$1,000	$5,000
2025	$5,000	$101,296	$0	$100	$14,100	$1,000	$91,296
2026	$91,296	$104,335	$0	$1,826	$40,550	$1,000	$155,906
2027	$155,906	$107,465	$305,941	$3,118	$566,430	$1,000	$5,000
2028	$5,000	$110,689	$0	$100	$6,190	$1,000	$108,599
2029	$108,599	$114,009	$660,910	$2,172	$879,690	$1,000	$5,000
2030	$5,000	$117,430	$906,070	$100	$1,022,600	$1,000	$5,000

Alternative Funding Scenario #2 reduces 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.

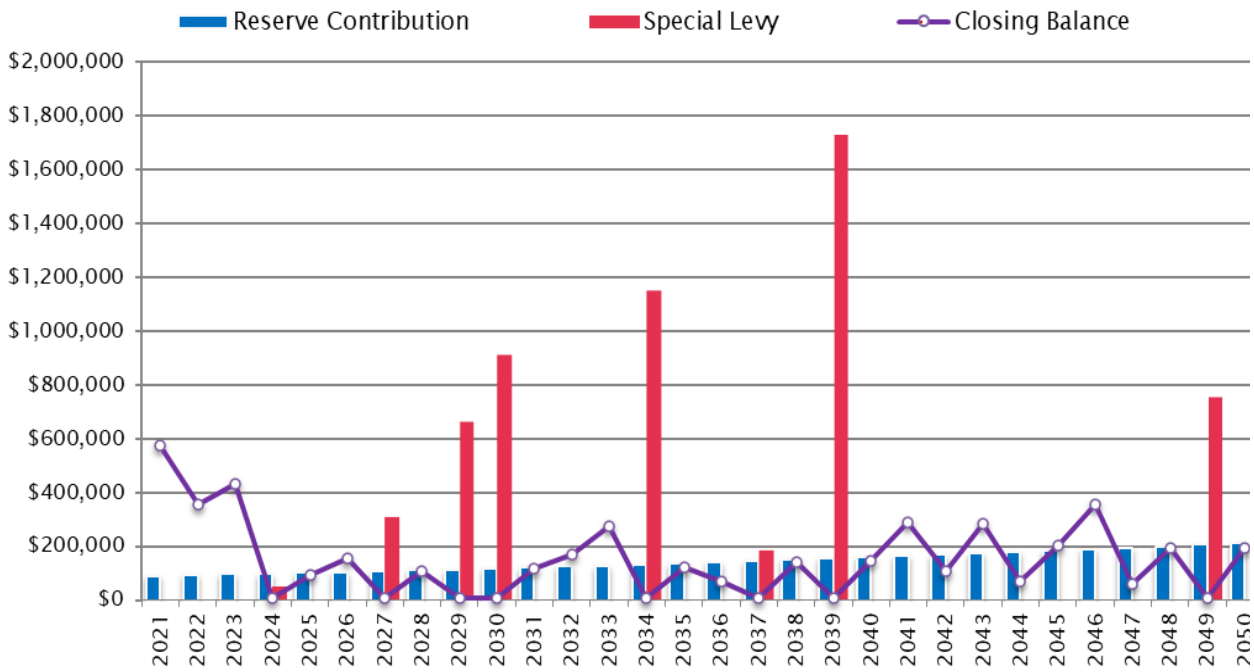


Figure 6.3 CRF balance, contribution, and special levies based on Alternative #2.

6.6 Progressive Funding Scenario

The Progressive Funding Scenario is based on a fixed annual CRF contribution.

TABLE 6.6 PROGRESSIVE FUNDING SCENARIO: CASH FLOW TABLE

FISCAL YEAR	OPENING BALANCE	RESERVE CONTRIBUTION	SPECIAL LEVY	RESERVE INCOME	RENEWAL COSTS	CONTINGENCY COSTS	CLOSING BALANCE
2021	$476,882	$271,000	$0	$9,538	$720	$1,000	$755,700
2022	$755,700	$271,000	$0	$15,114	$323,180	$1,000	$717,634
2023	$717,634	$271,000	$0	$14,353	$24,000	$1,000	$977,986
2024	$977,986	$271,000	$0	$19,560	$581,920	$1,000	$685,626
2025	$685,626	$271,000	$0	$13,713	$14,100	$1,000	$955,239
2026	$955,239	$271,000	$0	$19,105	$40,550	$1,000	$1,203,793
2027	$1,203,793	$271,000	$0	$24,076	$566,430	$1,000	$931,439
2028	$931,439	$271,000	$0	$18,629	$6,190	$1,000	$1,213,878
2029	$1,213,878	$271,000	$0	$24,278	$879,690	$1,000	$628,465
2030	$628,465	$271,000	$116,565	$12,569	$1,022,600	$1,000	$5,000

The Progressive Reserve would offset smaller special levies. However, because of the timing of anticipated renewals 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.

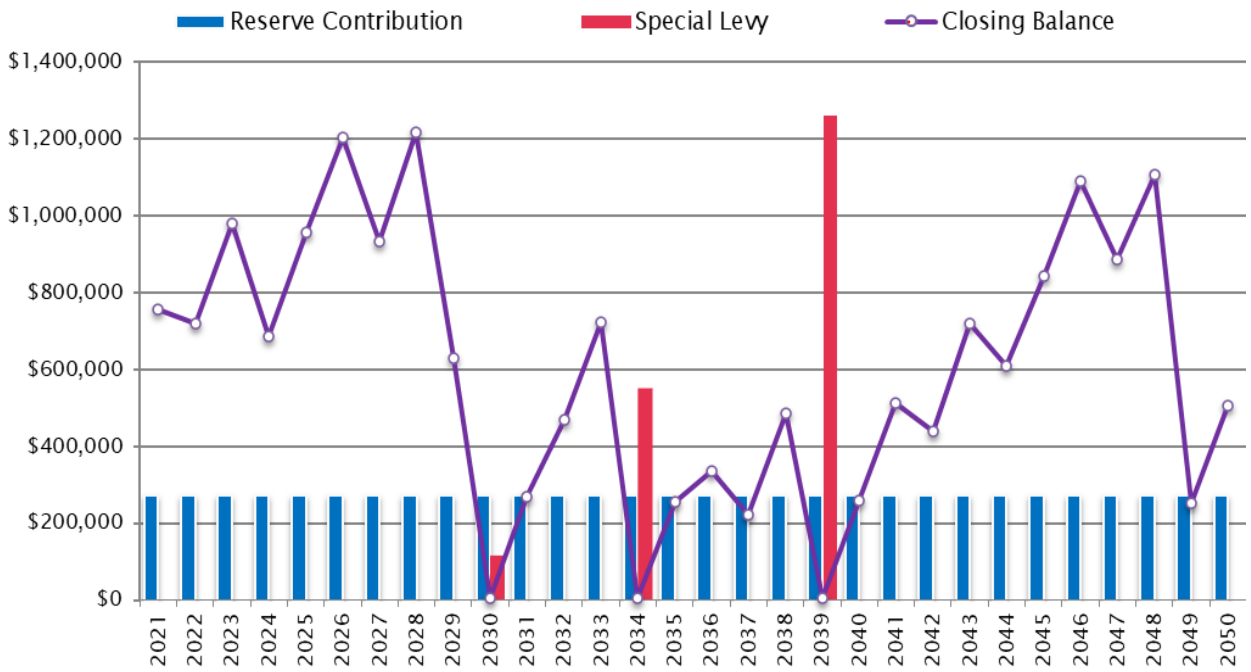


Figure 6.4 CRF balance, contribution, and special levies based on a Progressive Reserve calculation.

7 Next Steps

The Depreciation Report Update identifies the possible major maintenance and renewals expenditures that Ocean Park Gardens may encounter over the next 30 years. Estimated timelines have been provided to assist the Strata Corporation with the planning process; however, much like the 2016 Depreciation Report Update, this Report should still be considered a first step when planning for renewals. Funding scenarios have been developed to provide the Strata Corporation with an objective basis for determining appropriate CRF contributions.

Ocean Park Gardens is a 27-year-old building (as of 2021), that has primarily been maintained with localized repairs and renewals, some of which have been completed by way of the Owners' operating budget. However, as of 2021, various Assets appear to be approaching or have exceeded their anticipated service lives, which has contributed to a variety of potential expenditures being forecasted over the next 10 years, including the podium waterproofing membrane and various roofing membranes. As Depreciation Report Updates are limited to visual review, the Owners would benefit from completing a Building Enclosure Condition Assessment (BECA) Report to review the concealed physical conditions of the original Assets and refine the capital expenditure forecasts accordingly.

In addition, Assets, such as the elevator, fire safety equipment, and plumbing distribution systems 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, particularly for the life safety Assets, such as the fire safety equipment, and update the renewal forecasts accordingly.

Other expenditures that occur 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.

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

Recommendations

- → **Project Planning.** Review the information in Section 5.2 and begin planning for projects, including commissioning assessments, requesting information, and preparing construction budgets, well in advance of the forecasted date of renewals. The planning process will assist the Owners in refining the actual timing, scope of work, and project budget.
- → **Major Maintenance Planning.** Review Appendix H 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.
- → **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.
- → **Building Enclosure Condition Assessment.** Conduct a Building Enclosure Condition Assessment (BECA) Report of the building enclosure prior to or in conjunction with the update to the Depreciation

Report in three years' time. The BECA should inform the renewal timing of the stucco cladding, and podium waterproofing membrane.

→ **Piping Condition Assessment or Evaluation.** Conduct a Condition Assessment of the 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.

Yours truly,

Daniela Beilmann | Dipl. T.
Building Science Technologist
dbeilmann@rdh.com
T 604-873-1181
RDH Building Science Inc.

Reviewed by
Mark Will | B Econ, Dipl. T.
Principal, Regional Manager
RDH Building Science Inc.

Brandon Carreira | Dipl. T.
Project Manager
bcarreira@rdh.com
T 604-873-1181
RDH Building Science Inc.

encl.

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

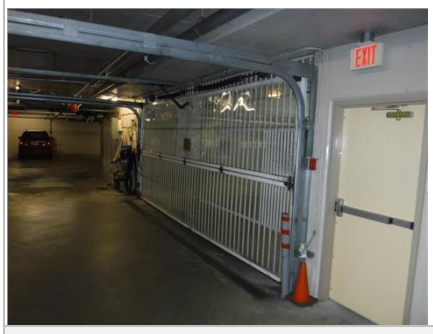
Asset Inventory

Ocean Park Gardens
Asset Inventory

Structural

Foundations

Struct 01 - Concrete Foundation & Parkade



Location

Parkade.

Description

Concrete strip and spread foundations supported directly on existing grade, slab on grade, concrete walls, and concrete suspended slab.

Information

Service Life:	75
Installed Year:	1994
Chronological Age:	28
Effective Age:	28
Next Renewal Year:	2069

Walls & Columns

Struct 02 - Wood Structure

Location

Primary building structure.

Description

Wood framed structure.

Information

Service Life:	75
Installed Year:	1994
Chronological Age:	28
Effective Age:	28
Next Renewal Year:	2069

Enclosure

Roofs & Decks

Encl 01 - Exposed SBS Membrane Roof

Location

Main roof.

Description

Bituminous and modified bituminous Styrene-Butadiene-Styrene (SBS) membrane on a low-slope roof. The roof is a conventional assembly with an overlay board and insulation below the membrane. Roof maintenance and repairs have been completed as required, based on the roof inspections completed in 2018.

Information

Service Life:	25
Installed Year:	1999
Chronological Age:	23
Effective Age:	23
Next Renewal Year:	2024

Encl 02 - Exposed BUR Membrane Roof

Location

West end of the building, and section above building entrance on the east elevation.

Description

built-up roof (BUR) membrane consisting of multiple layers of roofing felt bonded together with hot-applied bitumen. A protective layer of gravel is seeded into the upper layer of bitumen. Section above building entrance was replaced in 2020 and shown as a component of this asset.

Information

Service Life:	25
Installed Year:	1994
Chronological Age:	28
Effective Age:	23
Next Renewal Year:	2024

Encl 03 - Protected Membrane Walkway & Roof Deck (Conventional Assembly) with Traffic-Bearing Surface

Location

Exterior walkways on the third and fourth floors.

Description

SBS membrane overlaid with concrete paver traffic-bearing surface. A portion of the original walkway membrane was retained on the south side of levels 3 and 4. On the south side, the original walkway SBS membrane and concrete overlay has been retained. On the north side, walkways were renewed in 2006 and shown as a component of this asset. Localized repairs have been completed, as required.

Information

Service Life:	30
Installed Year:	1994
Chronological Age:	28
Effective Age:	23
Next Renewal Year:	2029

Encl 04 - Protected Roof Membrane with Traffic-Bearing Surface

Location

Decks.

Description

SBS and BUR membranes overlaid with a concrete paver traffic-bearing surface. Various decks have been renewed as required, such as Suites 403 and 404 in 2007. The renewal of this asset is phased.

Information

Service Life:	30
Installed Year:	1994
Chronological Age:	28
Effective Age:	28
Next Renewal Year:	2024

Encl 05 - Soffit with Acrylic Finish Coat

Location

Underside of balconies and various other locations.

Description

Exterior gypsum board with acrylic finish coat.

Information

Service Life:	40
Installed Year:	1994
Chronological Age:	28
Effective Age:	28
Next Renewal Year:	2034

Encl 06 - Concealed Waterproof Membrane Podium

Location

Below landscaping on portions of the west and south elevations.

Description

Waterproof membrane assembly protected with a combination of drainage mat, insulation, pavers and/or landscaping overburden.

Information

Service Life:	40
Installed Year:	1994
Chronological Age:	28
Effective Age:	32
Next Renewal Year:	2030

Fall Protection

Encl 07 - Guardrail Aluminum

Location

Exterior walkways and parkade entrances.

Description

Aluminum posts and pickets functioning as a protective barrier to prevent accidental falls from one level to another.

Information

Service Life:	30
Installed Year:	1994
Chronological Age:	28
Effective Age:	23
Next Renewal Year:	2029

Encl 08 - Guardrail Glazed Aluminum

Location

Balconies and roof decks.

Description

Aluminum posts and glass infill panels functioning as a protective barrier to prevent accidental falls from one level to another.

Information

Service Life:	30
Installed Year:	1994
Chronological Age:	28
Effective Age:	23
Next Renewal Year:	2029

Walls

Encl 09 - Exposed Stucco Clad Wall - Drained

Location

All levels on all elevations.

Description

Acrylic coated stucco applied on furring to create a drained cavity over the exterior sheathing membrane. Rainscreen siding on the north side of the horseshoe was replaced between Levels 3 and 5 in 2006. Stucco walls locally repaired, cleaned, and painted as required.

Information

Service Life:	40
Installed Year:	1999
Chronological Age:	23
Effective Age:	23
Next Renewal Year:	2039

Encl 10 - Enclosed Stucco Clad Wall - Undrained

Location

Enclosed walkways on ground and second floor.

Description

Acrylic coated stucco applied directly over exterior sheathing membrane.

Information

Service Life:	40
Installed Year:	1994
Chronological Age:	28
Effective Age:	23
Next Renewal Year:	2039

Glazing Systems

Encl 11 - Aluminum Storefront

Location

Lobby entrance.

Description

Aluminum framed, thermally broken, storefront system with doors and insulating glazing units, and no operators. Door was automated in 2018.

Information

Service Life:	40
Installed Year:	1994
Chronological Age:	28
Effective Age:	28
Next Renewal Year:	2034

Encl 12 - Unit Skylight

Location

Throughout the roof.

Description

Individual unit skylights with double glazed insulating glazing units.

Information

Service Life:	30
Installed Year:	1999
Chronological Age:	23
Effective Age:	28
Next Renewal Year:	2024

Encl 13 - Vinyl Framed Window

Location

All levels and all elevations of the building.

Description

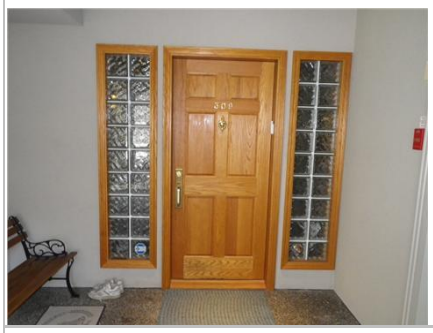
Vinyl framed windows with double insulating glazing units.

Information

Service Life:	30
Installed Year:	1994
Chronological Age:	28
Effective Age:	18
Next Renewal Year:	2034

Doors

Encl 14 - Wood Swing Door



Location

Suite entry doors.

Description

Solid wood swing door without insulating glazing units.

Information

Service Life:	40
Installed Year:	1994
Chronological Age:	28
Effective Age:	28
Next Renewal Year:	2034

Encl 15 - Steel Swing Door

Location

Parking garage exit doors.

Description

Hollow steel slab swing door with glazing. One door replaced in 2017 due to break in.

Information

Service Life:	25
Installed Year:	1994
Chronological Age:	28
Effective Age:	13
Next Renewal Year:	2034

Encl 16 - Vinyl Framed Sliding Glass Door

Location

Balcony, roof deck and patio access doors.

Description

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

Information

Service Life:	30
Installed Year:	1994
Chronological Age:	28
Effective Age:	18
Next Renewal Year:	2034

Balconies

Encl 17 - Exposed Vinyl Balcony Membrane

Location

Balconies.

Description

Sheet vinyl membrane applied over wood balcony sheathing. Replaced in 2007.

Information

Service Life:	15
Installed Year:	2007
Chronological Age:	15
Effective Age:	10
Next Renewal Year:	2027

Canopies

Encl 18 - Canopy

Location

Above 3rd and 4th floor corner balconies, west portion of the building.

Description

Canopy constructed with light metal framing and covered with fabric.

Information

Service Life:	20
Installed Year:	2009
Chronological Age:	13
Effective Age:	13
Next Renewal Year:	2029

Encl 19 - Awning

Location

Suites 403 and 404.

Description

Retractable awning with metal frame and covered with fabric.

Information

Service Life:	15
Installed Year:	1994
Chronological Age:	28
Effective Age:	10
Next Renewal Year:	2027

General & Inspections

Encl 20 - General & Inspections

Location

All elevations and all levels of the building.

Description

Miscellaneous interior and exterior components, such as service penetrations and interface details, not related to any particular assembly. Warranty and general reviews.

Information

Service Life:	75
Installed Year:	1994
Chronological Age:	28
Effective Age:	28
Next Renewal Year:	2069

Encl 21 - Sealant

Location

Interfaces and service penetrations at the exterior walls, roofs and other locations.

Description

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

Information

Service Life:	10
Installed Year:	1999
Chronological Age:	23
Effective Age:	5
Next Renewal Year:	2027

Electrical

Distribution

Elec 01 - Electrical Distribution

Location

Parking garage level electrical room.

Description

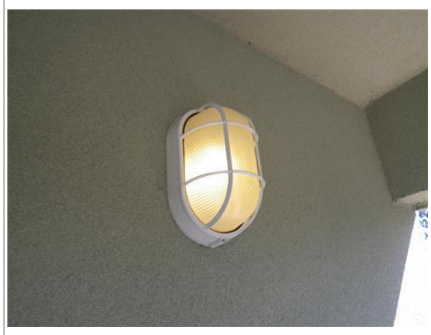
Federal Pioneer 600A, 208/120V main disconnect switch; downstream switchboards, panelboards, breakers, switches, disconnects and wiring to mechanical, lighting and power loads throughout the building and to individual suites through BC Hydro owned metering devices.

Information

Service Life:	40
Installed Year:	1994
Chronological Age:	28
Effective Age:	28
Next Renewal Year:	2034

Light Fixtures

Elec 02 - Exterior Light Fixtures



Location

Throughout the building and site.

Description

A variety of fixture types, including wall, pole and post mounted, street, pathway and recessed soffit pot lighting. A variety of lamp types, including fluorescent, compact fluorescent, halogen, incandescent, LED, etc. for exterior direct, indirect and accent lighting applications. A variety of light fixture controls, including switches, motion sensors, timers and photocells.

Information

Service Life:	10
Installed Year:	2014
Chronological Age:	8
Effective Age:	8
Next Renewal Year:	2024

Elec 03 - Interior Light Fixtures

Location

Throughout the building.

Description

A variety of fixture types, including fixed surface (pendant, track and sconce) and recessed (pot, troffer and cove). A variety of lamp types, including fluorescent, compact fluorescent, halogen, incandescent, LED, etc. for interior direct, indirect and accent lighting applications. A variety of light fixture controls, including switches, motion sensors, timers, dimmers and photocells.

Information

Service Life:	10
Installed Year:	2011
Chronological Age:	11
Effective Age:	8
Next Renewal Year:	2024

Security

Elec 04 - Enterphone System

Location

Main entrance.

Description

Flush mounted, enterphone panels with associated key pads and display panels.

Information

Service Life:	25
Installed Year:	2009
Chronological Age:	13
Effective Age:	22
Next Renewal Year:	2025

Elec 05 - Security Surveillance

Location

Lobby.

Description

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

Information

Service Life:	14
Installed Year:	1994
Chronological Age:	28
Effective Age:	11
Next Renewal Year:	2025

Mechanical

Controls and End Devices

Mech 01 - Hydronic Control Valves and Electronic Actuators

Location

Parking garage mechanical room.

Description

Electronic motor-driven control devices on valves, dampers etc to control heating, air-conditioning, domestic hot water system and boilers etc.

Information

Service Life:	10
Installed Year:	2016
Chronological Age:	6
Effective Age:	6
Next Renewal Year:	2026

Mech 02 - Controls - Boiler Electronic

Location

Parking garage mechanical room.

Description

Tekmar electronic control panel to optimize boiler operation and efficiency.

Information

Service Life:	15
Installed Year:	2016
Chronological Age:	6
Effective Age:	13
Next Renewal Year:	2024

Mech 03 - Gas Detection - Parking Garage

Location

Mounted to columns throughout the parking garage.

Description

Armstrong electronic sensing devices for detection of dangerous gases such as carbon monoxide (CO) and propane produced by vehicles and to activate the exhaust fans accordingly. Sensing devices are inspected annually.

Information

Service Life:	10
Installed Year:	1994
Chronological Age:	28
Effective Age:	8
Next Renewal Year:	2024

Mech 04 - 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.

Information

Service Life:	20
Installed Year:	1994
Chronological Age:	28
Effective Age:	18
Next Renewal Year:	2024

Plumbing & Drainage

Mech 05 - Snowmelt System

Location

Mechanical room to driveway.

Description

Instantaneous water heater supplies radiant floor heat to prevent ice from forming on the parking garage entry ramp. Controller was last replaced in 2016.

Information

Service Life:	35
Installed Year:	1994
Chronological Age:	28
Effective Age:	28
Next Renewal Year:	2029

Mech 06 - Tank - DHW - Heating - Gas Fired

Location

Mechanical room parking garage.

Description

AO Smith 100 gallon tanks, gas-fired naturally vented water heaters. Replaced in 2012, 2015, and 2019.

Information

Service Life:	12
Installed Year:	2012
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2024

Mech 07 - Drainage - Perimeter and Foundation

Location

Perimeter of the building.

Description

(Concealed Asset). Perforated piping forming part of a sub-surface perimeter drainage system around perimeters of buildings and underground structures. Performed foundation protection upgrades on the south-east elevation in 2021.

Information

Service Life:	40
Installed Year:	1994
Chronological Age:	28
Effective Age:	28
Next Renewal Year:	2034

Mech 08 - Valves - Cross Connection & Backflow Prevention

Location

Parking garage mechanical room.

Description

Various types and sizes of backflow prevention valves, including vacuum breakers, double check, reduced pressure valves on systems. Backflow preventor was last replaced in 2015.

Information

Service Life:	20
Installed Year:	2015
Chronological Age:	7
Effective Age:	7
Next Renewal Year:	2035

Mech 09 - Fixtures - Taps & Sinks

Location

Amenity room and washroom.

Description

Sinks, janitors mop sinks, and other plumbing supply fixtures.

Information

Service Life:	25
Installed Year:	1994
Chronological Age:	28
Effective Age:	13
Next Renewal Year:	2034

Mech 10 - Fixtures - Toilets

Location

Amenity washroom.

Description

Floor mounted toilet.

Information

Service Life:	25
Installed Year:	1994
Chronological Age:	28
Effective Age:	13
Next Renewal Year:	2034

Mech 11 - Pump - Domestic Water Circulation and Recirculation

Location

Parking garage mechanical room.

Description

Armstrong, fractional HP, pipe-mounted bronze body domestic hot water recirculation pumps.

Information

Service Life:	10
Installed Year:	1994
Chronological Age:	28
Effective Age:	8
Next Renewal Year:	2024

Mech 12 - Sanitary Drainage Collection

Location

Connected to waste fixtures throughout.

Description

Cast iron DWV piping, with mechanical joints, p-traps, and fittings. Drainage last cleaned in 2016.

Information

Service Life:	50
Installed Year:	1994
Chronological Age:	28
Effective Age:	28
Next Renewal Year:	2044

Mech 13 - Expansion Tank - Radiant Heating - Diaphragm-Type

Location

Parking garage mechanical room.

Description

Diaphragm expansion tank for radiant heating of parking garage entry ramp.

Information

Service Life:	20
Installed Year:	1994
Chronological Age:	28
Effective Age:	18
Next Renewal Year:	2024

Mech 14 - Piping - Domestic Hot Water Distribution

Location

Connected to supply fixtures throughout the building.

Description

Mixture of K and L copper for vertical/horizontal mains system.

Information

Service Life:	35
Installed Year:	1994
Chronological Age:	28
Effective Age:	28
Next Renewal Year:	2029

Mech 15 - Piping - Gas Distribution

Location

Throughout the building.

Description

Gas distribution system consisting of threaded sch. 40 steel piping from meter to appliance. Piping inside townhouse is not Strata owned.

Information

Service Life:	50
Installed Year:	1994
Chronological Age:	28
Effective Age:	28
Next Renewal Year:	2044

Mech 16 - Storm Drainage Collection

Location

Throughout the site.

Description

Trench drains, catch basins and associated piping systems for rainwater runoff. Roof drains may be included with the roof assets.

Information

Service Life:	40
Installed Year:	1994
Chronological Age:	28
Effective Age:	28
Next Renewal Year:	2034

Mech 17 - Hytec Dom Water Treatment Equipment [PLACEHOLDER]

Location

Mechanical room.

Description

Hytec Aquasoft pH control system including treatment tanks, filters, chemical dosers, metering pumps and other associated equipment to provide treatment for potable water system. Last inspection completed in 2019. Leased by Strata.

Information

Service Life:	3
Installed Year:	2021
Chronological Age:	1
Effective Age:	1
Next Renewal Year:	2024

Mech 18 - Valves - Plumbing Flow Control and Directional

Location

Mechanical room.

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.

Information

Service Life:	20
Installed Year:	1994
Chronological Age:	28
Effective Age:	18
Next Renewal Year:	2024

Heating & Cooling

Mech 19 - Pump - Hydronic Loop - Pipemount

Location

Parking garage mechanical room.

Description

Bell & Gossett pipe mounted pumps for heating water hydronic loop.

Information

Service Life:	15
Installed Year:	2012
Chronological Age:	10
Effective Age:	8
Next Renewal Year:	2029

Mech 20 - Chemical Treatment Equipment

Location

Parking garage mechanical room.

Description

Pot feeder, chemicals (such as biocide, scale, corrosion and oxygen inhibitor, glycol), metering pumps and other associated equipment to provide corrosion protection to boilers, loops and piping.

Information

Service Life:	8
Installed Year:	2017
Chronological Age:	5
Effective Age:	5
Next Renewal Year:	2025

Mech 21 - Electric Baseboard

Location

Common areas and service rooms.

Description

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

Information

Service Life:	40
Installed Year:	1994
Chronological Age:	28
Effective Age:	28
Next Renewal Year:	2034

Mech 22 - Electric Unit Heater

Location

Locker rooms.

Description

Electric unit heaters, ceiling mounted, fans and louver. One motor replaced.

Information

Service Life:	17
Installed Year:	1994
Chronological Age:	28
Effective Age:	15
Next Renewal Year:	2024

Mech 23 - Gas Fireplace

Location

Amenity room.

Description

Natural gas fireplaces with fireplace enclosure, flue, gas piping, gas valve, glass panel and other components.

Information

Service Life:	30
Installed Year:	1994
Chronological Age:	28
Effective Age:	18
Next Renewal Year:	2034

Mech 24 - Hydronic Loop Pumps - Vertical Inline/Basemount

Location

Parking garage mechanical room.

Description

Centrifugal vertical in-line, basemount pumps for heating water hydronic loop. One loop pump was replaced in 2018. The original pump is a component of this asset.

Information

Service Life:	15
Installed Year:	2018
Chronological Age:	4
Effective Age:	5
Next Renewal Year:	2032

Mech 25 - Heat Exchanger - Shell & Tube

Location

Parking garage mechanical room.

Description

Shell and tube heat exchanger for parking garage ramp radiant heating.

Information

Service Life:	25
Installed Year:	1994
Chronological Age:	28
Effective Age:	23
Next Renewal Year:	2024

Mech 26 - Heating Boiler

Location

Parking garage mechanical room.

Description

Burnham commercial natural gas fired, natural gas fired, hot water boiler, atmospheric vent/chimney. Boiler gauges installed in 2016. Mixing valve for the boilers replaced in 2017. Brick tiles replaced in one boiler 2017. One of the three boilers was replaced in 2019.

Information

Service Life:	20
Installed Year:	2007
Chronological Age:	15
Effective Age:	15
Next Renewal Year:	2027

Mech 27 - Heating System Expansion Tank - Diaphragm-Type

Location

Parking garage mechanical room.

Description

Extrol floor mounted diaphragm expansion tank for in-floor radiant heating system.

Information

Service Life:	20
Installed Year:	1994
Chronological Age:	28
Effective Age:	18
Next Renewal Year:	2024

Mech 28 - Hydronic Distribution Piping

Location

Throughout the building.

Description

Hydronic heating water supply and return system consisting of insulated, threaded sch 40 steel piping.

Information

Service Life:	30
Installed Year:	1994
Chronological Age:	28
Effective Age:	28
Next Renewal Year:	2024

Mech 29 - Gas Chimney Vent

Location

From fireplace to roof.

Description

Fireplace vent with approved collars, fittings and vent terminal.

Information

Service Life:	35
Installed Year:	1994
Chronological Age:	28
Effective Age:	33
Next Renewal Year:	2024

Ventilation and Air-conditioning

Mech 30 - Packaged Rooftop Air-conditioning Unit [PLACEHOLDER]

Location

Rooftop.

Description

Lennox CHA16-261-3P cooling only packaged air conditioning unit, 230/208V 60 Hz 1 Phase, outdoor rooftop unit, belt-driven, centrifugal fans, for supply air to the interior spaces. It is our understanding that the rooftop AC unit is owned and maintained by the individual owner.

Information

Service Life:	20
Installed Year:	1994
Chronological Age:	28
Effective Age:	18
Next Renewal Year:	2024

Mech 31 - Exhaust Fans Parking Garage - Propellor

Location

Various strategic locations throughout the parking garage.

Description

Belt-driven propellor exhaust fan mounted in exterior wall. Units are inspected regularly.

Information

Service Life:	20
Installed Year:	1994
Chronological Age:	28
Effective Age:	18
Next Renewal Year:	2024

Mech 32 - General Exhaust Fan

Location

Service rooms and amenity rooms throughout the building.

Description

Direct drive fans, ceiling and cabinet fans, and centrifugal inline blower fans. Replaced two exhaust fan motors in storage locker room in 2016.

Information

Service Life:	12
Installed Year:	1994
Chronological Age:	28
Effective Age:	10
Next Renewal Year:	2024

Mech 33 - Make Up Air Unit - Outdoor

Location

Main roof, south end.

Description

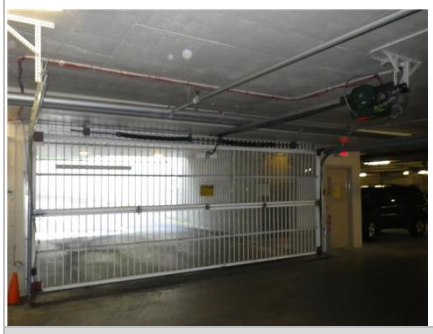
Reznor outdoor rooftop unit, belt-driven, centrifugal fan with natural gas fired heating to supply tempered make-up air to the interior spaces. Fan motors replaced 2014. Heater core failed, Owners opted to not condition interior air.

Information

Service Life:	20
Installed Year:	1994
Chronological Age:	28
Effective Age:	18
Next Renewal Year:	2024

Other

Mech 34 - Overhead Gate Motor



Location

Parking garage entrance.

Description

1/2 HP AC motor and commercial-grade overhead sectional door controlled by an electric operator. Repairs completed in 2021.

Information

Service Life:	7
Installed Year:	2012
Chronological Age:	10
Effective Age:	2
Next Renewal Year:	2027

Elevator

Hydraulic

Elev 01 - Hydraulic Elevator, Double Bottom

Location

Elevator machine room at basement.

Description

Holed hydraulic passenger elevator with a buried double bottom cylinder (Not protected from corrosion/PVC encapsulated); RAM PLC/Relay control system; submersed pump unit; Maxton UC-4M valve; 2000 lbs capacity; 125 fpm rated speed.

Information

Service Life:	28
Installed Year:	1994
Chronological Age:	28
Effective Age:	28
Next Renewal Year:	2022

Car Interiors

Elev 02 - Elevator Cabs & Hoistway

Location

Elevator cab interior, fixture, and hoistway.

Description

Single speed side opening doors; plastic non-raised car and hall pushbuttons; stainless steel car operating panel; Formula SafeScreen infrared door protection; GAL MODL door operator; plastic laminate door, door header, and front return; plastic laminate paneled walls with painted steel reveals; egg crate ceiling; tile flooring; flat bar stainless steel handrails on all non-access walls; no firefighter's emergency operation; no emergency power; no voice communication device; no seismic provision.

Information

Service Life:	28
Installed Year:	1994
Chronological Age:	28
Effective Age:	28
Next Renewal Year:	2022

Fire Safety

Controls

Fire 01 - Fire Alarm Panel - Addressable

Location

Parking garage electrical room.

Description

EST 6632 microprocessor central processing unit for all fire detection devices and fire suppression devices connected to the fire alarm system.

Information

Service Life:	20
Installed Year:	1994
Chronological Age:	28
Effective Age:	20
Next Renewal Year:	2022

Detection

Fire 02 - Fire Detection & Alarm

Location

Various strategic locations throughout the building.

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.

Information

Service Life:	20
Installed Year:	1994
Chronological Age:	28
Effective Age:	20
Next Renewal Year:	2022

Suppression

Fire 03 - Dry Sprinkler Compressor

Location

Parking garage mechanical room.

Description

Compressor with 1/2 HP motor to maintain the pressure of air in the dry fire sprinkler lines.

Information

Service Life:	14
Installed Year:	2010
Chronological Age:	12
Effective Age:	12
Next Renewal Year:	2024

Fire 04 - Fire Hydrant

Location

Site entrance.

Description

Devices used to access water directly from the municipal water supply by fire department, to assist in extinguishing fires.This may be municipally owned if on property perimeter.

Information

Service Life:	40
Installed Year:	1994
Chronological Age:	28
Effective Age:	28
Next Renewal Year:	2034

Fire 05 - Portable Fire Extinguisher

Location

Strategically wall mounted throughout the building.

Description

Wall mounted, manually operated, 5lbs and 10lbs ABC type, pressurized vessels for controlled discharge of chemicals to extinguish small fires.

Information

Service Life:	24
Installed Year:	1994
Chronological Age:	28
Effective Age:	24
Next Renewal Year:	2022

Fire 06 - Sprinkler & Standpipe - Wet

Location

Throughout all common, heated interior spaces.

Description

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

Information

Service Life:	100
Installed Year:	1994
Chronological Age:	28
Effective Age:	28
Next Renewal Year:	2094

Fire 07 - Sprinkler System - Dry

Location

Throughout the parking garage and service rooms.

Description

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

Information

Service Life:	100
Installed Year:	1994
Chronological Age:	28
Effective Age:	28
Next Renewal Year:	2094

Fire 08 - Sprinkler Valve Assembly - Dry

Location

Parking garage mechanical room.

Description

Reliable automatic sprinkler dry sprinkler valves, trim and gauges, steel piping.

Information

Service Life:	40
Installed Year:	1994
Chronological Age:	28
Effective Age:	28
Next Renewal Year:	2034

Fire 09 - Dry Sprinklers - Wet System

Location

Above and adjacent to doors at exterior walkways, decks, and balconies.

Description

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

Information

Service Life:	30
Installed Year:	1994
Chronological Age:	28
Effective Age:	25
Next Renewal Year:	2027

Egress

Fire 10 - Emergency Egress Equipment

Location

Various strategic locations throughout the building and parking garage.

Description

Exit lights and emergency lighting equipment to facilitate evacuation from the interior of the building in the event of an emergency. Exit lights replaced with LED in 2011 and 2015.

Information

Service Life:	20
Installed Year:	2011
Chronological Age:	11
Effective Age:	11
Next Renewal Year:	2031

Interior Finishes

Floors

Finish 01 - Cork Flooring

Location
Amenity room. Replaced 2010.

Description
Cork flooring.

Information

Service Life:	20
Installed Year:	2010
Chronological Age:	12
Effective Age:	8
Next Renewal Year:	2034

Finish 02 - Rubber Sports Flooring

Location
Parking garage level amenity/ fitness room.

Description
High density, impact resistant rubber sports flooring.

Information

Service Life:	25
Installed Year:	2012
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2037

Finish 03 - Porcelain Floor Tile

Location
Amenity room kitchen, washroom and parking garage elevator vestibule.

Description
Porcelain floor tile on thin set mortar with grout, cove base and interface thresholds with adjoining floor finishes.

Information

Service Life:	40
Installed Year:	1994
Chronological Age:	28
Effective Age:	28
Next Renewal Year:	2034

Finish 04 - Carpet Flooring

Location
Interior spaces/ hallways throughout the parking garage level. Level 1 carpet replaced in 2017.

Description
Synthetic, low level loop, textile sheet floor covering glued over floor substrate.

Information

Service Life:	15
Installed Year:	2009
Chronological Age:	13
Effective Age:	3
Next Renewal Year:	2034

Walls

Finish 05 - Paint

Location

Interior walls.

Description

Primers and multiple pigmented coating finishes applied to interior gypsum wallboard, mill work trim details, and metal trim. Repainted amenity room and Level 1 walls in 2010. Exercise room painted in 2016.

Information

Service Life:	15
Installed Year:	2009
Chronological Age:	13
Effective Age:	3
Next Renewal Year:	2034

Window Coverings

Finish 06 - Window Covering

Location

Amenity room.

Description

Fabric drapes or composite blinds with head rails, lift cords, control cords; mounted to the interior of windows.

Information

Service Life:	20
Installed Year:	2011
Chronological Age:	11
Effective Age:	8
Next Renewal Year:	2034

Architectural Woodwork

Finish 07 - Carpentry and Millwork

Location

Amenity room.

Description

Shop fabricated custom casework, built-in counter-tops with laminate, composite or stone surface, wood veneer or composite cabinets.

Information

Service Life:	30
Installed Year:	1994
Chronological Age:	28
Effective Age:	18
Next Renewal Year:	2034

Doors

Finish 08 - Interior Swing Door - General

Location

Throughout the building and protected suite entry doors.

Description

Solid wood core or hollow metal swing door hung in framed opening including hardware. Exterior doors are considered separately as part of the building enclosure system.

Information

Service Life:	40
Installed Year:	1994
Chronological Age:	28
Effective Age:	28
Next Renewal Year:	2034

Amenities

Equipment

Amen 01 - Domestic Appliances

Location

Amenity room.

Description

Refrigerator, microwave oven, range of miscellaneous brands.

Information

Service Life:	15
Installed Year:	1994
Chronological Age:	28
Effective Age:	10
Next Renewal Year:	2027

Amen 02 - Fitness Equipments

Location

Fitness room, parking garage level.

Description

Various fitness machines and equipment.

Information

Service Life:	10
Installed Year:	2015
Chronological Age:	7
Effective Age:	5
Next Renewal Year:	2027

Furnishings

Amen 03 - Furniture

Location

Amenity room.

Description

Chairs, tables, couches etc.

Information

Service Life:	15
Installed Year:	2012
Chronological Age:	10
Effective Age:	10
Next Renewal Year:	2027

Amen 04 - Central Mailboxes

Location

Lobby.

Description

Flush mounted, front or rear loading, brushed brass finish, with extruded trim.

Information

Service Life:	30
Installed Year:	1994
Chronological Age:	28
Effective Age:	18
Next Renewal Year:	2034

Amen 05 - Public Signage

Location

Throughout the building and site.

Description

Variety of permanently displayed information placards in the common areas of the building.

Information

Service Life:	25
Installed Year:	1994
Chronological Age:	28
Effective Age:	18
Next Renewal Year:	2029

Amen 06 - Wood Storage Locker

Location

South end of the parking garage.

Description

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

Information

Service Life:	40
Installed Year:	1994
Chronological Age:	28
Effective Age:	28
Next Renewal Year:	2034

Amen 07 - Exterior Furniture & Accessories

Location

Amenity roof and throughout the site.

Description

Wood and metal furniture with fabric or leather covering, paintings, ornaments, and other miscellaneous accessories. Outdoor furnishings and in-suite furnishings are included separately.

Information

Service Life:	15
Installed Year:	1994
Chronological Age:	28
Effective Age:	10
Next Renewal Year:	2027

Suite

Amen 08 - Audio Visual Equipment

Location

Amenity room and fitness room.

Description

TV, stereo and other miscellaneous equipment.

Information

Service Life:	10
Installed Year:	1994
Chronological Age:	28
Effective Age:	5
Next Renewal Year:	2027

Sitework

Hard Landscaping

Site 01 - Wood Fencing

Location

Along east and west property lines.

Description

Wood fence with posts and rails.

Information

Service Life:	20
Installed Year:	1994
Chronological Age:	28
Effective Age:	20
Next Renewal Year:	2022

Site 02 - Gravel Walkway

Location

West end of the site, walkway leading to the greenhouse.

Description

Fine gravel installed over compacted sub-grade.

Information

Service Life:	75
Installed Year:	1994
Chronological Age:	28
Effective Age:	28
Next Renewal Year:	2069

Site 03 - Concrete Paving

Location

Various sections of pavements throughout the site.

Description

Concrete pavement, cast with control and construction joints, onto compacted gravel base. Includes paving in enclosed walkways.

Information

Service Life:	40
Installed Year:	1994
Chronological Age:	28
Effective Age:	28
Next Renewal Year:	2034

Site 04 - Interlocking Unit Paving

Location

Throughout the site.

Description

Precast concrete unit pavers with curbs, combination of chip seal joint filler and jointing sand, bedding sand, and onto compacted gravel base. Locally removal, replacement, and releveling of pavers in 2017.

Information

Service Life:	40
Installed Year:	1994
Chronological Age:	28
Effective Age:	33
Next Renewal Year:	2029

Site 05 - Stone Retaining Wall

Location

Various locations throughout the site.

Description

Stone with mortared joints.

Information

Service Life:	40
Installed Year:	1994
Chronological Age:	28
Effective Age:	28
Next Renewal Year:	2034

Site 06 - Water Feature

Location

South west corner of the site, and entrance courtyard.

Description

Ponds and channels to retain water including liner.

Information

Service Life:	15
Installed Year:	1994
Chronological Age:	28
Effective Age:	13
Next Renewal Year:	2024

Site 07 - Wood Gazebo

Location

West end of the site.

Description

Timber framed with wood cross pieces and lattice infill panel and shingle roof (includes greenhouse as duplicate asset).

Information

Service Life:	20
Installed Year:	2016
Chronological Age:	6
Effective Age:	6
Next Renewal Year:	2036

Site 08 - Metal Trellis

Location

Front courtyard.

Description

Decorative metal trellis. Repainted trellis in 2014.

Information

Service Life:	40
Installed Year:	1994
Chronological Age:	28
Effective Age:	28
Next Renewal Year:	2034

Site 09 - Wood Arbours

Location

Garden area.

Description

Wood arbours for garden climbing plants. Locally repaired and or replaced in 2016.

Information

Service Life:	20
Installed Year:	2016
Chronological Age:	6
Effective Age:	8
Next Renewal Year:	2034

Soft Landscaping

Site 10 - Irrigation System

Location

Parking garage level mechanical room.

Description

Controller with time clock, network of pipes, valves, and irrigation heads distributed around the soft landscaping.

Information

Service Life:	15
Installed Year:	1994
Chronological Age:	28
Effective Age:	13
Next Renewal Year:	2024

Site 11 - Soft Landscaping

Location

Throughout the site.

Description

Lawn, ground cover, shrubs, perennials and small trees(up to 30').

Information

Service Life:	15
Installed Year:	2013
Chronological Age:	9
Effective Age:	3
Next Renewal Year:	2034

Site Services

Site 12 - Underground Natural Gas Service

Location

From the property line to the building(s).

Description

(Concealed Asset). Natural gas pipe installed underground.

Information

Service Life:	50
Installed Year:	1994
Chronological Age:	28
Effective Age:	28
Next Renewal Year:	2044

Site 13 - Electrical Site Services

Location

From individual pad mounted transformers to building electrical rooms.

Description

(Concealed Asset). Underground secondary distribution conduits and services.

Information

Service Life:	50
Installed Year:	1994
Chronological Age:	28
Effective Age:	28
Next Renewal Year:	2044

Site 14 - Underground Sewer Services - Sewer

Location

Throughout the site.

Description

(Concealed Asset). Sanitary sewer system from the buildings to the property line, including all appurtenances.

Information

Service Life:	80
Installed Year:	1994
Chronological Age:	28
Effective Age:	18
Next Renewal Year:	2084

Site 15 - Underground Drainage Services - Storm (Concealed Asset)

Location

Throughout the site.

Description

(Concealed Asset). Storm sewer from buildings and catch basins to property line.

Information

Service Life:	80
Installed Year:	1994
Chronological Age:	28
Effective Age:	18
Next Renewal Year:	2084

Site 16 - Underground Water Services with PVC/Copper and Ductile Piping

Location

Throughout the site.

Description

(Concealed Asset). Fire/domestic water supplies, from the property line to the buildings and hydrant

Information

Service Life:	50
Installed Year:	1994
Chronological Age:	28
Effective Age:	18
Next Renewal Year:	2054

Appendix C

Asset Service Life Summary

RDH BUILDING SCIENCE

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

Making Buildings Better™

Ocean Park Gardens

Asset Service Life Summary

Asset Ref	Asset Name	Chronological Age	Estimated Remaining SL
Struct 01	Concrete Foundation & Parkade	28	47
Struct 02	Wood Structure	28	47
Encl 01	Exposed SBS Membrane Roof	23	2
Encl 02	Exposed BUR Membrane Roof	28	2
Encl 03	Protected Membrane Walkway & Roof Deck (Conventional Assembly) with Traffic-Bearing Surface	28	7
Encl 04	Protected Roof Membrane with Traffic-Bearing Surface	28	2
Encl 05	Soffit with Acrylic Finish Coat	28	12
Encl 06	Concealed Waterproof Membrane Podium	28	8
Encl 07	Guardrail Aluminum	28	7
Encl 08	Guardrail Glazed Aluminum	28	7
Encl 09	Exposed Stucco Clad Wall - Drained	23	17
Encl 10	Enclosed Stucco Clad Wall - Undrained	28	17
Encl 11	Aluminum Storefront	28	12
Encl 12	Unit Skylight	23	2
Encl 13	Vinyl Framed Window	28	12
Encl 14	Wood Swing Door	28	12
Encl 15	Steel Swing Door	28	12
Encl 16	Vinyl Framed Sliding Glass Door	28	12
Encl 17	Exposed Vinyl Balcony Membrane	15	5
Encl 18	Canopy	13	7
Encl 19	Awning	28	5
Encl 20	General & Inspections	28	47
Encl 21	Sealant	23	5
Elec 01	Electrical Distribution	28	12
Elec 02	Exterior Light Fixtures	8	2
Elec 03	Interior Light Fixtures	11	2
Elec 04	Enterphone System	13	3
Elec 05	Security Surveillance	28	3
Mech 01	Hydronic Control Valves and Electronic Actuators	6	4
Mech 02	Controls - Boiler Electronic	6	2
Mech 03	Gas Detection - Parking Garage	28	2
Mech 04	HVAC Instrumentation	28	2
Mech 05	Snowmelt System	28	7
Mech 06	Tank - DHW - Heating - Gas Fired	10	2
Mech 07	Drainage - Perimeter and Foundation	28	12
Mech 08	Valves - Cross Connection & Backflow Prevention	7	13

Mech 09	Fixtures - Taps & Sinks	28	12
Mech 10	Fixtures - Toilets	28	12
Mech 11	Pump - Domestic Water Circulation and Recirculation	28	2
Mech 12	Sanitary Drainage Collection	28	22
Mech 13	Expansion Tank - Radiant Heating - Diaphragm-Type	28	2
Mech 14	Piping - Domestic Hot Water Distribution	28	7
Mech 15	Piping - Gas Distribution	28	22
Mech 16	Storm Drainage Collection	28	12
Mech 17	Hytec Dom Water Treatment Equipment [PLACEHOLDER]	1	2
Mech 18	Valves - Plumbing Flow Control and Directional	28	2
Mech 19	Pump - Hydronic Loop - Pipemount	10	7
Mech 20	Chemical Treatment Equipment	5	3
Mech 21	Electric Baseboard	28	12
Mech 22	Electric Unit Heater	28	2
Mech 23	Gas Fireplace	28	12
Mech 24	Hydronic Loop Pumps - Vertical Inline/Basemount	4	10
Mech 25	Heat Exchanger - Shell & Tube	28	2
Mech 26	Heating Boiler	15	5
Mech 27	Heating System Expansion Tank - Diaphragm-Type	28	2
Mech 28	Hydronic Distribution Piping	28	2
Mech 29	Gas Chimney Vent	28	2
Mech 30	Packaged Rooftop Air-conditioning Unit [PLACEHOLDER]	28	2
Mech 31	Exhaust Fans Parking Garage - Propellor	28	2
Mech 32	General Exhaust Fan	28	2
Mech 33	Make Up Air Unit - Outdoor	28	2
Mech 34	Overhead Gate Motor	10	5
Elev 01	Hydraulic Elevator, Double Bottom	28	0
Elev 02	Elevator Cabs & Hoistway	28	0
Fire 01	Fire Alarm Panel - Addressable	28	0
Fire 02	Fire Detection & Alarm	28	0
Fire 03	Dry Sprinkler Compressor	12	2
Fire 04	Fire Hydrant	28	12
Fire 05	Portable Fire Extinguisher	28	0
Fire 06	Sprinkler & Standpipe - Wet	28	72
Fire 07	Sprinkler System - Dry	28	72
Fire 08	Sprinkler Valve Assembly - Dry	28	12
Fire 09	Dry Sprinklers - Wet System	28	5
Fire 10	Emergency Egress Equipment	11	9
Finish 01	Cork Flooring	12	12
Finish 02	Rubber Sports Flooring	10	15

Finish 03	Porcelain Floor Tile	28	12
Finish 04	Carpet Flooring	13	12
Finish 05	Paint	13	12
Finish 06	Window Covering	11	12
Finish 07	Carpentry and Millwork	28	12
Finish 08	Interior Swing Door - General	28	12
Amen 01	Domestic Appliances	28	5
Amen 02	Fitness Equipments	7	5
Amen 03	Furniture	10	5
Amen 04	Central Mailboxes	28	12
Amen 05	Public Signage	28	7
Amen 06	Wood Storage Locker	28	12
Amen 07	Exterior Furniture & Accessories	28	5
Amen 08	Audio Visual Equipment	28	5
Site 01	Wood Fencing	28	0
Site 02	Gravel Walkway	28	47
Site 03	Concrete Paving	28	12
Site 04	Interlocking Unit Paving	28	7
Site 05	Stone Retaining Wall	28	12
Site 06	Water Feature	28	2
Site 07	Wood Gazebo	6	14
Site 08	Metal Trellis	28	12
Site 09	Wood Arbours	6	12
Site 10	Irrigation System	28	2
Site 11	Soft Landscaping	9	12
Site 12	Underground Natural Gas Service	28	22
Site 13	Electrical Site Services	28	22
Site 14	Underground Sewer Services - Sewer	28	62
Site 15	Underground Drainage Services - Storm (Concealed Asset)	28	62
Site 16	Underground Water Services with PVC/Copper and Ductile Piping	28	32

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

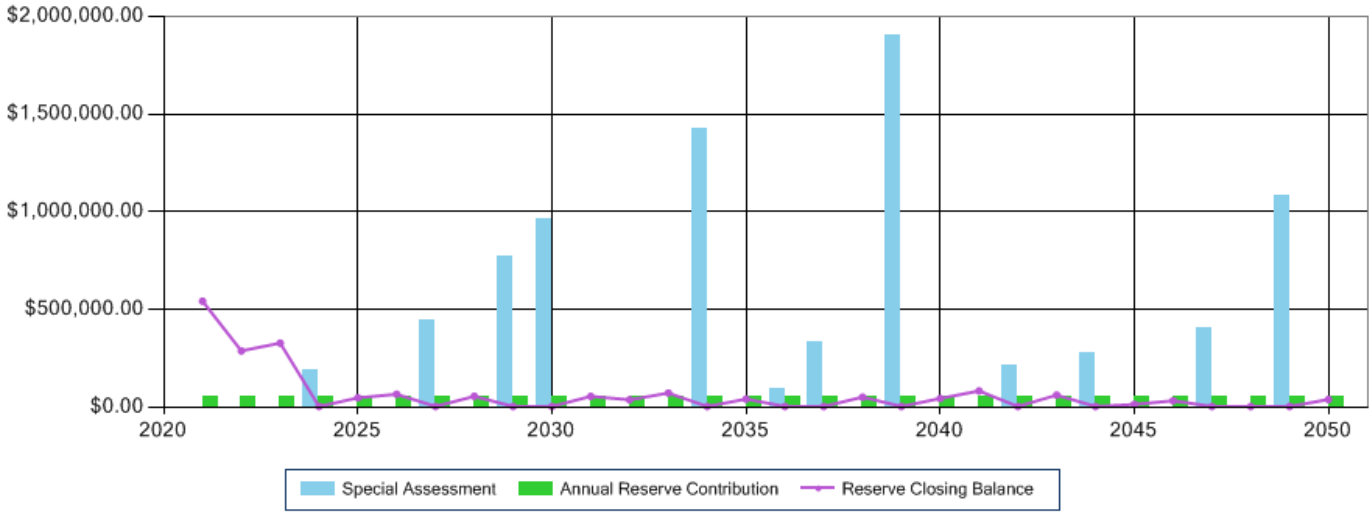
RDH
Making Buildings Better

Building - Funding Model
Ocean Park Gardens

Name	2021 - Fixed Annual Funding of $59,000 (Current)
Type	Basic
Regarding	Ocean Park Gardens
Start Year	2021
Interest/Investment Rate	2.0%
Estimated Contingency Allowance	$1,000
Tax Rate	0.0%
Planning Horizon	30
Number Of Units	33

Init Catchup Cost	$0
Operating Budget	$243,220
Starting Reserve Balance	$476,882
Reserve Contribution Threshold	$500,000
Contribution Below Threshold	$59,000
Contribution Above Threshold	$59,000
Reserve Contribution Increase	0.00 %
Monthly Avg. Unit Contribution	$149

Year	Opening Balance	Reserve Contribution	Special Assessment	Reserve Income	Renewal Costs	Contingency Costs	Tax Liability	Closing Balance	Percent Funded
2021	$476,882	$59,000	$0	$9,538	$720	$1,000	$0	$543,700	15.85 %
2022	$543,700	$59,000	$0	$10,874	$323,180	$1,000	$0	$289,394	8.37 %
2023	$289,394	$59,000	$0	$5,788	$24,000	$1,000	$0	$329,182	8.76 %
2024	$329,182	$59,000	$193,155	$6,584	$581,920	$1,000	$0	$5,000	0.14 %
2025	$5,000	$59,000	$0	$100	$14,100	$1,000	$0	$49,000	1.28 %
2026	$49,000	$59,000	$0	$980	$40,550	$1,000	$0	$67,430	1.63 %
2027	$67,430	$59,000	$444,651	$1,349	$566,430	$1,000	$0	$5,000	0.12 %
2028	$5,000	$59,000	$0	$100	$6,190	$1,000	$0	$56,910	1.33 %
2029	$56,910	$59,000	$768,642	$1,138	$879,690	$1,000	$0	$5,000	0.13 %
2030	$5,000	$59,000	$964,500	$100	$1,022,600	$1,000	$0	$5,000	0.16 %
2031	$5,000	$59,000	$0	$100	$6,360	$1,000	$0	$56,740	1.72 %
2032	$56,740	$59,000	$0	$1,135	$76,860	$1,000	$0	$39,015	1.11 %
2033	$39,015	$59,000	$0	$780	$24,060	$1,000	$0	$73,735	1.94 %
2034	$73,735	$59,000	$1,423,710	$1,475	$1,551,920	$1,000	$0	$5,000	0.19 %
2035	$5,000	$59,000	$0	$100	$20,200	$1,000	$0	$42,900	1.55 %
2036	$42,900	$59,000	$97,822	$858	$194,580	$1,000	$0	$5,000	0.17 %
2037	$5,000	$59,000	$332,110	$100	$390,210	$1,000	$0	$5,000	0.18 %
2038	$5,000	$59,000	$0	$100	$10,350	$1,000	$0	$52,750	1.81 %
2039	$52,750	$59,000	$1,907,825	$1,055	$2,014,630	$1,000	$0	$5,000	0.45 %
2040	$5,000	$59,000	$0	$100	$17,260	$1,000	$0	$45,840	3.65 %
2041	$45,840	$59,000	$0	$917	$20,200	$1,000	$0	$84,557	6.01 %
2042	$84,557	$59,000	$213,992	$1,691	$353,240	$1,000	$0	$5,000	0.41 %
2043	$5,000	$59,000	$0	$100	$0	$1,000	$0	$63,100	4.58 %
2044	$63,100	$59,000	$277,918	$1,262	$395,280	$1,000	$0	$5,000	0.44 %
2045	$5,000	$59,000	$0	$100	$47,800	$1,000	$0	$15,300	1.24 %
2046	$15,300	$59,000	$0	$306	$39,310	$1,000	$0	$34,296	2.57 %
2047	$34,296	$59,000	$409,578	$686	$497,560	$1,000	$0	$5,000	0.48 %
2048	$5,000	$59,000	$8,830	$100	$66,930	$1,000	$0	$5,000	0.47 %
2049	$5,000	$59,000	$1,086,770	$100	$1,144,870	$1,000	$0	$5,000	31.25 %
2050	$5,000	$59,000	$0	$100	$22,340	$1,000	$0	$40,760	100.00 %
		$1,770,000	$8,129,503		$10,353,340				


$2,000,000.00
$1,500,000.00
$1,000,000.00
$500,000.00
$0.00
2020
2025
2030
2035
2040
2045
2050
Special Assessment
Annual Reserve Contribution
Reserve Closing Balance

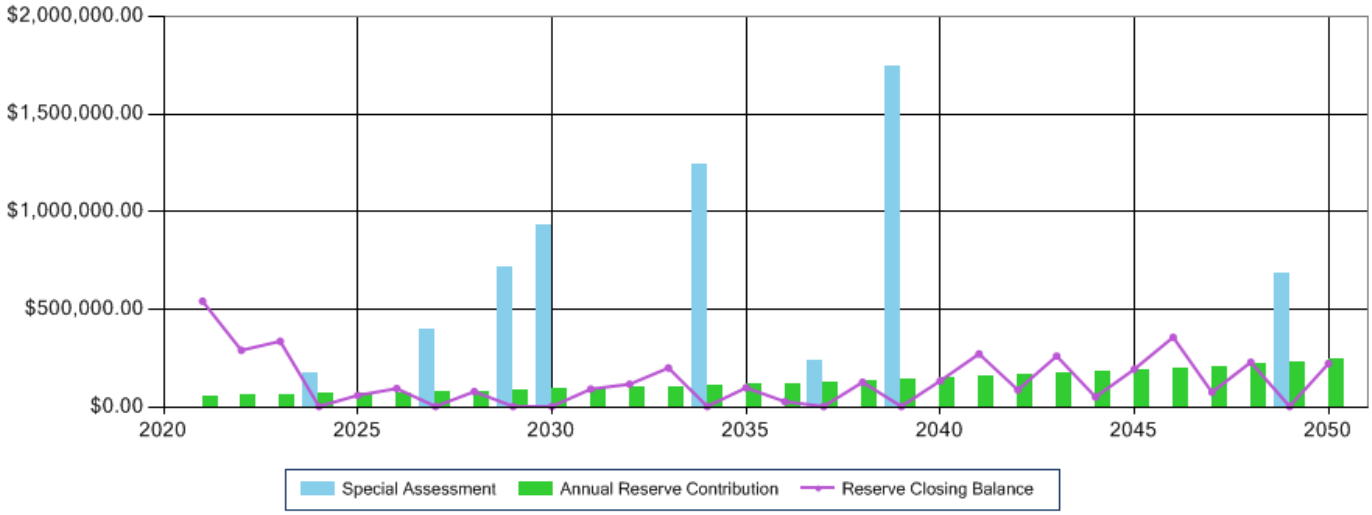
RDH
Making Buildings Better

Building - Funding Model
Ocean Park Gardens

Name	2021 - Annual Funding of $59,000 w/ 5% annual increase (Alternative #1)
Type	Basic
Regarding	Ocean Park Gardens
Start Year	2021
Interest/Investment Rate	2.0%
Estimated Contingency Allowance	$1,000
Tax Rate	0.0%
Planning Horizon	30
Number Of Units	33

Init Catchup Cost	
Operating Budget	$243,220
Starting Reserve Balance	$476,882
Reserve Contribution Threshold	$500,000
Contribution Below Threshold	$59,000
Contribution Above Threshold	$59,000
Reserve Contribution Increase	5.00 %
Monthly Avg. Unit Contribution	$149

Year	Opening Balance	Reserve Contribution	Special Assessment	Reserve Income	Renewal Costs	Contingency Costs	Tax Liability	Closing Balance	Percent Funded
2021	$476,882	$59,000	$0	$9,538	$720	$1,000	$0	$543,700	15.85 %
2022	$543,700	$61,950	$0	$10,874	$323,180	$1,000	$0	$292,344	8.45 %
2023	$292,344	$65,047	$0	$5,847	$24,000	$1,000	$0	$338,238	9.00 %
2024	$338,238	$68,300	$174,617	$6,765	$581,920	$1,000	$0	$5,000	0.14 %
2025	$5,000	$71,715	$0	$100	$14,100	$1,000	$0	$61,715	1.61 %
2026	$61,715	$75,301	$0	$1,234	$40,550	$1,000	$0	$96,700	2.34 %
2027	$96,700	$79,066	$394,731	$1,934	$566,430	$1,000	$0	$5,000	0.12 %
2028	$5,000	$83,019	$0	$100	$6,190	$1,000	$0	$80,929	1.89 %
2029	$80,929	$87,170	$715,973	$1,619	$879,690	$1,000	$0	$5,000	0.13 %
2030	$5,000	$91,528	$931,972	$100	$1,022,600	$1,000	$0	$5,000	0.16 %
2031	$5,000	$96,105	$0	$100	$6,360	$1,000	$0	$93,845	2.85 %
2032	$93,845	$100,910	$0	$1,877	$76,860	$1,000	$0	$118,772	3.38 %
2033	$118,772	$105,955	$0	$2,375	$24,060	$1,000	$0	$202,043	5.32 %
2034	$202,043	$111,253	$1,240,583	$4,041	$1,551,920	$1,000	$0	$5,000	0.19 %
2035	$5,000	$116,816	$0	$100	$20,200	$1,000	$0	$100,716	3.64 %
2036	$100,716	$122,657	$0	$2,014	$194,580	$1,000	$0	$29,807	1.05 %
2037	$29,807	$128,790	$237,017	$596	$390,210	$1,000	$0	$5,000	0.18 %
2038	$5,000	$135,229	$0	$100	$10,350	$1,000	$0	$128,979	4.43 %
2039	$128,979	$141,990	$1,747,081	$2,580	$2,014,630	$1,000	$0	$5,000	0.45 %
2040	$5,000	$149,090	$0	$100	$17,260	$1,000	$0	$135,930	10.84 %
2041	$135,930	$156,544	$0	$2,719	$20,200	$1,000	$0	$273,993	19.50 %
2042	$273,993	$164,372	$0	$5,480	$353,240	$1,000	$0	$89,604	7.35 %
2043	$89,604	$172,590	$0	$1,792	$0	$1,000	$0	$262,987	19.12 %
2044	$262,987	$181,220	$0	$5,260	$395,280	$1,000	$0	$53,186	4.68 %
2045	$53,186	$190,281	$0	$1,064	$47,800	$1,000	$0	$195,731	15.92 %
2046	$195,731	$199,795	$0	$3,915	$39,310	$1,000	$0	$359,130	26.94 %
2047	$359,130	$209,784	$0	$7,183	$497,560	$1,000	$0	$77,537	7.57 %
2048	$77,537	$220,274	$0	$1,551	$66,930	$1,000	$0	$231,431	21.77 %
2049	$231,431	$231,287	$683,523	$4,629	$1,144,870	$1,000	$0	$5,000	31.25 %
2050	$5,000	$242,852	$0	$100	$22,340	$1,000	$0	$224,612	100.00 %
		$3,919,889	$6,125,497		$10,353,340				


$2,000,000.00
$1,500,000.00
$1,000,000.00
$500,000.00
$0.00
2020
2025
2030
2035
2040
2045
2050
Special Assessment
Annual Reserve Contribution
Reserve Closing Balance

RDH
Making Buildings Better

Building - Funding Model
Ocean Park Gardens

Name	2021 - Annual Funding of $90,000 w/ 3% annual increase (Alternative #2)
Type	Basic
Regarding	Ocean Park Gardens
Start Year	2021
Interest/Investment Rate	2.0%
Estimated Contingency Allowance	$1,000
Tax Rate	0.0%
Planning Horizon	30
Number Of Units	33

Init Catchup Cost	$0
Operating Budget	$243,220
Starting Reserve Balance	$476,882
Reserve Contribution Threshold	$500,000
Contribution Below Threshold	$90,000
Contribution Above Threshold	$90,000
Reserve Contribution Increase	3.00 %
Monthly Avg. Unit Contribution	$227

Year	Opening Balance	Reserve Contribution	Special Assessment	Reserve Income	Renewal Costs	Contingency Costs	Tax Liability	Closing Balance	Percent Funded
2021	$476,882	$90,000	$0	$9,538	$720	$1,000	$0	$574,700	16.75 %
2022	$574,700	$92,700	$0	$11,494	$323,180	$1,000	$0	$354,714	10.26 %
2023	$354,714	$95,481	$0	$7,094	$24,000	$1,000	$0	$432,289	11.50 %
2024	$432,289	$98,345	$48,640	$8,646	$581,920	$1,000	$0	$5,000	0.14 %
2025	$5,000	$101,296	$0	$100	$14,100	$1,000	$0	$91,296	2.39 %
2026	$91,296	$104,335	$0	$1,826	$40,550	$1,000	$0	$155,906	3.78 %
2027	$155,906	$107,465	$305,941	$3,118	$566,430	$1,000	$0	$5,000	0.12 %
2028	$5,000	$110,689	$0	$100	$6,190	$1,000	$0	$108,599	2.54 %
2029	$108,599	$114,009	$660,910	$2,172	$879,690	$1,000	$0	$5,000	0.13 %
2030	$5,000	$117,430	$906,070	$100	$1,022,600	$1,000	$0	$5,000	0.16 %
2031	$5,000	$120,952	$0	$100	$6,360	$1,000	$0	$118,692	3.60 %
2032	$118,692	$124,581	$0	$2,374	$76,860	$1,000	$0	$167,787	4.77 %
2033	$167,787	$128,318	$0	$3,356	$24,060	$1,000	$0	$274,401	7.23 %
2034	$274,401	$132,168	$1,145,863	$5,488	$1,551,920	$1,000	$0	$5,000	0.19 %
2035	$5,000	$136,133	$0	$100	$20,200	$1,000	$0	$120,033	4.33 %
2036	$120,033	$140,217	$0	$2,401	$194,580	$1,000	$0	$67,071	2.37 %
2037	$67,071	$144,424	$183,374	$1,341	$390,210	$1,000	$0	$5,000	0.18 %
2038	$5,000	$148,756	$0	$100	$10,350	$1,000	$0	$142,506	4.89 %
2039	$142,506	$153,219	$1,722,055	$2,850	$2,014,630	$1,000	$0	$5,000	0.45 %
2040	$5,000	$157,815	$0	$100	$17,260	$1,000	$0	$144,655	11.54 %
2041	$144,655	$162,550	$0	$2,893	$20,200	$1,000	$0	$288,899	20.56 %
2042	$288,899	$167,426	$0	$5,778	$353,240	$1,000	$0	$107,863	8.85 %
2043	$107,863	$172,449	$0	$2,157	$0	$1,000	$0	$281,469	20.47 %
2044	$281,469	$177,623	$0	$5,629	$395,280	$1,000	$0	$68,441	6.02 %
2045	$68,441	$182,951	$0	$1,369	$47,800	$1,000	$0	$203,962	16.59 %
2046	$203,962	$188,440	$0	$4,079	$39,310	$1,000	$0	$356,171	26.71 %
2047	$356,171	$194,093	$0	$7,123	$497,560	$1,000	$0	$58,827	5.75 %
2048	$58,827	$199,916	$0	$1,177	$66,930	$1,000	$0	$191,990	18.06 %
2049	$191,990	$205,913	$749,127	$3,840	$1,144,870	$1,000	$0	$5,000	31.25 %
2050	$5,000	$212,091	$0	$100	$22,340	$1,000	$0	$193,851	100.00 %
		$4,281,785	$5,721,980		$10,353,340				


$2,000,000.00
$1,500,000.00
$1,000,000.00
$500,000.00
$0.00
2020
2025
2030
2035
2040
2045
2050
Special Assessment
Annual Reserve Contribution
Reserve Closing Balance

RDH
Making Buildings Better

Building - Funding Model
Ocean Park Gardens

Name	2021 - Fixed Annual Funding of $271,000 (Progressive)
Type	Basic
Regarding	Ocean Park Gardens
Start Year	2021
Interest/Investment Rate	2.0%
Estimated Contingency Allowance	$1,000
Tax Rate	0.0%
Planning Horizon	30
Number Of Units	33

Init Catchup Cost	$0
Operating Budget	$243,220
Starting Reserve Balance	$476,882
Reserve Contribution Threshold	$500,000
Contribution Below Threshold	$271,000
Contribution Above Threshold	$271,000
Reserve Contribution Increase	0.00 %
Monthly Avg. Unit Contribution	$684

Year	Opening Balance	Reserve Contribution	Special Assessment	Reserve Income	Renewal Costs	Contingency Costs	Tax Liability	Closing Balance	Percent Funded
2021	$476,882	$271,000	$0	$9,538	$720	$1,000	$0	$755,700	22.03 %
2022	$755,700	$271,000	$0	$15,114	$323,180	$1,000	$0	$717,634	20.75 %
2023	$717,634	$271,000	$0	$14,353	$24,000	$1,000	$0	$977,986	26.03 %
2024	$977,986	$271,000	$0	$19,560	$581,920	$1,000	$0	$685,626	19.62 %
2025	$685,626	$271,000	$0	$13,713	$14,100	$1,000	$0	$955,239	25.04 %
2026	$955,239	$271,000	$0	$19,105	$40,550	$1,000	$0	$1,203,793	29.22 %
2027	$1,203,793	$271,000	$0	$24,076	$566,430	$1,000	$0	$931,439	23.76 %
2028	$931,439	$271,000	$0	$18,629	$6,190	$1,000	$0	$1,213,878	28.44 %
2029	$1,213,878	$271,000	$0	$24,278	$879,690	$1,000	$0	$628,465	16.77 %
2030	$628,465	$271,000	$116,565	$12,569	$1,022,600	$1,000	$0	$5,000	0.16 %
2031	$5,000	$271,000	$0	$100	$6,360	$1,000	$0	$268,740	8.17 %
2032	$268,740	$271,000	$0	$5,375	$76,860	$1,000	$0	$467,255	13.30 %
2033	$467,255	$271,000	$0	$9,345	$24,060	$1,000	$0	$722,540	19.04 %
2034	$722,540	$271,000	$549,929	$14,451	$1,551,920	$1,000	$0	$5,000	0.19 %
2035	$5,000	$271,000	$0	$100	$20,200	$1,000	$0	$254,900	9.21 %
2036	$254,900	$271,000	$0	$5,098	$194,580	$1,000	$0	$335,418	11.87 %
2037	$335,418	$271,000	$0	$6,708	$390,210	$1,000	$0	$221,916	8.27 %
2038	$221,916	$271,000	$0	$4,438	$10,350	$1,000	$0	$486,005	16.69 %
2039	$486,005	$271,000	$1,253,905	$9,720	$2,014,630	$1,000	$0	$5,000	0.45 %
2040	$5,000	$271,000	$0	$100	$17,260	$1,000	$0	$257,840	20.57 %
2041	$257,840	$271,000	$0	$5,157	$20,200	$1,000	$0	$512,797	36.49 %
2042	$512,797	$271,000	$0	$10,256	$353,240	$1,000	$0	$439,813	36.10 %
2043	$439,813	$271,000	$0	$8,796	$0	$1,000	$0	$718,609	52.26 %
2044	$718,609	$271,000	$0	$14,372	$395,280	$1,000	$0	$607,701	53.49 %
2045	$607,701	$271,000	$0	$12,154	$47,800	$1,000	$0	$842,055	68.51 %
2046	$842,055	$271,000	$0	$16,841	$39,310	$1,000	$0	$1,089,586	81.73 %
2047	$1,089,586	$271,000	$0	$21,792	$497,560	$1,000	$0	$883,818	86.39 %
2048	$883,818	$271,000	$0	$17,676	$66,930	$1,000	$0	$1,104,565	103.91 %
2049	$1,104,565	$271,000	$0	$22,091	$1,144,870	$1,000	$0	$251,786	1,573.66 %
2050	$251,786	$271,000	$0	$5,036	$22,340	$1,000	$0	$504,481	100.00 %
		$8,130,000	$1,920,400		$10,353,340				


$1,400,000.00
$1,200,000.00
$1,000,000.00
$800,000.00
$600,000.00
$400,000.00
$200,000.00
$0.00
2020
2025
2030
2035
2040
2045
2050
Special Assessment
Annual Reserve Contribution
Reserve Closing Balance

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

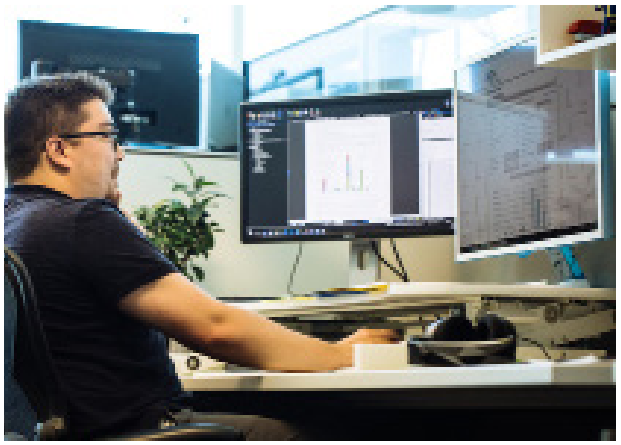
A Depreciation Report is a long-range financial planning tool. It's used to identify funding requirements for costs associated with future repair, renewal, and replacement projects. The report establishes where you need to focus resources and is a good place to start developing your roadMaP.

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.

Building Asset Management Software (BAMS)

All of this information is accessible through our propriety online BAM Software—we do the groundwork and provide the critical information so that you can leverage the Software to track and report on maintenance, repair, and renewal activities. Alternatively, we can follow up and manage the activities on your behalf.

The Software tool also empowers you to create your own funding scenarios so you can evaluate different funding levels and find a solution that works specifically for your building. Where a Depreciation Report identifies what items you need to spend money on and when you need to spend it, this tool helps you optimize the way you spend your money. Ultimately, we can help you track what work is completed versus what is outstanding so that you are better able to produce reports and make informed decisions.



RDH

RDH Qualifications

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

David Taguchi | Eng.L., RRO

Principal, Building Science Specialist

- Eng.L., Engineers & Geoscientists of British Columbia
- RRO, Roofing Consultants Institute Inc.
- Member of Applied Science Technologists and Techicians of British Columbia
- Has 19 years of Building Science Experience

Heather Reid | P.Eng.

Principal, Building Science Engineer

- B.A.Sc., Civil Engineering
- Diploma, Advanced Civil Engineering Technology
- Diploma, Civil Engineering Technology, Structural Option
- Has worked in maintenance and planning consulting since 2017
- Registered Professional Engineer, Engineers and Geoscientists of BC

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, Project Manager

- Dipl.T., Architectural & Building Engineering Technology (Building Science Option)
- 5+ years' experience in maintenance and planning consulting and has been involved in the preperation 70+ depreciation reports
- Has worked in maintenance and planning

RDH Qualifications

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
- → Hold 10 years of Building Science experience
- → Registered Professional Engineer, Engineers and Geoscientists of BC

Len Sakurgi | 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

Ryan McNamara| M.A.Sc., P.Eng.

Building Science Engineer

- → M.A.Sc., Mechanical Engineering
- → Has specialized in building energy performance and sustainable design since 2016
- → Conducts building energy simulations and utility data analysis
- → Registered Professional Engineer, Engineers and Geoscientists of BC

Talen Springer | EIT

Building Science Engineer (EIT)

- → B.A.Sc., Civil Engineering
- → Has worked in maintenance and planning consulting since 2016
- → Engineer in Training, Engineers and Geoscientists of BC

Kasra Vahidi | B.A.Sc., EIT

Building Science Engineer (EIT)

- → B.A.Sc., Civil Engineering, Minor in Commerce
- → Has worked in maintenance and planning consulting since 2018
- → Engineer in Training, Engineers and Geoscientists of BC

RDH

RDH Qualifications

Josh Chambers | RSE, RRO

Project Manager

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

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

Jackie Wong | Dipl.T.

Building Science Technologist

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

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

Cameron Skoglund | GradTech.

Building Science Technologist

- → GradTech., ASTTBC
- → Has worked in maintenance and planning consulting since 2017

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

RDH

RDH Qualifications

Daniela Beilmann

Building Science Technologist

- → Diploma in Architectural and Building Technology
- → Has worked in maintenance and planning consulting since 2018

Yan Marineau-Brachmann | B.A.Sc.

Building Science Engineer (EIT)

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

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

Building Science Technologist

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

Administrators and Client Support

Vanessa Jumawan

Maintenance and Planning Coordinator

- → Has worked in administration within engineering/architecture since 2008
- → Preparation of Depreciation Report estimates and proposals

Anna Qiu

Maintenance and Planning Project Assistant

- → Certificate, Business Administration
- → Has worked in administration within engineering/architecture firms since 2004

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

Appendix G

Insurance Certificate

Ref. No. 320008778690

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	
	Effective	02-May-2021	**Expiry** 01-Jul-2022
	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 #	PSDEF2100249	
	Effective	02-May-2021	**Expiry** 01-Jul-2022
		Subject to aggregate where applicable	

Terms and / or Additional Coverage

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

Professional Liability
Limit: $1,000,000 Per Claim Limit / $2,000,000 Aggregate Limit

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. 320008778690

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 : 04-May-2021

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

Appendix H

Strategic Plan

RDH BUILDING SCIENCE

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

Making Buildings Better™

Ocean Park Gardens
Strategic Plan

Accuracy of Budget Cost Estimates:

1. Budget costs in this report are provided in both current year dollars (without inflation or escalation factors) and future year dollars (with inflation or escalation factors).
2. All budget costs are preliminary estimates intended for planning purposes and not for accounting use.
3. Actual costs will vary depending on several factors. The budget estimates assume economies of scale will be achieved by bundling work items together into larger projects. Small projects done individually may exceed the budget estimates.
4. Each project should include appropriate cost line-items when developing an overall project budget.
5. Labour and material costs are subject to the vagaries of the marketplace. At the time of tender, costs may vary depending on the time of the year and/or contractor availability.
6. The budget estimates must be updated over time and confirmed by competitive tender before any contracts are awarded.
7. Detailed repair specifications are required to be prepared in order to confirm scopes of work and costs.
8. Soft costs, such as consulting services and contingency allowances are not included in the budget estimates. Depending on the sizes, scope and timing of individual projects, the magnitude of the soft costs will vary.
9. Cost savings may be realized depending on the use of in-house labor or 3rd party-contractors.
10. The estimates do not include allowances for site specific access requirements and environmental concerns, which should be addressed on a project-by-project basis.
11. Consideration may sometimes need to be given to costs arising from the impact of projects on occupancy use and facility operations.

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
STRUCTURAL																																				
FOUNDATIONS																																				
Struct 01	R01	Concrete foundation is not deemed to be a renewal component.	75 Yrs	$0	2069	$0																														
WALLS & COLUMNS																																				
Struct 02	R01	Provided maintenance and repairs are completed to adjacent assets, structural assets are not likely to require renewal.	75 Yrs	$0	2069	$0																														

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
ENCLOSURE																																				
ROOFS & DECKS																																				
Encl 01	R01	Replace SBS membrane roof assembly and associated components such as drains and flashing.	25 Yrs	$258,000	2024	$270,000				•																									•	
Encl 02	R01	Replace BUR membrane roof assembly and associated components such as drains and flashing at area above the main entrance.	25 Yrs	$11,520	2045	$19,000																									•					
Encl 02	R02	Replace BUR membrane roof assembly and associated components such as drains and flashing at area on the west side of the building.	25 Yrs	$55,800	2024	$59,000				•																									•	
Encl 03	J01	Review traffic surface for signs of distress. Replace damaged pavers as required.	2 Yrs	$0	2022	$0		•		•		•		•		•		•		•		•		•		•		•		•		•		•		•
Encl 03	J02	Locally remove pavers to visually review the surface of the underlying membrane, paying close attention to all penetration locations for signs of distress, such as ridges, cracks, and delamination. Review to include sealants and flashings.	2 Yrs	$0	2022	$0		•		•		•		•		•		•		•		•		•		•		•		•		•		•		•
Encl 03	R01	Replace roof deck membrane assembly on levels 4 and 5. Some of the concrete pavers or pavement may be salvagable.	30 Yrs	$105,600	2036	$140,000																•														

RDH BUILDING SCIENCE

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

Making Buildings Better™

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
ENCLOSURE																																				
Encl 03	R02	Replace original (1994) deck walkway membrane assembly and associated components.	30 Yrs	$166,320	2029	$190,000									•																					
Encl 04	J01	Review traffic surface for signs of distress.	2 Yrs	$0	2022	$0		•		•		•		•		•		•		•		•		•		•		•		•		•		•		•
Encl 04	J02	Locally remove pavers to visually review the surface of the underlying membrane, paying close attention to all penetration locations for signs of distress, such as ridges, cracks, and delamination. Review to include sealants and flashings.	2 Yrs	$0	2022	$0		•		•		•		•		•		•		•		•		•		•		•		•		•		•		•
Encl 04	R01	Replace roof membrane assembly and associated components at Suites 403 and 404. Some of the (pavers, deck boards, etc.) may be salvagable.	30 Yrs	$36,000	2037	$49,000																	•													
Encl 04	R02	Replace remaining original BUR roof membrane assembly and associated components at the amenity room deck. Some of the (pavers, deck boards, etc.) may be salvagable.	30 Yrs	$37,800	2024	$40,000				•																										
Encl 05	J01	Clean soffit surfaces to remove atmospheric dirt, vegetative growth and other stains as required.	3 Yrs	$0	2022	$0		•			•			•			•						•			•			•			•			•	
Encl 05	J02	Re-paint stucco soffit surfaces and fill existing cracks.	20 Yrs	$57,600	2027	$61,000							•																							
Encl 05	R01	Replace stucco clad soffit and associated components.	40 Yrs	$192,000	2034	$250,000														•																
Encl 06	R01	Allowance to complete localized repairs to the underside of the parking garage slab, as required. Further investigation may be required.	3 Yrs	$15,000	2023	$16,000			•			•			•				•		•			•			•			•			•		
Encl 06	R02	Replace podium membrane assembly and associated components. Some of the pavers and overburden may be salvageable.	40 Yrs	$861,000	2030	$1,000,000										•																				
FALL PROTECTION																																				
Encl 07	J01	Review all metal finishes. Touch up paint as required.	2 Yrs	$0	2022	$0		•		•		•		•			•		•		•		•		•		•		•		•		•		•	
Encl 07	R01	Replace exterior guardrails.	30 Yrs	$19,200	2029	$22,000									•																					
Encl 08	J01	Review all metal finishes. Touch up paint as required.	2 Yrs	$0	2022	$0		•		•		•		•			•		•		•		•		•		•		•		•		•		•	
Encl 08	R01	Replace exterior glazed guardrails.	30 Yrs	$58,500	2029	$69,000									•																					
WALLS																																				
Encl 09	J03	Re-paint stucco surface as required.	10 Yrs	$148,800	2027	$190,000							•										•													•	
Encl 09	R02	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.	40 Yrs	$1,116,000	2039	$1,600,000																		•												
Encl 10	J02	Locally re-paint or touch-up stucco surface as required.	10 Yrs	$7,300	2027	$7,300							•										•													•	
Encl 10	R02	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.	40 Yrs	$219,000	2039	$310,000																		•												
GLAZING SYSTEMS																																				
Encl 11	J01	Replace or repair gasket and weatherstripping, as required.	2 Yrs	$0	2022	$0		•		•		•		•		•		•												•		•		•		•	
Encl 11	R02	Replace storefront window system.	40 Yrs	$5,000	2034	$6,500														•																

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
ENCLOSURE																																				
Encl 12	R01	Replace unit skylights and associated components, as required.	30 Yrs	$72,800	2024	$77,000				•																										
Encl 13	J01	Replace or repair gasket and weatherstripping, as required.	2 Yrs	$0	2022	$0		•		•		•		•		•		•				•		•		•		•		•		•		•		•
Encl 13	J02	Replace insulating glazing units (IGUs) with condensation or misting between panes of glass.	2 Yrs	$2,610	2022	$2,600		•		•		•		•		•		•				•		•		•		•		•		•		•		•
Encl 13	R01	Replace vinyl windows and associated components.	30 Yrs	$377,000	2034	$490,000														•																
DOORS																																				
Encl 14	J01	Replace or repair gasket and weatherstripping, as required.	2 Yrs	$0	2022	$0		•		•		•		•		•		•				•		•		•		•		•		•		•		•
Encl 14	R01	Repaint wood door and frame finish.	12 Yrs	$3,000	2027	$3,000							•																			•				
Encl 14	R02	Replace wood swing doors.	40 Yrs	$24,000	2034	$31,000														•																
Encl 15	J01	Replace or repair gasket and weatherstripping, as required.	2 Yrs	$0	2022	$0		•				•		•		•		•				•		•		•		•		•		•		•		•
Encl 15	R01	Repaint steel door finish, as required.	10 Yrs	$2,500	2027	$2,500							•																	•						
Encl 15	R02	Replace steel swing doors and frames.	25 Yrs	$32,000	2034	$41,000														•																
Encl 16	J04	Replace insulating glazing units (IGUs) with condensation or misting between panes of glass.	2 Yrs	$2,520	2022	$2,600		•		•		•		•		•		•				•		•		•		•		•		•		•		•
Encl 16	R01	Replace sliding glass doors and associated components.	30 Yrs	$230,000	2034	$300,000														•																
BALCONIES																																				
Encl 17	R01	Replace vinyl balcony membrane and associated components.	15 Yrs	$108,800	2027	$120,000							•															•								
CANOPIES																																				
Encl 18	J01	Review exposed metal finishes. Touch up paint as required.	2 Yrs	$0	2023	$0			•		•		•		•		•		•		•		•		•		•		•		•		•		•	
Encl 18	R01	Replace fabric cover as required.	10 Yrs	$0	2023	$0			•										•										•							
Encl 18	R02	Replace fabric awnings.	20 Yrs	$40,500	2029	$47,000								•																				•		
Encl 19	J01	Review exposed metal finishes. Touch up paint as required.	2 Yrs	$0	2023	$0			•		•				•		•		•		•		•		•			•		•		•		•	
Encl 19	R01	Replace fabric cover if required.	10 Yrs	$0	2023	$0			•														•													
Encl 19	R02	Replace roll-up fabric canopies, as required.	15 Yrs	$6,400	2027	$7,200							•															•								
GENERAL & INSPECTIONS																																				
Encl 20	J06	Update depreciation report.	3 Yrs	$0	2024	$0	•			•			•			•			•			•			•			•			•			•		
Encl 20	J09	Perform full condition assessment of all building enclosure systems.	6 Yrs	$8,000	2023	$8,000			•					•							•					•						•				
Encl 20	R01	This is not a renewable asset.	75 Yrs	$0	2069	$0																														
Encl 21	J01	Review condition of sealant at all locations and undertake localized repairs or replacement as required.	2 Yrs	$0	2022	$0		•		•		•		•		•		•		•		•		•		•		•		•		•		•		•
Encl 21	R01	Replace sealants at interfaces between building enclosure assemblies, and at penetrations through assemblies in accordance with sealant renewals plan.	10 Yrs	$44,835	2027	$50,000							•										•										•			

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
ELECTRICAL																																				
DISTRIBUTION																																				
Elec 01	J01	Check for any exposed wiring and visually inspect wiring, where accessible, for signs of distress. Repair as required.	2 Yrs	$0	2022	$0		•		•		•		•		•		•		•		•		•		•		•		•		•		•		•
Elec 01	J02	Check raceways and cables for proper mechanical support, check insulation for abrasion or cracks at support points, examine raceway joints for clean and tight connections. Check busducts connections for proper tightness and evidence of overheating, corrosion, arcing or other deterioration. Clean and torque dirty and loose connections.	2 Yrs	$0	2022	$0		•		•		•		•		•		•		•		•		•		•		•		•		•		•		•		•
Elec 01	R01	Clean and maintain all electrical distribution equipment (reference subsequent maintenance tasks). Vacuum to remove accumulated dust. Check oil levels of oil filled equipment.	5 Yrs	$2,000	2022	$2,000		•					•					•					•				•						•				
Elec 01	R02	Conduct infrared thermography and ultrasonic scanning tests on all switchgear, distribution panels, cable and bus connections, and other critical equipment. Results may diagnose hidden hazards; contractor should provide certificate for insurance purposes. To be coordinated prior to planned maintenance to identify areas that require immediate attention. Tests should be conducted on energized equipment during peak demand periods if possible.	5 Yrs	$3,000	2022	$3,000		•					•					•					•				•						•				
Elec 01	R03	Cyclical replacement of components of the electrical distribution equipment, as required.	40 Yrs	$30,000	2034	$39,000														•																
LIGHT FIXTURES																																				
Elec 02	R04	Cyclical replacement of electronic ballasts.	10 Yrs	$0	2024	$0				•										•									•							
Elec 02	R05	Replace exterior light fixtures, as required, for aesthetic purposes, to match ballast replacement cycles, or technological obsolescence.	10 Yrs	$7,500	2024	$8,000				•										•									•							
Elec 03	R05	Replace interior light fixtures, as required, for aesthetic purposes, to match ballast replacement cycles, or technological obsolescence.	10 Yrs	$4,500	2024	$4,800				•										•									•							
SECURITY																																				
Elec 04	R01	Replace enterphone panels, excluding field wiring.	25 Yrs	$6,000	2025	$6,500					•																										•
Elec 05	R01	Service the multiplex unit, update software as required.	5 Yrs	$1,000	2030	$1,100										•					•					•					•						•
Elec 05	R02	Modernize components of the security surveillance system, excluding field wiring, as required by technological obsolescence.	14 Yrs	$5,000	2025	$5,400					•														•											

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
MECHANICAL																																				
CONTROLS AND END DEVICES																																				
Mech 01	R01	Cyclical replacement of electronic actuator controls, as required.	10 Yrs	$1,000	2026	$1,100						•										•											•				

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
MECHANICAL																																				
Mech 02	R01	Cyclical replacement of sensors and other field devices, as required.	3 Yrs	$0	2027	$0							•			•			•			•			•			•			•			•		
Mech 02	R02	Replace boiler control, as required.	15 Yrs	$3,000	2024	$3,200				•															•											
Mech 03	R01	Cyclical replacement of gas detection sensors.	10 Yrs	$2,250	2024	$2,300				•										•										•						
Mech 04	R01	Cyclical replacement of miscellaneous HVAC instrumentation, as required.	3 Yrs	$500	2024	$520				•			•			•			•			•			•			•			•			•		
PLUMBING & DRAINAGE																																				
Mech 05	R02	Replace components of radiant in-slab snowmelt system, as needed.	35 Yrs	$20,000	2029	$23,000									•																					
Mech 06	R01	Cyclical replacement of various components of domestic hot water storage tanks, such as burners, controls, etc.	5 Yrs	$0	2022	$0		•					•					•					•					•					•			
Mech 06	R02	Replace domestic hot water heater, as required.	12 Yrs	$8,500	2030	$10,000										•												•								
Mech 06	R03	Replace domestic hot water heater, as required.	12 Yrs	$8,500	2024	$9,000				•												•												•		
Mech 07	J01	By means of pipe camera service, visually inspect underground piping runs. Look for build up of silts and dirt fines, tree roots, and other obstructions. Look for standing water indicating saturated soil conditions or impermeable conditions.	5 Yrs	$1,820	2022	$1,900		•					•					•					•					•					•			
Mech 07	R01	Jetflush or auger drains to remove buildup and blockages.	5 Yrs	$1,820	2022	$1,900		•					•					•					•					•					•			
Mech 07	R02	Repair and/replace components of perimeter drainage system, as required.	40 Yrs	$36,400	2034	$47,000														•																
Mech 08	R01	Cyclical replacement of cross connection & back flow prevention valves, as required.	20 Yrs	$6,000	2035	$7,900															•															
Mech 09	R01	Cyclical replacement of sinks and faucets, as required.	20 Yrs	$2,000	2034	$2,600														•																
Mech 10	R01	Cyclical replacement of toilets and urinals, as required.	20 Yrs	$1,000	2034	$1,300														•																
Mech 11	J01	Inspect brushes and remove brush dust from motor.	2 Yrs	$0	2022	$0		•		•		•		•		•		•		•		•		•		•		•		•		•		•		•
Mech 11	R01	Cyclical replacement of recirculating pumps, as required.	8 Yrs	$2,970	2024	$3,000				•								•							•									•		
Mech 12	J01	Insert video cameras into main lines to conduct pipe inspection.	5 Yrs	$3,000	2022	$3,100		•					•					•					•					•					•			
Mech 12	J02	Hydroflush or auger lateral drain lines.	10 Yrs	$4,000	2022	$4,100		•										•										•								
Mech 12	R01	Repair components of sanitary drainage distribution system, as required.	50 Yrs	$30,000	2044	$47,000																								•						
Mech 13	R01	Cyclical replacement of expansion tanks, as required.	20 Yrs	$5,000	2024	$5,000				•																				•						
Mech 14	J01	Check that pipe hangars are properly fastened.	5 Yrs	$0	2022	$0		•					•					•					•					•					•			
Mech 14	J02	Check piping and supports for mechanical damage, proper clearance, adequate insulation, and labeling.	5 Yrs	$0	2022	$0		•					•					•					•					•					•			
Mech 14	J03	Check integrity of all soldered pipe connections and couplings.	5 Yrs	$0	2022	$0		•					•					•					•					•					•			
Mech 14	J04	Comprehensive third party testing and inspection of the copper domestic water distribution system.	20 Yrs	$10,000	2024	$11,000				•																										
Mech 14	R01	Replace components of domestic plumbing distribution system, including domestic valves.	28 Yrs	$330,000	2029	$390,000									•																					
Mech 15	R01	Cyclical replacement of fittings and valves, as required.	20 Yrs	$7,598	2044	$12,000																								•						

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
MECHANICAL																																				
Mech 16	J01	By means of pipe camera service, visually inspect underground piping runs. Look for build up of silts and dirt fines, tree roots, and other obstructions. Look for standing water indicating saturated soil conditions or impermeable conditions. Jet flush or auger to suit.	5 Yrs	$3,000	2022	$3,200		•					•					•					•				•					•				
Mech 16	R01	Repair and/replace components of storm water drainage collection system, as required.	40 Yrs	$40,000	2034	$52,000														•															
Mech 17	R01	Replacement of components of water treatment equipment by Hytec. Not a strata owned asset [PLACEHOLDER]	3 Yrs	$0	2024	$0																														
Mech 18	R01	Cyclical replacement of valves, as required.	20 Yrs	$6,000	2024	$6,000				•																				•						
HEATING & COOLING																																				
Mech 19	R01	Replace circulating pumps for hydronic loop - heating water.	15 Yrs	$4,000	2029	$4,700									•															•						
Mech 20	R01	Cyclical replacement of components of water treatment equipment.	8 Yrs	$2,000	2025	$2,200					•								•								•								•	
Mech 21	R01	Cyclical replacement of electric baseboard heaters, as required.	40 Yrs	$1,125	2034	$1,500														•															
Mech 22	R01	Cyclical replacement of electric unit heaters.	17 Yrs	$1,000	2024	$1,000				•																	•									
Mech 23	R01	Replace components of fireplace, such as gas valve and switch.	30 Yrs	$1,500	2034	$1,900														•															
Mech 24	R01	Replace circulating pumps for hydronic loop, as required.	15 Yrs	$1,500	2024	$1,500				•														•												
Mech 24	R02	Replace circulating pumps for hydronic loop - heating water.	15 Yrs	$1,500	2032	$1,800												•															•			
Mech 25	R01	Replace shell and tube heat exchanger.	20 Yrs	$8,000	2024	$8,000				•																				•						
Mech 26	R01	Cyclic replacement of heating boilers, as required.	20 Yrs	$22,000	2039	$31,000																		•												
Mech 26	R02	Cyclical replacement of heating boilers, as required.	20 Yrs	$44,000	2027	$58,000							•																					•		
Mech 27	R01	Cyclic replacement of diaphragm heating expansion tanks, as required.	20 Yrs	$1,500	2024	$1,500				•																				•						
Mech 28	R01	Cyclical replacement of piping and fittings	5 Yrs	$7,200	2022	$7,300		•					•					•					•					•					•			
Mech 28	R02	Cyclical replacement of valves, as required.	5 Yrs	$4,000	2024	$4,300				•					•					•				•						•					•	
Mech 29	R01	Cyclical replacement of various components of gas venting system.	5 Yrs	$500	2024	$500				•					•					•				•						•					•	
Mech 29	R02	Replace domestic venting system.	35 Yrs	$1,000	2024	$1,100				•																										
VENTILATION AND AIR-CONDITIONING																																				
Mech 30	J01	Motor mount - Inspect for damage, cracks or corrosion. [PLACEHOLDER]	2 Yrs	$0	2024	$0																														
Mech 30	R01	Cyclical replacement of pulleys and motors and vibration isolation, as required. [PLACEHOLDER]	8 Yrs	$0	2028	$0																														
Mech 30	R02	Cyclical rebuild or replacement of packaged rooftop air conditioner. Not a strata owned asset. [PLACEHOLDER]	20 Yrs	$0	2024	$0																														
Mech 31	R01	Cyclical replacement of motors, fan blades and bearings on supply and exhaust fans, as required.	3 Yrs	$500	2027	$520							•			•			•			•		•			•			•				•		
Mech 31	R02	Rebuild of supply and exhaust fans, as required.	20 Yrs	$4,000	2024	$4,000				•																				•						
Mech 32	R01	Cyclical replacement of failed or damaged general purpose exhaust fans, as required.	12 Yrs	$1,500	2024	$1,500				•												•												•		

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
MECHANICAL																																				
Mech 33	J01	Motor mount - Inspect for damage, cracks or corrosion.	2 Yrs	$0	2022	$0		•		•		•		•		•		•		•		•		•		•		•		•		•		•		•
Mech 33	R01	Cyclical replacement of pulleys and motors and vibration isolation, as required.	8 Yrs	$0	2022	$0		•								•								•								•				
Mech 33	R02	Rebuild or replace make-up air unit.	20 Yrs	$25,000	2024	$27,000				•																				•						
OTHER																																				
Mech 34	R01	Replace overhead door motors and operators, as required.	7 Yrs	$2,500	2027	$2,500							•							•							•								•		

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
ELEVATOR																																				
HYDRAULIC																																				
Elev 01	J01	Check and test overload device.	2 Yrs	$0	2022	$0		•		•		•		•		•		•		•		•		•		•		•		•		•		•		•
Elev 01	J02	Conduct full load performance test.	2 Yrs	$0	2022	$0		•		•		•		•		•		•		•		•		•		•		•		•		•		•		•
Elev 01	R01	Replace elevator controls, tank/pump unit and control valve. Note: Fire alarm upgrades may be required if this asset is implemented. The budget for fire alarm upgrade is not included in the estimate.	25 Yrs	$65,000	2022	$78,000		•																									•				
CAR INTERIORS																																				
Elev 02	R01	Replace buried cylinder with new PVC encapsulated.	50 Yrs	$75,000	2022	$90,000		•																													
Elev 02	R03	Replace elevator operating and signal fixtures, replace door operator, upgrade cab interior (to be completed in conjunction with asset 1).	25 Yrs	$55,000	2022	$66,000		•																									•				

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
FIRE SAFETY																																				
CONTROLS																																				
Fire 01	R01	Replace battery packs.	5 Yrs	$250	2027	$270							•					•					•					•						•			
Fire 01	R02	Replace fire alarm annunciator panels and control panel, excluding field wiring and field devices.	20 Yrs	$15,000	2022	$15,000		•																				•								
DETECTION																																				
Fire 02	R01	Cyclical replacement of speakers, heat detectors, smoke detectors and related modules, excluding field wiring.	10 Yrs	$16,000	2022	$16,000		•										•										•								
SUPPRESSION																																				
Fire 03	R01	Replace fire sprinkler compressor.	14 Yrs	$2,000	2024	$2,100				•														•												
Fire 04	R01	Replace fire hydrants. Not normally part of Common property asset. Municipally owned and maintained.	40 Yrs	$0	2034	$0														•																

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
FIRE SAFETY																																				
Fire 05	R01	Cyclical replacement of fire extinguishers.	12 Yrs	$1,600	2022	$1,600		•												•												•				
Fire 06	J01	Sprinkler Piping - Conduct flow test on piping, both exposed and underground.	5 Yrs	$0	2022	$0		•					•					•					•					•					•			
Fire 06	J02	Sprinkler Heads - Test extra high temperature on sprinkler heads.	5 Yrs	$0	2022	$0		•					•					•					•					•					•			
Fire 06	R01	Phased replacement of sprinkler zone control valves, as required.	20 Yrs	$2,500	2022	$2,500		•																				•								
Fire 06	R02	Renew compromised portions of piping, gaskets, connections, valves, devices and trim to maintain required function.	5 Yrs	$3,655	2022	$3,700		•					•					•					•					•					•			
Fire 06	R05	Replace all heads, or submit representative sample of heads for testing by a recognised testing agency at the 50th anniversary, to the satisfaction of the authority having jurisdiction, in accordance with NFPA 25.	50 Yrs	$21,930	2044	$35,000																								•						
Fire 06	R06	Replace entire system including risers, branch piping, valves, heads, swaybracing, and all related trim, back to Sprinkler Room.	100 Yrs	$73,100	2094	$0																														
Fire 07	J01	Sprinkler Piping - Conduct flow test on piping, both exposed and underground.	5 Yrs	$0	2022	$0		•					•					•					•					•					•			
Fire 07	J02	Sprinkler Heads - Test extra high temperature on sprinkler heads.	5 Yrs	$0	2022	$0		•					•					•					•					•					•			
Fire 07	R01	Replace all heads, or submit representative sample of heads for testing by recognized testing agency at the 50th anniversary, to the satisfaction of the authority having jurisdiction, in accordance with NFPA 25.	50 Yrs	$8,460	2044	$13,000																								•						
Fire 07	R02	Replace damaged piping, sprinkler heads, hangers and leaking gaskets, cages, sway-braces, drains etc as required.	10 Yrs	$1,410	2022	$1,400		•										•										•								
Fire 07	R03	Replace entire system including risers, branch piping, valves, heads, swaybracing, and all related trim, back to Sprinkler Room.	100 Yrs	$28,200	2094	$0																														
Fire 08	R01	Phased replacement of sprinkler zone control valves, as required.	20 Yrs	$0	2024	$0				•																				•						
Fire 08	R02	Replace gaskets in dry sprinkler valves.	20 Yrs	$0	2024	$0				•																				•						
Fire 08	R03	Rebuild dry sprinkler valves.	20 Yrs	$1,000	2024	$1,000				•																				•						
Fire 08	R04	Replace sprinkler valves, as required.	40 Yrs	$3,000	2034	$3,900														•																
Fire 09	R01	Submit representative sample of heads for testing by recognised testing agency, to the satisfaction of the authority having jurisdiction, in accordance with NFPA 25.	10 Yrs	$0	2022	$0		•										•										•								
Fire 09	R02	Replace all heads, to the satisfaction of the authority having jurisdiction, in accordance with NFPA 25.	10 Yrs	$15,000	2027	$17,000							•										•										•			
EGRESS																																				
Fire 10	R01	Cyclical replacement of batteries and lamps in DC battery packs.	5 Yrs	$0	2022	$0		•					•					•					•					•					•			
Fire 10	R02	Cyclical replacement of LED exit signs.	15 Yrs	$4,500	2031	$5,500											•															•				

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
INTERIOR FINISHES																																					
FLOORS																																					
Finish 01	R01	Replace wood flooring, as required.	20 Yrs	$8,450	2034	$11,000														•			•														
Finish 02	R01	Replace rubber sports flooring.	20 Yrs	$1,500	2037	$2,100																	•														
Finish 03	R02	Renew porcelain tile floor.	40 Yrs	$5,500	2034	$7,100														•																	
Finish 04	R01	Renew carpet.	15 Yrs	$7,760	2034	$10,000														•																•	
WALLS																																					
Finish 05	R01	Repaint interior wall in high traffic area, as required.	10 Yrs	$1,130	2024	$1,200				•																			•								
Finish 05	R02	Re-coat painted wall surface including preparation of substrate.	15 Yrs	$16,950	2034	$22,000														•																•	
WINDOW COVERINGS																																					
Finish 06	R01	Replace window covering, as required.	20 Yrs	$500	2034	$650														•																	
ARCHITECTURAL WOODWORK																																					
Finish 07	R01	Replace damaged components of carpentry and millwork, as required.	30 Yrs	$2,000	2034	$2,600														•																	
DOORS																																					
Finish 08	J03	Repaint door and frame in high-traffic locations as required.	12 Yrs	$1,750	2030	$1,800										•												•									
Finish 08	R01	Cyclical replacement of interior swing door in low traffic/exposure locations, as required.	40 Yrs	$17,500	2034	$23,000														•																	

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
AMENITIES																																					
EQUIPMENT																																					
Amen 01	R01	Replace domestic appliances, as required.	15 Yrs	$1,500	2027	$1,500							•															•									
Amen 02	R01	Replace components of fitness equipment, as required.	10 Yrs	$6,000	2027	$6,800							•										•										•				
FURNISHINGS																																					
Amen 03	R01	Replace furniture and associated component.	15 Yrs	$2,500	2027	$2,800							•															•									
Amen 04	R01	Replace central mail boxes as required.	30 Yrs	$5,000	2034	$6,500														•																	
Amen 05	R01	Replace damaged and outdated signage, as required.	25 Yrs	$6,000	2029	$6,000									•																						
Amen 06	R01	Reconstruct wood storage lockers, as required.	40 Yrs	$2,000	2034	$2,600														•																	
Amen 07	R01	Replace furnishings in common areas, as required.	15 Yrs	$2,000	2027	$2,300							•															•									
SUITE																																					
Amen 08	R01	Cyclical replacement and upgrade of components of audiovisual equipment, excluding field wiring, as required.	10 Yrs	$800	2027	$800							•										•										•				

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
SITEWORK																																				
HARD LANDSCAPING																																				
Site 01	R01	Recoat/repaint wood fencing.	6 Yrs	$750	2024	$900				•						•						•						•						•		
Site 01	R03	Replace wood perimeter fencing, as required.	20 Yrs	$15,000	2022	$15,000		•																				•								
Site 02	R01	Replace section of edging material as required.	10 Yrs	$2,000	2026	$2,000						•										•										•				
Site 02	R02	Gravel walkway is not deemed to be a renewable asset.	75 Yrs	$0	2069	$0																														
Site 03	R01	Replace sections of concrete paving, as required.	10 Yrs	$22,680	2034	$29,000														•										•						
Site 04	R02	Reapply traffic markings on roadways.	5 Yrs	$1,250	2027	$1,300							•							•					•					•						
Site 04	R03	Rebuild sections of interlocking paving, including sub-grade, as required.	20 Yrs	$67,800	2029	$93,000									•																			•	
Site 05	J01	Repoint mortar joints in masonry wall.	10 Yrs	$720	2031	$860	•										•													•						
Site 05	R01	Reconstruct components of stone retaining walls.	40 Yrs	$43,200	2034	$56,000														•																
Site 06	J01	Drain pond and visually review the surface of the membrane, paying close attention to all penetration locations for signs of distress, such as ridges, cracks, and delamination. Clean as required.	5 Yrs	$2,000	2029	$2,300						•			•					•										•					•	
Site 06	R01	Replacement of pond liner.	15 Yrs	$15,000	2024	$16,000				•															•											
Site 07	R01	Repaint/recoat wood trellis/gazebo.	10 Yrs	$2,500	2026	$2,800						•																					•			
Site 07	R02	Replace components of trellis/gazebo structures.	10 Yrs	$1,500	2026	$1,700						•																					•			
Site 07	R03	Rebuild trellis/gazebo structures, as required.	20 Yrs	$5,000	2036	$6,700																•														
Site 08	J02	Repaint metal trellis as required.	10 Yrs	$5,000	2026	$5,500						•																		•						
Site 08	R02	Replace metal trellis and fencing.	40 Yrs	$15,000	2034	$19,000														•																
Site 09	R01	Repaint wood arbours.	6 Yrs	$2,500	2026	$2,500						•						•								•						•				
Site 09	R03	Rebuild arbours, as required.	20 Yrs	$10,000	2034	$13,000														•																
SOFT LANDSCAPING																																				
Site 10	J01	Replace the back-up battery in the timer/controller.	2 Yrs	$250	2026	$250						•		•		•		•		•		•		•		•		•		•		•		•		•
Site 10	R01	Cylical replacement of components of irrigation sprinkler system, as required.	15 Yrs	$5,000	2024	$5,000				•															•											
Site 11	J01	Clearance pruning of trees of large shrubs.	3 Yrs	$1,000	2024	$1,000				•			•			•			•			•			•			•			•			•		
Site 11	R01	Renovate sections of the soft landscaping, as required.	15 Yrs	$31,680	2034	$41,000														•															•	
SITE SERVICES																																				
Site 12	R01	Replace gas services where not owned by Utility	50 Yrs	$15,000	2044	$24,000																								•						
Site 13	R01	Replace underground electrical services.	50 Yrs	$48,000	2044	$76,000																								•						
Site 14	J02	CCTV length of services for inspection of condition and function.	5 Yrs	$500	2022	$500		•					•					•					•					•					•			
Site 14	J03	Powerflush underground sanitary drains to remove buildup and debris.	10 Yrs	$500	2022	$500		•										•										•								

RDH BUILDING SCIENCE

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

Making Buildings Better™

Asset Ref ID	Maint. Ref ID	Maintenance Description	Frequency	Current Cost	Next Event	Future Cost	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
SITEWORK																																				
Site 14	R03	Replace portions of underground sewer services, including all appurtenances. Includes temporary services during construction (assumes no room to abandon old services in place), trench backfill and asphalt patching. (1/3)	80 Yrs	$6,994	2064	$16,000																														
Site 14	R04	Replace portions of underground sewer services, including all appurtenances. Includes temporary services during construction (assumes no room to abandon old services in place), trench backfill and asphalt patching. (2/3)	80 Yrs	$7,206	2074	$21,000																														
Site 14	R07	Replace underground sewer services, including all appurtenances. Includes temporary services during construction (assumes no room to abandon old services in place), trench backfill and asphalt patching. (3/3)	80 Yrs	$6,994	2084	$0																														
Site 15	J01	Review underground drainage piping by video camera for condition and performance.	5 Yrs	$640	2022	$640		•					•					•					•					•					•			
Site 15	J02	Powerflush underground drainage piping to clear and remove any buildup of debris.	10 Yrs	$640	2022	$640		•										•										•								
Site 15	R03	Replace components of underground drainage services. (1/3)	80 Yrs	$13,728	2064	$32,000																														
Site 15	R04	Replace components of underground drainage services. (2/3)	80 Yrs	$13,728	2074	$39,000																														
Site 15	R09	Replace components of underground drainage services. (3/3)	80 Yrs	$15,232	2084	$0																														
Site 16	R03	Replace portions of underground water services with PVC/copper and ductile piping, hydrants, valves and connections. (1/3)	50 Yrs	$5,204	2034	$6,700														•																
Site 16	R04	Replace portions of underground water services with PVC/copper and ductile piping, hydrants, valves and connections. (2/3)	50 Yrs	$5,204	2044	$8,200																								•						
Site 16	R05	Replace portions of underground water services with PVC/copper and ductile piping, hydrants, valves and connections. (3/3)	50 Yrs	$5,362	2054	$10,000																														