



JRS ENGINEERING
BUILDING ENVELOPE CONSULTANTS

DEPRECIATION REPORT

WESTHAMPTON COURT

**8511 WESTMINSTER HWY & 8500 ACKROYD
RICHMOND, BC**



PREPARED FOR: The Owners, Strata Plan NW2184
c/o Mark Cervantes, Council Member
c/o Dan Wong, Strata Manager

DATE: **OCTOBER 17, 2017**

JRS PROJECT: VR17061

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PREFACE

The purpose of this Depreciation Report is to assist the owners in the asset management of their property with respect to the major building systems and components. JRS has reviewed pertinent building documents, communicated with building representatives, and performed a visual site review, all of which is summarized in this report.

The provisions of this Depreciation Report, including Reserve Planner qualifications, insurance requirements and site review and reporting methods, address all the requirements of the current Strata Property Act (Section 94) and its associated Regulation – BC Reg43/2000 (Part 6). These methods are also consistent with nationwide standards and guidelines provided by the Real Estate Institute of Canada (REIC).

In accordance with Strata Property Regulation requirements, JRS Engineering Ltd. confirms that it and its employees, directors and affiliates are unaware of any conflicting relationship with the strata corporation. This Depreciation Report is being provided independently, with no other purpose than to provide the strata corporation with an objective report in accordance with the Engineering Services Agreement executed on April 25, 2017.

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1.0 EXECUTIVE SUMMARY

JRS Engineering Ltd. (JRS) was retained by The Owners, Strata Plan NW2184 to complete a Depreciation Report on Westhampton Court, located at 8511 Westminster Hwy & 8500 Ackroyd, Richmond, BC. The purpose of this report is to assist in allocating the anticipated reserve fund expenditures associated with the major systems and components of the building. This executive summary should be read with the rest of the report in its entirety to recognize the full context.

Due to significant renewals estimated to occur in the near term, it would be prudent for the strata corporation to increase its CRF contributions. The strata corporation's current annual CRF contribution is approximately \$12,000. We recommend you increase your CRF contributions per the Graduated Hybrid model presented in Appendix D.

While JRS recommends prudent and practical increases in the strata corporation's annual CRF contributions, we understand that ideal contribution increases may not occur. At the very least, this report should be used as supplemental information and an education tool for current owners and potential buyers to save for possible upcoming special levies.

Over the next three years (before or on the next Depreciation Report update), the strata council should consider the following:

- ♦ Engage a geotechnical engineer to provide a report and assess the severity of settlement of the structure and if further action is required (item #1).
- ♦ Perform a Building Envelope Condition Assessment (BECA) in order to fine tune the service life predictions and replacement costs. Consider renewing the wood cladding and repointing the brickwork (item #4 & item #5).
- ♦ Engage an elevator professional to inspect the existing elevator systems and provide a detailed modernization plan (item #20).
- ♦ Engage a mechanical engineer to assess the condition of the cold domestic water pipes and HVAC components and provide a detailed report on its condition (item #22 & item #29).
- ♦ Engage a qualified fire protection professional for a detailed review of the existing emergency systems for potential upgrades (Item #34).
- ♦ Renew the finishes and gym equipment in the fitness room (item #37).
- ♦ Consider repairing the retaining walls and landscaping (item #44).

The following is a summary of the most pertinent financial values within a 30-year outlook:

ITEM	COST
Current Replacement Costs	\$ 7,257,229
Future Replacement Costs	\$ 9,293,744
Current Reserve Fund Requirements	\$ 5,606,656
Future Reserve Fund Requirements	\$ 3,421,319
Current Annual Reserve Fund Contributions	\$ 12,000
Theoretical Fully Funded Annual Reserve Fund Contributions	\$ 449,117
Target Annual Reserve Fund Contributions (50%)	\$ 224,559

Our financial analysis includes three funding models: Baseline, Theoretical Fully Funded, and a Graduated Hybrid.

The Baseline model consists of current contribution levels or the statutory minimum, whichever is higher. In this case, it is the latter. This would lead to numerous special levies within the 30-year outlook.

The Theoretical Fully Funded model creates a fully funded CRF that theoretically should not require any special levies (physical asset based) within a 30-year outlook. However, this theoretical model would require the owners to increase their current contributions significantly and immediately, which would be financially challenging for many and impractical to try to pass at a general meeting.

The Graduated Hybrid model is a funding strategy that JRS recommends, which will allow the strata corporation to gradually increase their contributions to 50% of a fully funded contribution level by 2022, then implementing inflationary increases – minimizing the frequency and amount of potential of special levies.

It is incumbent on the owners to decide what funding strategy works best for them and to tailor their own, customized financial plan. The Cash Flow Table for the recommended Graduated Hybrid Funding model is included in Appendix D for your review.

2.0 TERMS OF REFERENCE

As the information of all Depreciation Reports is comprehensive and subjective, a draft report was issued on August 21, 2017 in order to obtain feedback and commentary on any chronological mistakes and reporting errors. We have acknowledged all comments and made all appropriate revisions that we feel prudent and technically justifiable. It is important to understand that these reports are intended to be dynamic, “work-in-progress documents”, which should be continually updated to be practical documents.

2.1 GENERAL LIMITATIONS

JRS assumes that this is the first Depreciation Report for this property (requiring a site visit and a full compilation of asset inventory). We also assume that the building systems were built and completed with no known deficiencies in design and that construction procedures performed were in general conformance with the documents provided by the owners and property manager, unless otherwise noted.

The drawings, diagrams and photographs presented in this report are included for illustration purposes. No legal survey, soil analysis, detailed investigations, quantity survey compilations, nor exhaustive physical examinations, representative sampling or intrusive tests were performed, which would be required to discover any hidden conditions within the property.

JRS' technical area of expertise is within the building envelope. Items such as mechanical, electrical, conveyance and site service systems have been reviewed in a general nature for the purposes of budgeting and can be reviewed in a more detailed fashion should the owners wish to do so. Accordingly, we have identified any items that require a more comprehensive review by appropriate professionals.

Replacement costs are subjective. They are based on a combination of company experience, building documents and historical construction data. It must be appreciated that reserve fund budgeting and projections are not an exact science. At best, they are prudent provisions for typical life cycle renewal costs, if and when they arise. Reserve fund requirements are subject to change and must be reviewed and revised periodically.

JRS Engineering maintains errors and omission insurance (Professional Liability Insurance) through our Certificate of Insurance, which is renewed on an annual basis.

2.2 REPORT ORGANIZATION

Section 1.0 presents an executive summary of the depreciation report.

Section 2.0 presents our terms of reference outlining general limitations of the report, how this report is organized, a general building description, all relevant building documents reviewed, and when the site visit(s) were performed.

Section 3.0 presents an introduction to the report. This includes a brief background to Depreciation Reports, methodology used to create one, a

general description of all reserve systems and components, as well as a short note on updating the report.

Section 4.0 presents a technical inventory of each building system consisting of a general description and history relating specifically to this property.

Section 5.0 presents a financial analysis of each building system consisting of historical data, life cycle renewal costs, and at least three funding models with 30-year cost projections (as required by the Strata Property Regulation). A summary and opinion of adequacy of the CRF, with considerations is also included.

Section 6.0 presents our recommendations to the owners.

Section 7.0 presents our report closure and limitations.

Included as part of this report are the following appendices:

Appendix A – Technical Inventory - Component Descriptions

Appendix B – Replacement Costs (Benchmark Analysis)

Appendix C – Funding Models and Cost Projections

Appendix D – Cash Flow Table

Appendix E – Reserve Planning Team

Appendix F – Glossary of Terms

2.3 BUILDING DESCRIPTION

Westhampton Court is a residential, strata-owned condominium complex consisting of one four-storey building containing a total of 138 units. Shared amenities include storage, laundry rooms, gym, sauna, change rooms and an office. It was constructed in 1984.

The first level consists of the parking lot and common rooms. The second to fourth floors are residential units. The building is adjacent to major roads on the north and south elevations. Neighbouring buildings of similar construction are located to the west and east. The surrounding landscaping includes grass areas, bushes, medium height trees, walking paths, benches, and a wood canopy on the first-floor deck.

In general, the building is exposed to the elements with minimal protection from the surrounding vegetation and buildings.

Some recent major renewals for the building include the following:

- ♦ Renewal of finishes in the lobby in 2016.
- ♦ Renewing the hot domestic water pipes in 2011.
- ♦ Repainting the stairwells in 2016.

A general description and site plan of the property are summarized below:

DESCRIPTION	
Construction Date	1984
Applicable Building Code	National Building Code 1980
Number of Buildings	1
Number of Storeys	4
Number of Units	138
Number of Parking Stalls	138 + Visitors Parking
Site Area	115,421 ft ²
Gross Floor Area	138,633 ft ²
Landscaping Area	69210 ft ²



Figure 1 – Site Plan of Westhampton Court taken from Aerial 2016 Richmond Rim

2.4 DOCUMENTS REVIEWED

The following documents were provided for our review as resources for this Depreciation Report:

Plans/Drawings and Technical Documents

- ♦ Architectural (Record Set) – Cooper Rankin Architects, November 1983
- ♦ Electrical – a.e.b. Engineering Group

Non-Technical and Financial Documents

- ♦ AGM and SGM Minutes – 2014, 2015, 2016 and Jan. 2017
- ♦ Monthly Financial Statements, March 2017
- ♦ Elevator Service and Repair Order
- ♦ BCSC Safety Order – Hydraulic Elevators, 2013

- ♦ Strata Plan NW 2184 Westhampton Court Bylaws, Dec. 2010
- ♦ Certificate of Insurance for 2016/2017

In addition, we interviewed Don Wong (Strata Manager), and communicated with George Dobre (Building Manager) as supplementation to the building history and supporting documents.

2.5 SITE VISITS

Boris Lin, EIT and Justin Unger, EIT of JRS visited Westhampton Court on May 24, 2017. Weather was sunny and temperature was approximately 17 degrees Celsius.

3.0 INTRODUCTION

3.1 BACKGROUND

The terms *Contingency Reserve Fund Study* and *Depreciation Report* have been used interchangeably. The former is typically used across Canada and the latter is the terminology used in the Strata Property Act of BC. Therefore, *Depreciation Report* will be used for reporting purposes. It should be noted that a Depreciation Report is not a technical report, but more of a financial report that contains technical descriptions and predictions intended to assist the owners with the prudent fiscal management of their CRF.

A Depreciation Report is a financial plan that consists of the identification, description, quantification and analysis of reserve components, and then provides cost estimate and life cycle analysis, projecting future repair or replacement costs and estimating the necessary reserve fund requirements. It also takes into consideration inflationary trends, interest assumptions, and appropriate funding models.

Depreciation Reports are a basis for prudent financial planning for capital expenditures, intended to assist owners and property managers with informed decision making on CRF matters such as investment, management, and budgeting. In essence, it provides a guide for the owners to save sufficient funds to cover the costs of future repairs and replacements of major building systems and components, as well as to help ensure that current and future owners are assessed for CRF contributions fairly and equitably.

Per the Strata Property Regulation, we are required to state our relationship with the Strata Corporation. JRS staff who created this Depreciation Report simply serve as independent parties and do not have conflicting relationships with the Strata Corporation or Property Management Company.

3.2 METHODOLOGY

There are generally four main components in the Depreciation Report production process:

1) Background Review

JRS reviews the pertinent technical, financial and legal records related to the building for the purposes of writing a Depreciation Report. We also communicate with building representatives in order to confirm CRF financial information, previous capital expenditures, system replacements, maintenance strategies, and upcoming renewals. This gives us a deeper understanding of the financial situation, building maintenance and the overall context of the asset management history.

2) Site Visit

JRS visits the property to visually review all the major building systems and components, which can include making notes and sketches, as well as taking site measurements and photographs. Intrusive/destructive investigation or inspection by specialized professionals does not typically take place, as Depreciation Reports are meant to provide a general overview of component conditions.

3) Technical Inventory

JRS compiles an inventory of items that summarizes descriptions of all the major systems and components into a practical list of reserve items. To keep the list simple and easy to use, in some cases we have grouped together items that have minor renewal costs as well as similar maintenance and replacement dates. For example, roof components such as insulation, rock ballast, vents, and eave flashings are not reserved separately; instead, they are grouped together, as they will likely be replaced at the same time. Replacement dates are estimated based on typical service life and effective ages.

4) Financial Analysis

JRS' financial analysis is consistent with those outlined and recommended by the REIC. It uses the Cash Flow Funding method, which presents estimated current and future replacement costs for the CRF as a whole, as well as an accumulated CRF balance, using assumed inflation and interest rates. Units and dimensions are taken either directly from site, drawings, archived data on various governmental websites, or a combination of all of these sources. We provide at least three funding models to assist the owners with their CRF contribution strategy. Unit rates and allowances are based on similar completed projects, contractor quotes and other costing manuals/data.

3.3 UPDATING

Per the Strata Property Regulation - Part 6.2(7)(a), unless a 3/4 exemption vote is passed, strata corporations require a new or updated Depreciation Report every 3 years.

Furthermore, it is important that the strata council review the Depreciation Report annually to confirm accumulated CRF balance and contributions, document all expenditures and ensure that deterioration of certain building systems/components has not accelerated.

Continually updating your Depreciation Report will not only mitigate insufficient reserve funds for major repairs/renewals, but it will also enhance the value and durability of the property.

4.0 TECHNICAL INVENTORY

The technical inventory and reserve component descriptions below are property specific and based on building documents, visual review and communication with building representatives.

This technical inventory is categorized in the Uniformat sections listed below and summarized in component description boxes consisting of location, installation date, typical service life, effective age, remaining service life, planned renewal date, general description and condition as well as short term action. These reserve component description boxes are located in Appendix A. These generally provide information on what is included in the cost estimation of the physical assets.

An overall general description and system history are presented for each of the major building systems below.

4.1 BUILDING ENVELOPE AND STRUCTURE

Major building envelope components consist of roofs, windows/skylights, doors, wall cladding, balconies and parking, as well as associated waterproofing, membranes, metal flashings, sealants and paint coatings.

The steep sloped roof consists of a ventilated attic constructed of asphaltic shingles. The roof is insulated with batt insulation and blown-in insulation located at the ceiling of the top floor. The roofing was comprehensively renewed in 2001.

The cladding on the building consists of a face-sealed wood panel system and a rain-screen brick cladding system. There appears to be no sealants in place at the transitions of materials.

The balcony consists of liquid applied membrane with surface mounted guardrails. The transition between the membrane and the wall cladding includes a 1" wooden triangle piece designed to shed water away from the cladding. There were membrane repairs done to 16 balconies by Ramsafe in 2014.

We have also included allowances for exposed structural concrete, which may require targeted renewal or patchwork prior to the end of the building lifespan.

Sealant and paint renewals are subjective and can vary from property to property. As a standard approach, we typically recommend significant sealant renewal and painting projects to occur concurrently within 7 to 10 year cycles. However, sections of sealant should be replaced upon failure (e.g. cracks, crazing, de-bonding, etc.), especially in critical locations. Some properties may have to perform annual maintenance or pursue a targeted sealant renewals program more frequently (every 2 to 5 years) than shown in our cost projections.

4.2 INTERIOR

The interior finishes include wall paint, carpeting and tile. These finishes are limited to the common areas of each building.

The majority of the common areas on the parkade level consists of tiled flooring, painted drywall ceilings, and painted walls. Flooring was originally carpet and was updated to tile in 2000.

The finishes in the 2nd, 3rd, and 4th levels consist of carpet floors, painted popcorn finished ceiling, and painted popcorn finished walls. Carpeting in this area was also completed in 2000.

4.3 CONVEYANCE

The conveyance systems on this property includes 3 elevators in the building.

The elevators were installed during original construction. We understand that routine inspections and maintenance is currently done by Otis Elevators.

For a more detailed review and estimate of the conveyance systems, especially nearing the end of the service life, an elevator consultant should be engaged.

Recent changes to Provincial regulations adopted the most current version of the CSA B44-2007 *Safety Code for Elevators and Escalators*, which requires modification of existing single bottom cylinder elevators by October 8, 2015. Safety Order SO-L1 101214 1 was issued to all building owners, property managers and BCSA licensed elevating devices contractors and is intended to promote the orderly and efficient compliance of owners and contractors with the Code requirements (Safety Authority Information Bulletin No. B-L4 101214 1). To ensure that the elevator systems are safe and compliant to this bulletin, an elevator consultant should be engaged.

4.4 MECHANICAL

The mechanical systems for this building generally consist of heating (e.g. make-up air units), and plumbing (e.g. water pipe distribution, natural gas boiler, hot water tanks, and pumps). The smaller exhaust fans found in utility and storage rooms are not included in this report (e.g. parkade vestibule, mechanical room, elevator mechanical room, fitness room, or recycling room).

The mechanical systems are currently being maintained by Xpert Mechanical & JK Lillie Ltd.

Costs to renew domestic water piping should be viewed with caution. Numerous factors such as hazardous materials (e.g. asbestos in the drywall), BC Building Code changes, material costs/upgrades as well as complicated plumbing designs and high end interior furnishings can significantly affect the estimated cost of this asset. It should also be noted that while pipe replacement is common, there are other types of options available to the owners (e.g. internal coatings, altering water chemistry). JRS does not officially endorse any particular approach, as every property consists of varying factors that need to be considered (e.g. age of pipes, location of building, type of material, thickness of pipe, frequency of failures, type of failures). Regardless, we would be happy to discuss either of these options and provide general direction as needed.

Property wide renewals on sprinkler heads, standpipes, cabinet hoses are not typically included in these reports (as recommended by the REIC) due to the unpredictability of hidden conditions, soft costs and BC Fire Code changes/updates. Any safety deficiencies would also be caught during periodic inspections and corrected accordingly. Furthermore, complete and comprehensive fire detection system replacement has not been included in this report as this varies widely with different brands, models and parts and some manufacturers discontinue production of certain parts that support the current system. As the fire panels/detection systems become obsolete, a certified fire protection professional should be engaged to assess the system and make more detailed recommendations.

4.5 ELECTRICAL

The electrical reserve components include electrical distribution devices (i.e. incoming services, transformers, various distribution panels, wiring etc.), access control, security, fire panels and emergency lighting.

The building has secured access by keys at all entrances and keyfob access at the two main entrances.

The electrical section of any Depreciation Report should be viewed with caution. Many electrical systems and components generally serve the life of the building without having to be replaced (e.g. electrical panels, transformers, incoming underground service lines, etc). Renewal dates are difficult to predict, depending on use, maintenance and review. Major electrical system renewals are rare but can be expensive. Furthermore, it is not always clear whose responsibility certain electrical items belong to (e.g. distribution transformer, electrical wiring).

Electrical room/vault maintenance and review should be performed on a periodic basis. As a point of reference, infrared review and dust/debris removal should be performed every 3 years on high rise buildings in Vancouver this is specifically required for “dual radial” vaults.

4.6 SPECIALTY

Specialty items for Westhampton Court includes the laundry rooms, fitness room, sauna, and changeroom.

The fitness room consists of two treadmills, a weight station, free weights, an elliptical, and a punching bag. Most of the equipment are from original construction.

The building previously had a hot tub but was removed and infilled with concrete due to maintenance complications. The hot tub room is located next to the sauna and currently does not serve a purpose.

4.7 SITE SERVICES

The site services include walkways, patios, equipment (bike racks, benches), canopies, site services (utilities lines), exterior lighting, and landscaping.

The retaining walls by the driveways were renewed in 2009. The strata council is considering renewing the remaining retaining walls in the near future.

5.0 FINANCIAL ANALYSIS

5.1 RESERVE FUND: HISTORICAL DATA

Based on the documents reviewed and our communications with building representatives, we have summarized pertinent CRF transactions and balances in the table below:

DESCRIPTION	2017
Annual Operating Budget	\$478,724
CRF Balance	\$118,072
Approved CRF contributions	\$12,000
Past interest accrued on CRF	Approximately 0.68%

5.2 RESERVE FUND: LIFE CYCLE RENEWAL COSTS

The Life Cycle Renewal Cost table (Benchmark Analysis), included in Appendix B, is a tabulated summary of expected renewal years, costs and reserve fund parameters. Per the visual condition assessment of all the major building systems and components, future replacement dates are predicted (assuming reasonable and ongoing maintenance). This assumes that ongoing and reasonable maintenance is being performed unless otherwise noted or reported by property representatives. Based on these dates, as well as the assumed interest and inflation rates, the current and future CRF requirements are determined and allocated.

The order-of-magnitude renewal costs are developed based on general designs, makes and models, as well as estimated areas, assumed quantities and unit rates. While these costs may not be required on the specified dates, some or all of these allowances can be spent before or after these dates as needed. This is especially true for aggregate subjective assets like electrical, landscaping and miscellaneous mechanical equipment.

These costs may not consist of all contractor mobilization and front end costs, overhead and profit, as well as a detailed schedule of values, which would require the review of drawings, details, specifications and material schedules. Contingencies, consulting, project management and general contractor fees have also not been included. JRS does not guarantee the accuracy of these costs, and shall incur no liability where actual construction costs are exceeded.

The following pie chart illustrates the percentage that each of the major building systems represent relative to each other. The entire pie represents the reproduction value of the building reserve components and the wedges refer to the respective building systems, based on the "Reserve Fund Assessment Allocation" column in the benchmark analysis of Appendix B.

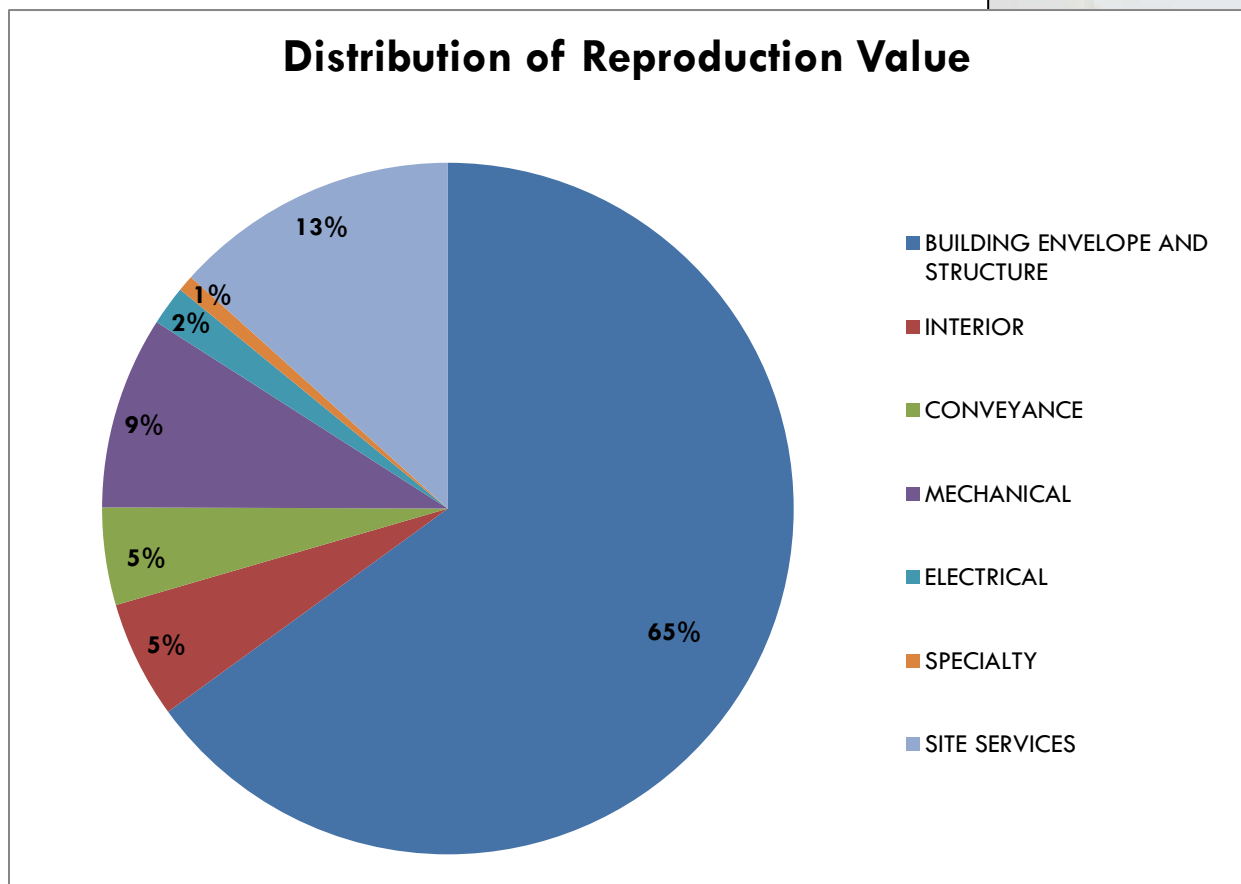


Figure 2 – Pie Distribution of Assets

It should also be noted that a *Power Smart Product Incentive Program* exists with BC Hydro. The program is intended to provide incentives for simple retrofits with energy efficient products to certain BC Hydro business customers. Refer to the *BC Hydro Product Acceptance Criteria* catalogue to determine acceptable technical and product requirements (i.e. lighting, HVAC and refrigeration) for the shared common assets of your property in order to potentially offset required renewal costs.

5.3 RESERVE FUND: 30-YEAR COST PROJECTION

The Cost Projection Sheets located in Appendix C consist of the estimated replacement costs of all the reserve fund components at anticipated renewal dates for the next 30 years (per the Strata Property Regulation). It should be noted that JRS does not purport that the actions/expenditures at the listed renewal dates must or will occur, but that we recommend the strata corporation strive to have sufficient funds for these actions/renewals that should or are highly likely to take place at or around these dates.

Interest Rate

Although the Regulation requires a reserve fund plan to be projected over 30 years, the interest rate is weighted more towards recent and short-term economic conditions because of their volatility over time. This is the rate of return applied to your CRF investment. We have assumed an annual interest rate of 0.68%, taken from historical data of interest earned on your CRF in 2017. This should be revised at the next Depreciation Report update. Significant consideration should be made towards an investment strategy that allows all or some of your CRF funds to grow at higher rates of return. Refer to Part 6.11 in the Strata Property Regulation to confirm what types of investment vehicles are permitted.

Inflation Rate

This is the growth rate applied to all future renewal costs. A common fallacy is that this rate should be tied to the CPI (Consumer Price Index). The CPI is based on a fixed basket of commodities - consumer goods and services such as milk and eggs, which are largely unrelated to construction costs. Since this fixed basket contains goods and services of unchanging or equivalent quantity and quality, the CPI reflects only price fluctuations and excludes labour costs, which is a significant portion of remediation/renewal projects. The CPI includes approximately 600 commodities categorized in 168 basic commodity classes, which is simply too broad to use for future construction/renewal cost estimating. Furthermore, volatile items such as oil and gas are also excluded from CPI, which can greatly affect construction costs.

We have derived an inflation rate from changes in actual construction price indices obtained from Statistics Canada relating to all trades in the Vancouver-area construction market. The estimated inflation rate takes into consideration construction indices going back to 1981 (as far back as Statistics Canada has records).

The inflation rate used in this Depreciation Report is **3.0%**. Although this is somewhat similar to the current CPI, a distinction in the process of reaching this value must be understood.

Interest and inflation rates are significant factors when projecting future replacement costs and CRF requirements. Slight variations in either parameter can have dramatic effects on future values, including the annual CRF contributions or any special levies, which are usually the most relevant concerns for the majority of owners.

5.4 FUNDING MODELS

To assist the owners with funding strategies, the Strata Property Regulation (Part 6.2.4) requires that at least 3 funding models be provided. Essentially, these are possible funding strategies for the owners to contribute to their CRF. Our funding models are “cash flow” and “cash funded” to allow pragmatic and user friendly recommendations.

It is important to note that there are many possibly funding strategies that a Reserve Planner can recommend. JRS has included the following three different cash flow funding models, which essentially consists of a low end, high end and a combination of the two:

Baseline

This model maintains the status quo (how the CRF is currently being funded) or the statutory minimum (10% of operating budget), whichever is higher. Annual increases are only governed by inflation and therefore future loans or special levies are likely to occur. This is the most “hands off” funding strategy, consisting of a more reactive approach.

Theoretical Fully Funded

This model immediately implements a contribution level that will eventually achieve a 100% fully funded accumulated reserve fund balance. This contribution strategy should theoretically never require loans or special levies and can be perceived as a hypothetical model, which is typically not practical for the strata corporation to execute.

Graduated Hybrid

This model is a combination of the Baseline and Fully Funded models, starting at current contribution levels and ramping up to a 50% fully funded contribution level. Special levies may still occur but at smaller and less frequent amounts. This funding strategy allows a more targeted funding plan, allowing for a more balanced and pro-active approach.

It is widely accepted that strata fees in BC are generally low and that most CRFs are under-funded. This is likely the driving force for Depreciation Report legislation, which has been mandated in many other provinces some time ago. Therefore, your Baseline model, as well as the statutory minimum, is not sufficient in most cases. The Fully Funded model is ideal, but impractical for most strata corporations—at least when trying to attain a fully funded level within a short period of time. Achieving at least a 50% fully funded CRF contribution level as soon as practical, should be the goal of every strata corporation. History in other provinces and with strata corporations who have already updated their Depreciation Reports, have shown that this is feasible.

JRS has provided a Graduated Hybrid funding model that we believe is achievable and pragmatic. These models allow the owners to ramp up towards a 50% fully funded CRF contribution level within five years.

The Baseline, Theoretical Fully Funded and Graduated Hybrid funding models are presented in Appendix C. A graph is included with each funding model cost projection sheet to summarize and visually aid the reader in comprehending the CRF contributions, balance, and requirements. The varying input parameter in each funding model is the annual contribution amount to the CRF.

5.5 SUMMARY OF RESULTS AND ADEQUACY OF RESERVE FUND

The Baseline and Fully Funded models indicate an unacceptable frequency of special levies and an immediately onerous level of annual CRF contributions, respectively. The current contingency fund is very close to the minimum requirement of 25% of the operating budget.

In the graduated hybrid model, the annual contributions increases proportionally from \$47,872 to \$224,559 over 5 years. After 50% of the fully funded CRF contribution is reached in 2022, the annual contributions will increase by 3% each year to account for inflation. Using this model, the potential 10 special levies from the benchmark model is decreased to 4 within 30 years.

The owners do not have to decide on either of the models – they should choose what financial plan or contribution level works for them.

It is essential to remember that our financial models and recommended funding strategies are for the strata corporation's contributions to their CRF, not strata fees. CRF contributions are only a fraction of the overall budget, which is funded almost entirely by the strata fees. For example, if an owner is paying \$300/month in strata fees and 10% of their strata fees go to the CRF, a recommended CRF contribution increase of 50% a year, results in an extra \$15 a month. Moreover, increasing CRF contributions does not need to be entirely borne out of raising strata fees. Other methods of offsetting increased strata fees include cutting costs and increasing revenue generating activities (e.g. laundry services, vending machines, etc.).

It is important to note that this Depreciation Report, nor should any Depreciation Report, purport to be used verbatim or used to pressure the strata corporation into mandating higher CRF contributions or strata fees. Our financial analysis and funding strategies are meant to simply provide information and encourage a balanced approach in saving for eventual renewals that may occur at or around the time stated in the funding models, which should be continually reviewed and updated. Therefore, this report should not be perceived as having to spend exactly the amounts at the specified times. It should be used as guidance for the strata council to manage its CRF and create its own detailed, customized financial plan.

Each model safeguards against negative CRF balances. However, it is incumbent on the owners to ensure that at least the statutory minimum outlined in Part 6.1 of the Strata Property Regulation are maintained, which is widely known to be a bare minimum that almost never achieves a reasonably long term funded CRF.

5.6 CONSIDERATIONS

It is often practical and economical to undertake the repair or replacement of property assets at the same time or immediately consecutive to one another. Although resulting in higher immediate capital costs, there will be potentially less disturbance to unit occupants than performing work at separate times, which may be a significant consideration. The owners should evaluate the relative weight they ascribe to some of the issues noted above prior to undertaking any major capital expenditures or updating the Depreciation Report, so that this information can be incorporated accordingly.

The intent of this Depreciation Report is to mitigate unfair levels of contribution and encourage the strata corporation as a whole or as individuals to save for eventual renewals/replacements to the property, starting at the soonest applicable fiscal year.

Costs and input data should also be reviewed and updated regularly to ensure a higher level of accuracy. Review of the financial parameters should be performed by the strata council annually and through Depreciation Report updates, which include site visits by a Reserve Planner every 3 years, per the Strata Property Regulation.

6.0 RECOMMENDATIONS

JRS recommends the strata council implement the Graduated Hybrid model or something similar to eventually reach a 50% fully funded contribution level to the CRF by 2022 or sooner. The strata council should compare it with the other funding strategies, tailor it to the ownership demographics and decide which would be the most appropriate and acceptable for the general ownership to include in the annual budget.

Over the next three years (before the next Depreciation Report update), the strata council should also consider the following:

- ♦ Engage a geotechnical engineer to provide a report and assess the severity of settlement of the structure and if further action is required (item #1).
- ♦ Perform a Building Envelope Condition Assessment (BECA) to better determine the remaining service life of the existing cladding. Consider renewing the wood cladding and repointing the brickwork (item #4 & item #5).
- ♦ Engage an elevator professional to inspect the existing elevator systems and provide a detailed modernization plan (item #20).
- ♦ Engage a mechanical engineer to assess the condition of the cold domestic water pipes and HVAC components and provide a detailed report on its condition (item #22 & item #29).
- ♦ Engage a qualified fire protection professional for a detailed review of the existing emergency systems for potential upgrades (Item #34).
- ♦ Renew the finishes and gym equipment in the fitness room (item #37).

- ♦ Consider repairing the retaining walls and landscaping (item #44).

JRS further submits the following general recommendations:

1. Prior to any major renewals, the strata council should hire a consultant to prepare drawings and specifications and tender out the work to multiple contractors before raising funds or requesting any special levies.
2. Major repairs and replacements should be recorded in, and funded from, a separate contingency reserve fund account. Keep in mind that multiple “sub-CRF-accounts” for specific assets (e.g. roofing, windows, piping, etc.) are not required and should be used with caution.
3. The strata council should create a committee or appoint a strata council member to oversee the overall management and documentation of the CRF.
4. The CRF should be invested with a strategy that will allow for multiple transactions and achieve a higher rate of return than the current interest rate.

7.0 CLOSURE

This report was prepared by JRS for The Owners, Strata Plan NW2184. Any use that a third party makes of this report, or any reliance or decisions made based on it, are the sole responsibility of such third parties.

The findings herein are based on a visual review of surface conditions. Deficiencies that may exist, but were not recorded in this report, were not apparent given the level of study undertaken.

This assessment is in part based on information provided by others. Unless specifically noted, we have assumed this information to be correct and have relied upon it in reaching our conclusions and recommendations.

Component conditions and renewal costs identified are for the purpose of general financial planning. This report is not intended to substitute the need for in-depth condition assessment of components by professionals using testing and other means.

The replacement costs in this report apply only within the confines and objectives of this review. The costs herein must not be used in conjunction with any other appraisal or Depreciation Report and may be invalid if so used.

The strata corporation may use this report in deliberations affecting the subject property only, and in so doing, the report must not be abstracted; it must be used in its entirety.

The material in this report reflects the best judgement of JRS in light of the information available at the time of preparation.

Please contact the undersigned if you should require any additional information.

Prepared by:

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Per:

Reviewed by:



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OCT 17 2017



JRS ENGINEERING
BUILDING ENVELOPE CONSULTANTS

Appendix A

Technical Inventory – Component Descriptions

BUILDING ENVELOPE AND STRUCTURE

1

Concrete Structure (Parkade Walls/Stairs/Slabs)

Location:	Building Exterior
Year Installed:	1984
Typical Service Life (yrs):	50
Effective Age (yrs):	33
Remaining Service Life (yrs):	17
Planned Renewal Date:	2034



Description: This asset includes the exposed concrete parkade walls, stairs, slabs.

Condition: This asset appears to be in reasonable condition.

Short-Term Action Required: It is recommended to monitor the concrete walls, stairs, and slabs for excessive cracking and to engage a geotechnical engineer to assess the rate of building settlement.

Comments: The building manager pointed out that there is some floor settlement in the lobby area. JRS has also noted some cracking in the floor finish in the upper levels likely due to differential movement of the structure.

2

Balcony Guardrails

Location:	Building Exterior
Year Installed:	1984
Typical Service Life (yrs):	30
Effective Age (yrs):	27
Remaining Service Life (yrs):	3
Planned Renewal Date:	2020



Description: The balcony metal railings are secured to the decks by surface mounting with screws.

Condition: The guard rails appear to be in reasonable condition.

Comments: JRS recommends replacing the railings with side mounted railings to minimize the amount of penetrations through membranes. An allowance has been made to renew this asset and should be done in tandem with membrane renewals.

3

Balcony Membrane Assemblies

Building Envelope and Structure

Location:	Building Exterior
Year Installed:	1984
Typical Service Life (yrs):	15
Effective Age (yrs):	12
Remaining Service Life (yrs):	3
Planned Renewal Date:	2020



Description: The purpose of balcony membranes is to be the first line of defence against water penetration into the building's structural components and interior space. The balcony membranes are liquid applied on top of a wood framed deck. Water drains from the balcony by flowing off the edge of the deck. 16 balcony membranes and soffits were renewed in 2014.

Condition: This asset appears to be in fair condition; however, there are some balconies with localized failure.

Short-Term Action Required: It is recommended to perform a building envelope condition assessment (BECA). Based on the BECA, the renewal years and costs for the wood cladding, balcony membranes, and brick cladding can be adjusted.

4

Exterior Walls (Wood Siding)

Building Envelope and Structure

Location:	Building Exterior Perimeter
Year Installed:	1984
Typical Service Life (yrs):	30
Effective Age (yrs):	27
Remaining Service Life (yrs):	3
Planned Renewal Date:	2020



Description: The wood siding is part of the building's face-sealed design.

Condition: This asset appears to be in fair condition, but is due for renewals. Minor warping of the wood panels on the roof were noted.

Comments: A non-rainscreen wall assembly will result in higher levels of moisture at and behind the wood cladding. The wood's susceptibility to trapped moisture will decrease its service life. The eventual replacement of the wood cladding will incorporate a rainscreen wall assembly per BC building Code requirements. An allowance has been included for a BECA report in 2018.

5

Exterior Walls (Brick)

Building Envelope and Structure

Location:	Building Exterior
Year Installed:	1984
Typical Service Life (yrs):	30
Effective Age (yrs):	27
Remaining Service Life (yrs):	3
Planned Renewal Date:	2020



Description: The brick cladding incorporates a rainscreen design and is used in a small percentage of the building's overall cladding.

Condition: The brick cladding appears to be in fair condition. Some areas require repointing as voids are noticeable.

Short-Term Action Required: Repoint brickwork where voids are evident to prevent water ingress and further deterioration.

6

Window Assemblies

Building Envelope and Structure

Location:	Building Exterior
Year Installed:	1984
Typical Service Life (yrs):	30
Effective Age (yrs):	27
Remaining Service Life (yrs):	3
Planned Renewal Date:	2020



Description: The windows are aluminum framed, dual pane windows with aluminum spacers.

Condition: The windows appear to be in fair condition.

Short-Term Action Required: It is recommended to perform a building envelope condition assessment (BECA) which may adjust renewal years.

Short-Term Action Required: The current window assemblies pose several risks to the building. The thermally conductive nature of the aluminum window frame may increase condensation on interior surfaces and increase the risk of deterioration and organic growth. They do not have adequate sill/head flashings and sealants at jambs, which serve to protect the window assembly from precipitation. Considerations should be made towards switching to a thermally improved design for the next renewal.



7

Sliding Doors

Building Envelope and Structure

Location:	Building Exterior – Balcony Locations
Year Installed:	1984
Typical Service Life (yrs):	30
Effective Age (yrs):	27
Remaining Service Life (yrs):	3
Planned Renewal Date:	2020



Description: The sliding doors provide access from the units to the balcony space. They consist of aluminum framed, dual paned insulated glass units (IGUs) with an aluminum spacer bar.

Condition: The sliding doors appear to be in fair condition. They are partially protected from exposure by the balcony above.

Comments: An allowance has been made for replacing the sliding doors.

8

Swing Doors

Building Envelope and Structure

Location:	Building Exterior and Interior
Year Installed:	1984
Typical Service Life (yrs):	30
Effective Age (yrs):	27
Remaining Service Life (yrs):	3
Planned Renewal Date:	2019



Description: These doors provide interior and exterior access to areas which do not require fire separation.

Condition: The doors appear to be in reasonable condition.

Comments: Replacement costs have been applied to a percentage of doors.

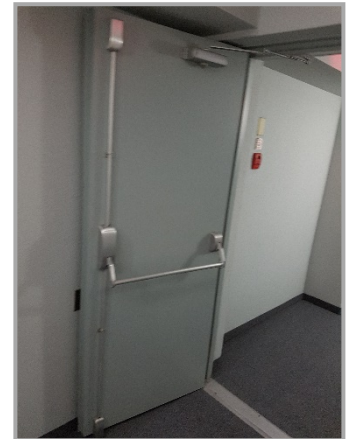


9

Service Doors

Building Envelope and Structure

Location:	Building Exterior and Interior
Year Installed:	1984
Typical Service Life (yrs):	50
Effective Age (yrs):	33
Remaining Service Life (yrs):	17
Planned Renewal Date:	2034



Description: These metal doors are typically more robust than non-rated doors. They provide fire separation and additional security to the building's service rooms.

Condition: The doors appear to be in reasonable condition. The strata council representative informed JRS that four service doors were replaced in 2016.

Comments: An allowance has been made to replace a percentage of the doors.

10

Front Entrance Doors

Building Envelope and Structure

Location:	Building Exterior
Year Installed:	1984
Typical Service Life (yrs):	35
Effective Age (yrs):	32
Remaining Service Life (yrs):	3
Planned Renewal Date:	2019



Description: There are two main entrances to the building. Each entrance has 2 sets of glazed aluminum doors.

Condition: The doors appear to be in fair working condition.

Comments: Item will be revisited at the next depreciation report for an update. Due to the aesthetic nature of this asset, its renewal year is subjective and at the discretion of the Strata Council.

11

Paint Coating

Building Envelope and Structure

Location:	Building Exterior
Year Installed:	2005
Typical Service Life (yrs):	10
Effective Age (yrs):	7
Remaining Service Life (yrs):	3
Planned Renewal Date:	2018



Description: This item applies to exterior paint coatings for the wood cladding.

Condition: The paint appears to be in fair condition. Paint peeling in localized areas were noticeable.

Comments: Especially in face-sealed wall assemblies, paint coatings are typically the first and only defence against moisture ingress. An allowance has been made to periodically paint the exterior. The renewals may be preformed in varying capacities during future building envelope renewals.

12

Fireplace Vents

Building Envelope and Structure

Location:	Building Roof
Year Installed:	1984
Typical Service Life (yrs):	40
Effective Age (yrs):	33
Remaining Service Life (yrs):	7
Planned Renewal Date:	2024



Description: Each unit has a fireplace, which vents out at the roof.

Condition: This asset appears to be in fair condition. Some corrosion is noticeable on a few vents.

Comments: An allowance has been made to replace the vents on the roof and may be done in tandem with roofing or cladding renewals. May be replaced earlier for aesthetic purposes.

13

Sealant

Building Envelope and Structure

Location:	Building Exterior
Year Installed:	1984
Typical Service Life (yrs):	10
Effective Age (yrs):	7
Remaining Service Life (yrs):	3
Planned Renewal Date:	2019



Description: Sealant provides a flexible continuous transition between different cladding materials and at penetrations through the exterior wall. It acts as a water shedding surface to prevent the ingress of water through the building envelope.

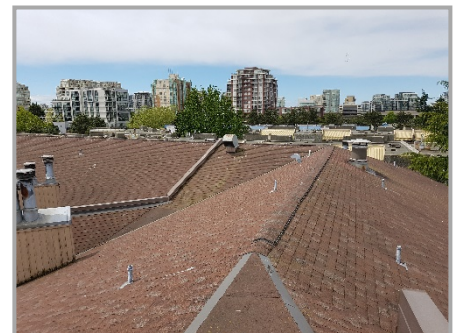
Comments: No exterior sealants were noted on site. It appears that the wood cladding was applied tight against the windows assembly. Allowances were made for sealant application around the jambs of wall penetrations such as windows and doors. We recommend coordinating this item in tandem with exterior painting renewals.

14

Steep Slope Asphaltic Shingles

Building Envelope and Structure

Location:	Building Exterior - Roof
Year Installed:	2001
Typical Service Life (yrs):	25
Effective Age (yrs):	16
Remaining Service Life (yrs):	9
Planned Renewal Date:	2031



Description: The steep sloped roof is likely comprised of asphaltic shingles, underlayment and plywood sheathing. This type of roof is located on the top level and on the ground floor entrances.

Condition: This asset appears to be in reasonable condition.

Comments: An allowance has been made for a comprehensive replacement of this item.

15

Gutters and Downspouts

Building Envelope and Structure

Location:	Building Exterior
Year Installed:	2014
Typical Service Life (yrs):	15
Effective Age (yrs):	3
Remaining Service Life (yrs):	14
Planned Renewal Date:	2031



Description: This item includes gutters and downspouts, which direct water off the building's roof into the city's storm water system.

Condition: The gutters and downspouts appear to be in reasonable condition.

Comments: An allowance has been made for partial renewals.

16

Below Grade Membrane

Building Envelope and Structure

Location:	Building Exterior - Above Parkade Ceiling
Year Installed:	1984
Typical Service Life (yrs):	50
Effective Age (yrs):	33
Remaining Service Life (yrs):	17
Planned Renewal Date:	2034



Description: The below grade membrane is from original construction and serves to prevent water ingress from the softscaping into parkade. The waterproofing membrane around the perimeter of the building was renewed in 2014.

Condition: The below grade membrane could not be reviewed with a visual site visit. According to the strata representatives on site, there has not been significant water ingress into the parkade.

Comments: Monitor for leaks and patch as necessary. We have included an allowance for the renewal of the membrane. This will require a relocation of all softscaping which sit above the parkade.



INTERIOR

17

Lobby

Interior

Location:	Building Interior
Year Installed:	2016
Typical Service Life (yrs):	30
Effective Age (yrs):	1
Remaining Service Life (yrs):	29
Planned Renewal Date:	2046



Description: There are two lobby areas at each end of the building. The main office is located at the 8500 entrance.

Condition: This asset appears to be in reasonable condition. There is some settlement of the flooring underneath the office which may decrease the service life of the flooring.

Comments: Due to the aesthetic nature of this asset, its renewal year is subjective and at the discretion of the strata council. We have made an allowance for the replacement of the finishes in the lobby.

18

Interior Doors

Interior

Location:	Building Interior
Year Installed:	1984
Typical Service Life (yrs):	50
Effective Age (yrs):	33
Remaining Service Life (yrs):	17
Planned Renewal Date:	2034



Description: The interior wooden doors provide access from the common corridor into the units.

Condition: The doors appear to be in reasonable condition.

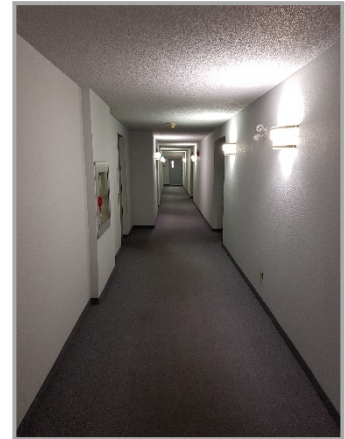
Comments: An allowance has been made to replace a percentage of the doors at its renewal date.



19

Finishes in Hallways, Stairwells, Common Areas

Location:	Building Interior
Year Installed:	1984
Typical Service Life (yrs):	20
Effective Age (yrs):	15
Remaining Service Life (yrs):	5
Planned Renewal Date:	2020



Description: The interior finishes applies to walls, floors and ceilings of the common areas including the hallways, stairs, and common rooms.

Condition: The carpets were renewed around 2007; however, the paint finishes are beginning to show its age. There are some localized areas on the upper levels near the laundry rooms where the floor finishes are damaged from settlement.

Comments: Consider repainting the wall and ceiling finishes. An allowance has been made for the renewing the interior.

CONVEYANCE

20

Elevator

Location:	Parkade - Elevator Machine Room
Year Installed:	1984
Typical Service Life (yrs):	30
Effective Age (yrs):	28
Remaining Service Life (yrs):	2
Planned Renewal Date:	2019



Description: There are three hydraulic elevators which services the building on all floors.

Condition: This asset appears to be in fair condition. At the time of the site visit, one elevator is broken down and waiting for repairs.

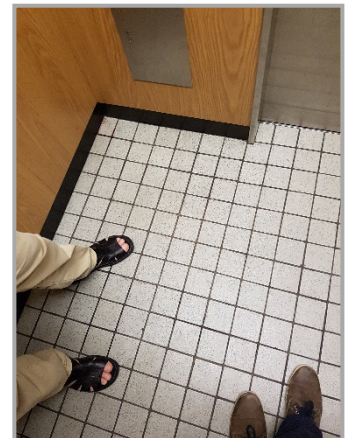
Short-Term Action Required: If not already done, we recommend having a qualified elevator professional to review the elevators and provide the strata corporation with a detailed modernization plan.

Comments: An allowance has been made for a professional review of the hydraulic elevators.

21

Elevator Cab Finishes

Location:	Building Interior
Year Installed:	1984
Typical Service Life (yrs):	15
Effective Age (yrs):	13
Remaining Service Life (yrs):	2
Planned Renewal Date:	2019



Description: This item includes the interior finishes inside the elevator cab.

Condition: Appears to be in fair condition given its chronological age.

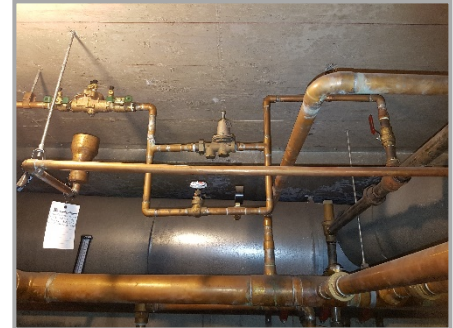
Comments: Due to the aesthetic nature of this asset, its renewal year is subjective and at the discretion of the Strata Council. We have made an allowance for finishes to be renewed at the same time as the hydraulic elevator. Finishes should be maintained as necessary to extend its service life.

MECHANICAL

22

Domestic Cold Water Pipes

Location:	Building Interior
Year Installed:	1984
Typical Service Life (yrs):	30
Effective Age (yrs):	27
Remaining Service Life (yrs):	3
Planned Renewal Date:	2020



Description: The domestic water pipes are of copper material and provide cold water to units.

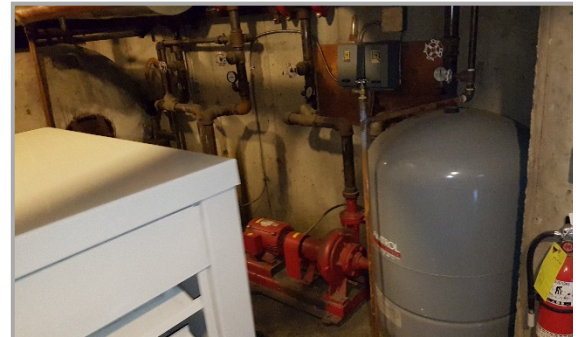
Condition: This component could not be comprehensively reviewed with a visual site visit; however, the building manager informed JRS that piping leaks were minimal.

Short-Term Action Required: Consider a pipe assessment by a qualified engineer to provide a detailed report on the water piping's condition. An allowance has been made for an engineering review and replacement of piping.

23

Domestic Hot Water Pipes

Location:	Building Interior
Year Installed:	2011
Typical Service Life (yrs):	30
Effective Age (yrs):	6
Remaining Service Life (yrs):	24
Planned Renewal Date:	2041



Description: The domestic water pipes are of copper material and provide cold water to units.

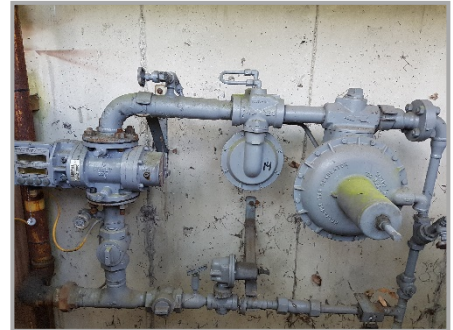
Condition: This component could not be comprehensively reviewed with a visual site visit; however, the building manager informed JRS that hot water piping was renewed with PEX piping in 2011. We have assumed that the recirculation line was included in the hot water piping replacement.

24

Gas Pipes

Mechanical

Location:	Building Exterior – Below Grade
Year Installed:	1984
Typical Service Life (yrs):	50
Effective Age (yrs):	33
Remaining Service Life (yrs):	17
Planned Renewal Date:	2034



Description: This item includes the below grade gas pipes which supplies gas to the mechanical room.

Condition: This component could not be comprehensively reviewed with a visual site visit.

Comments: Consider having the pipes reviewed by a qualified engineer in tandem with the domestic water pipes.

25

Boilers

Mechanical

Location:	Building Interior – Parkade Mechanical Room
Year Installed:	2008
Typical Service Life (yrs):	20
Effective Age (yrs):	9
Remaining Service Life (yrs):	11
Planned Renewal Date:	2028



Description: These boilers heat the domestic cold water for distribution throughout the entire building.

Condition: The asset appears to be in serviceable condition.

26

Furnaces

Mechanical

Location:	Building Interior – Parkade Mechanical Room
Year Installed:	2008
Typical Service Life (yrs):	20
Effective Age (yrs):	9
Remaining Service Life (yrs):	11
Planned Renewal Date:	2028



Description: The furnaces provides heated air which is distributed into the common areas of the building.

Condition: The furnaces appear to be in reasonable condition.

27

Hot Water Storage Tank

Mechanical

Location:	Building Interior – Parkade Mechanical Room
Year Installed:	2005
Typical Service Life (yrs):	12
Effective Age (yrs):	9
Remaining Service Life (yrs):	3
Planned Renewal Date:	2020



Description: The hot water tank stores and circulates hot water throughout the building.

Condition: The hot water tank appears to be in serviceable condition.

Comments: An allowance has been made of the future replacement of the hot water tank. Consider having the tanks reviewed in tandem with domestic water pipes.

28

Mechanical Room Components

Location:	Building Interior – Parkade Mechanical Room
Year Installed:	2005
Typical Service Life (yrs):	10
Effective Age (yrs):	5
Remaining Service Life (yrs):	5
Planned Renewal Date:	2022



Description: The item includes miscellaneous mechanical room items such as valves, pumps, expansion tanks and sensors.

Condition: This asset appears to be in serviceable condition.

Comments: Continue with regular maintenance by qualified mechanical professionals. An allowance has been made for replacing a percentage of the components.

29

HVAC - Building

Location:	Building Interior
Year Installed:	1984
Typical Service Life (yrs):	20
Effective Age (yrs):	17
Remaining Service Life (yrs):	3
Planned Renewal Date:	2020



Description: There are at least four make up air units to circulate outdoor air throughout the common areas of the building.

Condition: This component could not be comprehensively reviewed with a visual site visit, but is functioning as intended as noted by the building manager.

Comments: An allowance has been made for the renewals of the make up air units. Continue with scheduled inspections and maintenance of the HVAC components. Consider renewing the MUAs to maintain adequate indoor air quality.

ELECTRICAL

30

Service Distribution

Location:	Building Interior – Parkade Electrical Room
Year Installed:	1984
Typical Service Life (yrs):	50
Effective Age (yrs):	33
Remaining Service Life (yrs):	17
Planned Renewal Date:	2034



Description: This item includes underground wiring, as well as electrical service distribution equipment (i.e. transformers, breaker panels, disconnect switches, etc.).

Condition: This asset appears to be in reasonable condition.

Comments: An allowance has been made for electrical vault room cleaning and scanning every 6 years along with a percentage to replace failed components.

31

Power Distribution

Location:	Building Interior
Year Installed:	1984
Typical Service Life (yrs):	40
Effective Age (yrs):	33
Remaining Service Life (yrs):	7
Planned Renewal Date:	2024



Description: This item includes interior wiring in common walls, interior lighting, and baseboard heaters.

Condition: This asset appears to be in reasonable condition.

Comments: An allowance has been made for a percentage of these items to be replaced as need.

32

Enterphone System

Location:	Building Interior – Front Entrance
Year Installed:	1984
Typical Service Life (yrs):	35
Effective Age (yrs):	33
Remaining Service Life (yrs):	2
Planned Renewal Date:	2019



Description: There is one Enterphone panel located at the two main entrances on the interior side. This system allows visitors and owners to page a specific suite for secured access into the building.

Condition: This asset appears to be in fair condition.

Comments: Consider renewing the enterphone system to maintain aesthetics and functionality.

33

Security Access, Systems and Cameras

Location:	Building Exterior - Parkade
Year Installed:	2009
Typical Service Life (yrs):	25
Effective Age (yrs):	8
Remaining Service Life (yrs):	17
Planned Renewal Date:	2034



Description: There are eight security cameras which monitor the building's premises. Access to the building can be done by using keys or a key fob.

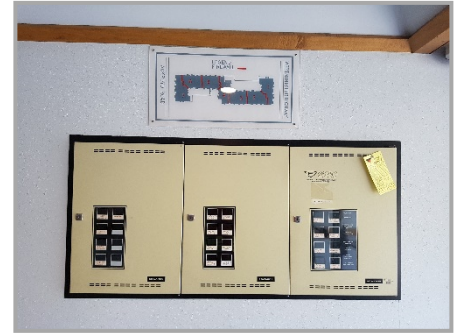
Condition: The camera system could not be comprehensively reviewed with a visual site visit. The building manager informed us that it is in working order and that a parkade gate is being considered.

Comments: An allowance has been made to modernize the security system.

34

Fire Alarm Panel and Emergency Lighting

Location:	Building Interior - Lobby
Year Installed:	1984
Typical Service Life (yrs):	30
Effective Age (yrs):	29
Remaining Service Life (yrs):	1
Planned Renewal Date:	2018



Description: This item includes the buildings' fire alarm panels and emergency lighting. In an event of a fire, the panel indicates the locations where sensors/alarms have been set off. Error messages of the building's emergency systems will also be displayed on the panel. There is a panel located at the both main entrances to the building and each one monitors half the building.

Condition: Due to the age of the current system, its capabilities will be limited compared with current fire alarm panel systems.

Short-Term Action Required: We recommend a detailed review of the current system for a potential upgrade. Continue regular inspections and service by qualified fire protection professional.

Comments: An allowance has been made to replace the fire alarm panel and a percentage of the emergency lighting.

Electrical



SPECIALTY

35

Mailboxes

Location:	Building Interior - Lobby
Year Installed:	1984
Typical Service Life (yrs):	30
Effective Age (yrs):	20
Remaining Service Life (yrs):	10
Planned Renewal Date:	2020



Description: This item includes the metal mailboxes located just past the front entrance.

Condition: This asset appears to be in reasonable condition.

Comments: Due to the aesthetic nature of this asset, its renewal year is subjective and at the discretion of the strata council.

36

Laundry Room

Location:	Building Interior – Each Level
Year Installed:	1984
Typical Service Life (yrs):	30
Effective Age (yrs):	20
Remaining Service Life (yrs):	10
Planned Renewal Date:	2022



Description: The laundry consists of leased laundry machines which are not maintained by the strata. This component includes the room finishes only.

Condition: This asset appears to be in fair condition.

Comments: Consider renewing finishes to maintain aesthetics.

37

Fitness Room

Location:	Building Interior
Year Installed:	1984
Typical Service Life (yrs):	25
Effective Age (yrs):	24
Remaining Service Life (yrs):	1
Planned Renewal Date:	2018



Description: The gym room consists of a station of gym equipment, a radio, free weights, and two treadmills.

Condition: This asset appears to be in fair condition; however, the gym equipment is showing its age and the treadmills may have been damaged from a past water leak. Part of a T-bar ceiling panel has fallen to the floor.

Short-Term Action Required: Remediate the damaged finishes in the room and consider modernizing the gym equipment.

Comments: An allowance has been made for renewing the finishes and gym equipment.

38

Sauna

Location:	Building Interior – Parkade Level
Year Installed:	1984
Typical Service Life (yrs):	15
Effective Age (yrs):	10
Remaining Service Life (yrs):	5
Planned Renewal Date:	2020



Description: This asset includes the heater and the finishes for the sauna room.

Condition: This asset appears to be in reasonable condition.

Comments: Replace the heater and renew finishes as required.



39

Changeroom/Washrooms Fixtures

Location:	Building Interior – Parkade Level
Year Installed:	2013
Typical Service Life (yrs):	30
Effective Age (yrs):	4
Remaining Service Life (yrs):	26
Planned Renewal Date:	2043



Description: The women and male changerooms consists of showers, toilets and a sink.

Condition: This asset appears to be in reasonable condition.

Comments: The changerooms may have an extended service life because the hot tub has been removed. This item will be revisited at the next depreciation report for an update.

SITE SERVICES

40

Softscaping

Site Services

Location:	Building Exterior
Year Installed:	1984
Typical Service Life (yrs):	50
Effective Age (yrs):	33
Remaining Service Life (yrs):	17
Planned Renewal Date:	2034



Description: This item includes the grass, bushes, trees, planters, and underlying soil within the property line.

Condition: This asset appears to be in fair condition at most areas. Walkways are damaged by tree roots at some locations. Soil is sagging at locations where the retaining walls have failed.

Comments: Allowances have been allocated to targeted repairs and soil removal for waterproofing renewals. Due to the aesthetic nature of softscaping, its renewal year and scope of work is subjective and is at the discretion of the strata council and owners.

41

Hardscaping

Site Services

Location:	Building Exterior
Year Installed:	1984
Typical Service Life (yrs):	50
Effective Age (yrs):	33
Remaining Service Life (yrs):	17
Planned Renewal Date:	2034



Description: This item includes exterior pavement, walkways, benches and arbour.

Condition: This asset appears to be in reasonable condition.

Comments: Patch pavement as necessary and consider renewing the pavement if potholes become evident. Consider renewing arbour to maintain aesthetics.



42

Underground Water Supply and Drainage

Site Services

Location:	Building Exterior – Below Grade
Year Installed:	1984
Typical Service Life (yrs):	50
Effective Age (yrs):	33
Remaining Service Life (yrs):	17
Planned Renewal Date:	2034



Description: This item includes the buildings below grade water supply and drainage.

Condition: This component could not be comprehensively reviewed with a visual site visit; however, it is assumed to be performing adequately as JRS was informed that the drainage system is regularly maintained.

Comments: An allowance has been made for flushing the drainage system every 5 years and performing a detailed inspection 3 years prior to the planned renewal date.

43

Outdoor Lighting and Electrical

Site Services

Location:	Building Exterior
Year Installed:	1984
Typical Service Life (yrs):	40
Effective Age (yrs):	33
Remaining Service Life (yrs):	7
Planned Renewal Date:	2024



Description: The building's exterior lighting consists of wall mounted lights and pole lighting.

Condition: This asset appears to be in reasonable condition.

Comments: Replace lights as necessary and consider replacing with LED lighting for energy savings.

44

Retaining Walls

Site Services

Location:	Building Exterior – Property Line
Year Installed:	1984
Typical Service Life (yrs):	25
Effective Age (yrs):	23
Remaining Service Life (yrs):	2
Planned Renewal Date:	2019



Description: This item includes the wooden and block retaining walls in the building's exterior.

Condition: This asset is in poor condition. The retaining walls have given way and caused damage to adjacent walkways and softscaping. We understand that the strata council is considering renewing the walls in the near future.

Short-Term Action Required: Repair or renew the retaining walls to maintain a safe walking path. We have made an allowance to renew a large portion of the retaining walls.

Comments: An allowance has been made for the replacement of a significant percentage of retaining walls.

45

Site Handrails

Site Services

Location:	Building Exterior – Exterior Deck
Year Installed:	1984
Typical Service Life (yrs):	30
Effective Age (yrs):	25
Remaining Service Life (yrs):	5
Planned Renewal Date:	2022



Description: This item includes the railings located around the 2nd level decks. They are the same type of railings used for the balconies and are surface mounted on concrete curbs.

Condition: This asset appears to be in reasonable condition.

Comments: Due to the aesthetic nature of the railings, its renewal year and scope of work is subjective and may be at the discretion of the strata council and owners.



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Appendix B

Lifecycle Renewal Costs (Benchmark Analysis)

WESTHAMPTON

LIFE CYCLE RENEWAL COSTS

Inflation Factor3.0%

Interest Rate0.68%

APPENDIX B

LIFE CYCLE RENEWAL COSTS

(Benchmark Analysis)

RESERVE COMPONENTS

BENCHMARK ANALYSIS

	YEAR INSTALLED	TYPICAL LIFE (Yrs)	EFFECTIVE AGE (Yrs)	REMAINING LIFE (Yrs)	RENEWAL YEAR	CURRENT REPLACEMENT COST	FUTURE REPLACEMENT COST	CURRENT RESERVE FUND REQUIREMENT	FUTURE RESERVE FUND ACCUMULATION	FUTURE RESERVE FUND REQUIREMENT	ANNUAL RESERVE FUND ASSESSMENT	RESERVE FUND ASSESSMENT ALLOCATION
BUILDING ENVELOPE AND STRUCTURE												
1 Concrete Structure (Parkade Walls/Stairs/Slabs)	1984	50	33	17	2034	54,381	89,884	35,891	40,274	49,609	2,763	0.61%
2 Balcony Guardrails	1984	30	27	3	2020	63,750	69,661	57,375	58,553	11,108	3,678	0.81%
3 Balcony Membrane Assemblies	1984	15	12	3	2020	500,000	546,364	400,000	408,216	138,148	45,738	10.12%
4 Exterior Walls (Wood Siding)	1984	30	27	3	2020	1,970,147	2,152,833	1,773,132	1,809,551	343,282	113,653	25.14%
5 Exterior Walls (Brick)	1984	30	27	3	2020	285,840	312,345	257,256	262,540	49,805	16,489	3.65%
6 Window Assemblies	1984	30	27	3	2020	272,466	297,731	245,219	250,256	47,475	15,718	3.48%
7 Sliding doors	1984	30	27	3	2020	207,000	226,194	186,300	190,126	36,068	11,941	2.64%
8 Swing Doors	1984	30	27	3	2020	1,500	1,639	1,350	1,378	261	87	0.02%
9 Service Doors	1984	50	33	17	2034	51,600	85,287	34,056	38,214	47,072	2,621	0.58%
10 Entrance Doors	1984	35	32	3	2020	26,400	28,848	24,137	24,633	4,215	1,396	0.31%
11 Paint Coating	2005	10	7	3	2020	131,343	143,522	91,940	93,828	49,694	16,452	3.64%
12 Fireplace Vents	1984	40	33	7	2024	51,750	63,646	42,694	44,768	18,878	2,642	0.58%
13 Sealant	1984	10	7	3	2020	7,694	8,407	5,386	5,496	2,911	964	0.21%
14 Steep Slope Asphaltic Shingles	2001	25	16	9	2026	601,200	784,430	384,768	408,967	375,463	40,596	8.98%
15 Gutters and Downspouts	2014	15	3	12	2029	12,991	18,522	2,598	2,818	15,704	1,260	0.28%
16 Below Grade Membrane	1984	50	33	17	2034	353,800	584,777	233,508	262,021	322,756	17,974	3.98%
INTERIOR												
17 Lobby	2016	30	1	29	2046	23,040	54,295	768	935	53,360	1,671	0.37%
18 Interior Doors	1984	50	33	17	2034	34,500	57,023	22,770	25,550	31,473	1,753	0.39%
19 Finishes in Hallways, Stairwells, Common Areas	1984	20	15	5	2022	280,202	324,831	210,152	217,394	107,436	21,197	4.69%
CONVEYANCE												
20 Elevator	1984	30	28	2	2019	300,000	318,270	280,000	283,821	34,449	17,166	3.80%
21 Elevator Cab Finishes	1984	15	13	2	2019	36,000	38,192	31,200	31,626	6,567	3,272	0.72%
MECHANICAL												
22 Domestic Cold Water Pipes	1984	30	27	3	2020	250,000	273,182	225,000	229,621	43,560	14,422	3.19%
23 Domestic Hot Water Plpes	2011	30	6	24	2041	250,000	508,199	50,000	58,831	449,367	17,301	3.83%
24 Gas Pipes	1984	50	33	17	2034	5,601	9,258	3,697	4,148	5,110	285	0.06%
25 Boilers	2008	20	9	11	2028	16,000	22,148	7,200	7,757	14,390	1,264	0.28%
26 Furnaces	2008	20	9	11	2028	11,000	15,227	4,950	5,333	9,893	869	0.19%
27 Hot Water Storage Tank	2005	12	9	3	2020	5,600	6,119	4,200	4,286	1,833	607	0.13%
28 Mechanical Room Components	2005	10	5	5	2022	12,000	13,911	6,000	6,207	7,704	1,520	0.34%
29 HVAC- Building	1984	20	17	3	2020	55,204	60,323	46,923	47,887	12,436	4,117	0.91%
ELECTRICAL												
30 Service Distribution	1984	50	33	17	2034	8,280	13,686	5,465	6,132	7,553	421	0.09%
31 Power Distribution	1984	40	33	7	2024	55,477	68,230	45,769	47,992	20,238	2,833	0.63%
32 Enterphone System	1984	35	33	2	2019	24,000	25,462	22,629	22,937	2,524	1,258	0.28%
33 Security Access, System and Cameras	2009	25	8	17	2034	18,000	29,751	5,760	6,463	23,288	1,297	0.29%
34 Fire Alarm Panel and Emergency Lighting	1984	30	29	1	2018	43,755	45,068	42,297	42,584	2,484	2,484	0.55%
SPECIALTY												
35 Mailboxes	1984	30	20	10	2027	10,768	14,471	7,179	7,682	6,789	658	0.15%
36 Laundry Room	1984	30	20	10	2027	7,642	10,270	5,095	5,452	4,818	467	0.10%
37 Fitness Room	1984	25	24	1	2018	17,071	17,583	16,388	16,500	1,084	1,084	0.24%
38 Sauna	1984	15	10	5	2022	5,500	6,376	3,667	3,793	2,583	510	0.11%
39 Changeroom/Washrooms Fixtures	2013	30	4	26	2043	9,600	20,703	1,280	1,527	19,177	677	0.15%
SITE SERVICES												
40 SoftScaping	1984	50	33	17	2034	1,019,843	1,685,645	673,096	755,287	930,359	51,810	11.46%
41 Hardscaping	1984	50	33	17	2034	99,380	164,260	65,591	73,600	90,660	5,049	1.12%
42 Underground Water Supply and Drainage	1984	50	33	17	2034	6,244	10,320	4,121	4,624	5,696	317	0.07%
43 Outdoor Lighting and Electrical	1984	40	33	7	2024	11,200	13,775	9,240	9,689	4,086	572	0.13%
44 Retaining Walls	1984	25	23	2	2019	20,700	21,961	19,044	19,304	2,657	1,324	0.29%
45 Site Handrails	1984	30	25	5	2022	11,880	13,772	9,900	10,241	3,531	697	0.15%
RESERVE FUND PLANNING												
Certified Reserve Fund Consultant	2017	3	1	3	2020	5,000	5,464	1,667	1,701	3,763	1,246	0.28%
TOTAL RESERVES						7,257,229	9,293,744	5,606,656	5,860,545	3,421,319	452,117	100%

DEFINITIONS

RESERVE COMPONENTS: Individual components within the major building systems. Note that some of these components were separated due to differences in installation dates. There may also be multiple renewals and smaller repairs included in the 30-year outlook. Minor components with insignificant renewal costs have either been combined with an allowance or not included in order to simplify financial analysis.

YEAR INSTALLED: Year the component was installed, which includes original construction or replacement. JRS assumes that all previously replaced components were new when installed, unless stated otherwise.

EXPECTED LIFE: Expected service life based on historical data and industry standards.

EFFECTIVE AGE: Assessed age of component. The default is the chronological age, but may be adjusted based on condition, location (exposure to weather and traffic), installation, maintenance, brand, model, etc.

REMAINING LIFE: Effective Age subtracted from Expected Life.

RENEWAL YEAR: Sum of current year and Remaining Life.

CURRENT REPLACEMENT COST: Cost to replace now, calculated as a product of Unit Measure and Unit Cost.

FUTURE REPLACEMENT COST: Cost to replace at expected date (including compounded inflation).

CURRENT RESERVE FUND REQUIREMENT: Amount needed in CRF now. What PRAs refer to as the FFB (Fully Funded Balance).

FUTURE RESERVE FUND ACCUMULATION: Amount of funds the Strata should have for this item if it met the current CRF requirements, given the CRF account's interest rate.

FUTURE RESERVE FUND REQUIREMENT: What the Strata's deficit or surplus will be when it is time to replace.

ANNUAL RESERVE FUND ASSESSMENT: This is derived from the standard "Future Value of an Annuity" formula. Essentially, this tells the Strata how much it needs to contribute each year to make sure this item is fully funded (i.e. no special levies, assessments or loans).

RESERVE FUND ASSESSMENT ALLOCATION: Allocated percentage of entire CRF.



CONSIDERATIONS & LIMITATIONS

The service life and estimated age of a specific reserve component is highly subjective. It should not be used for the exact timing of replacements, but as a relative timing to be used to assist in developing a financial plan. The exact timing of replacements will be influenced by several factors that are difficult to quantify. These factors include but are not limited to the following:

- ♦ Design appropriateness of reserve component
- ♦ Installation of reserve component
- ♦ Frequency and intensity of maintenance
- ♦ Frequency of use and misuse
- ♦ Exposure to traffic and weather
- ♦ Brand, quality, and model of reserve components
- ♦ Unplanned events such as earthquakes, floods and fires

It should be noted that economies of scale may be achieved if multiple projects are bundled together into larger projects, thus sharing front-end and mobilization costs.

The estimated costs should be considered as “order-of-magnitude” and used to allocate funds to undertake the work, not for accounting purposes. Actual costs will vary based on a variety of factors, which include but are not limited to the following:

- ♦ labour and materials market conditions
- ♦ time of the year
- ♦ contractor availability
- ♦ site-specific conditions
- ♦ environment concerns
- ♦ design specifications
- ♦ functional obsolescence
- ♦ project delivery method
- ♦ tendering process
- ♦ code upgrades
- ♦ required emergency repairs discovered during construction
- ♦ occupancy use and facility operations

More accurate estimates can only be determined once the project objectives are specified and the work tendered. Project-related costs, such as consulting services, contingency allowances, front-end costs, all overhead and profit, have not been included.



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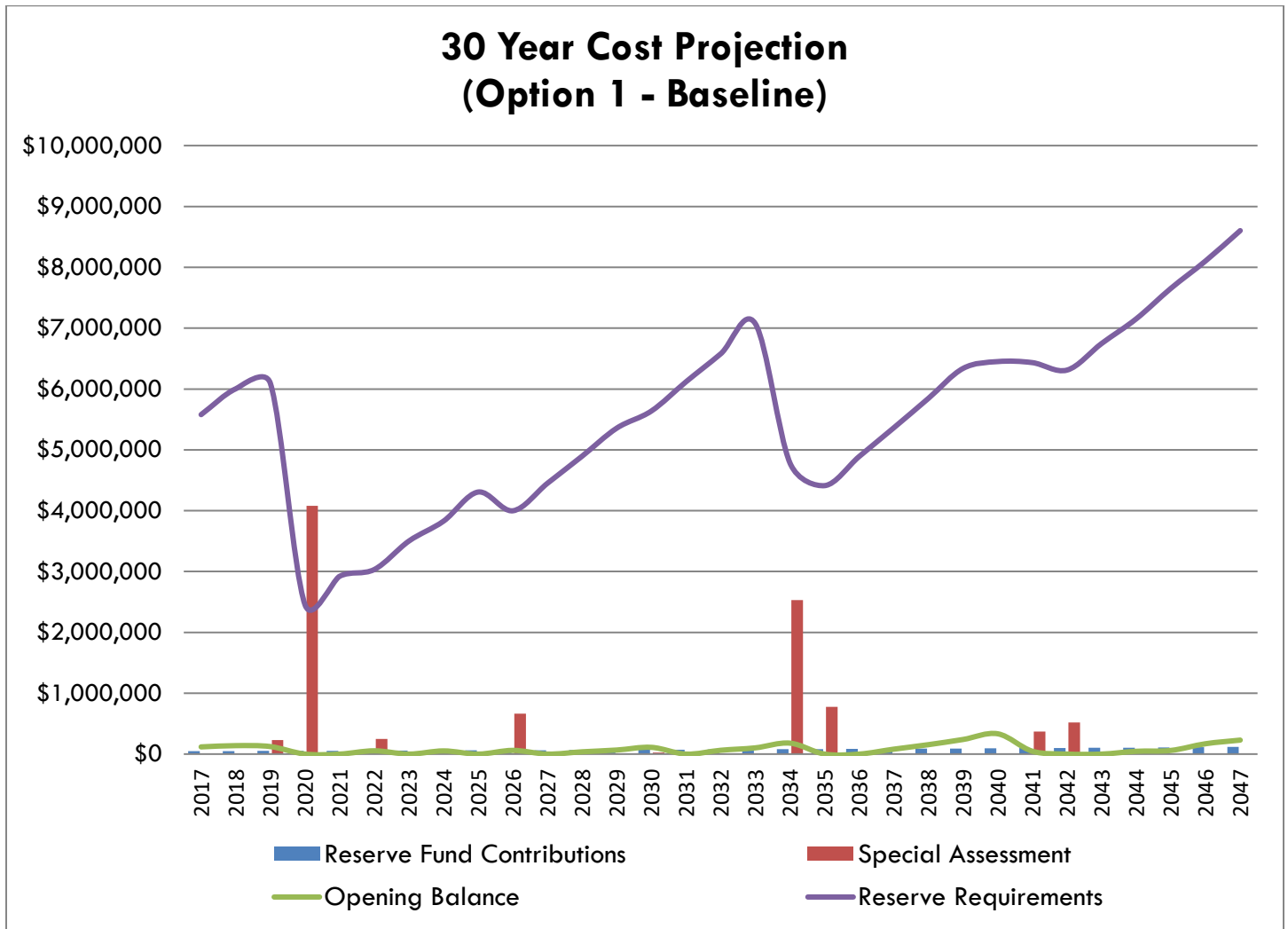
Appendix C

Funding Models & Cost Projections



OPTION 1 (BASELINE)

This model shows annual contributions (increasing with inflation) consistent with status quo (current contributions) or the statutory requirement of 10% of operating budget, whichever is higher. In this case the latter which equates to \$47,872. As seen below, multiple special levies will be required. From 2017 to 2047 (the end of the 30-year outlook), special levies will theoretically be required in 10 out of 30 years. This funding model does not allow for fair or equitable distribution of costs to the Owners, especially during the more expensive years.

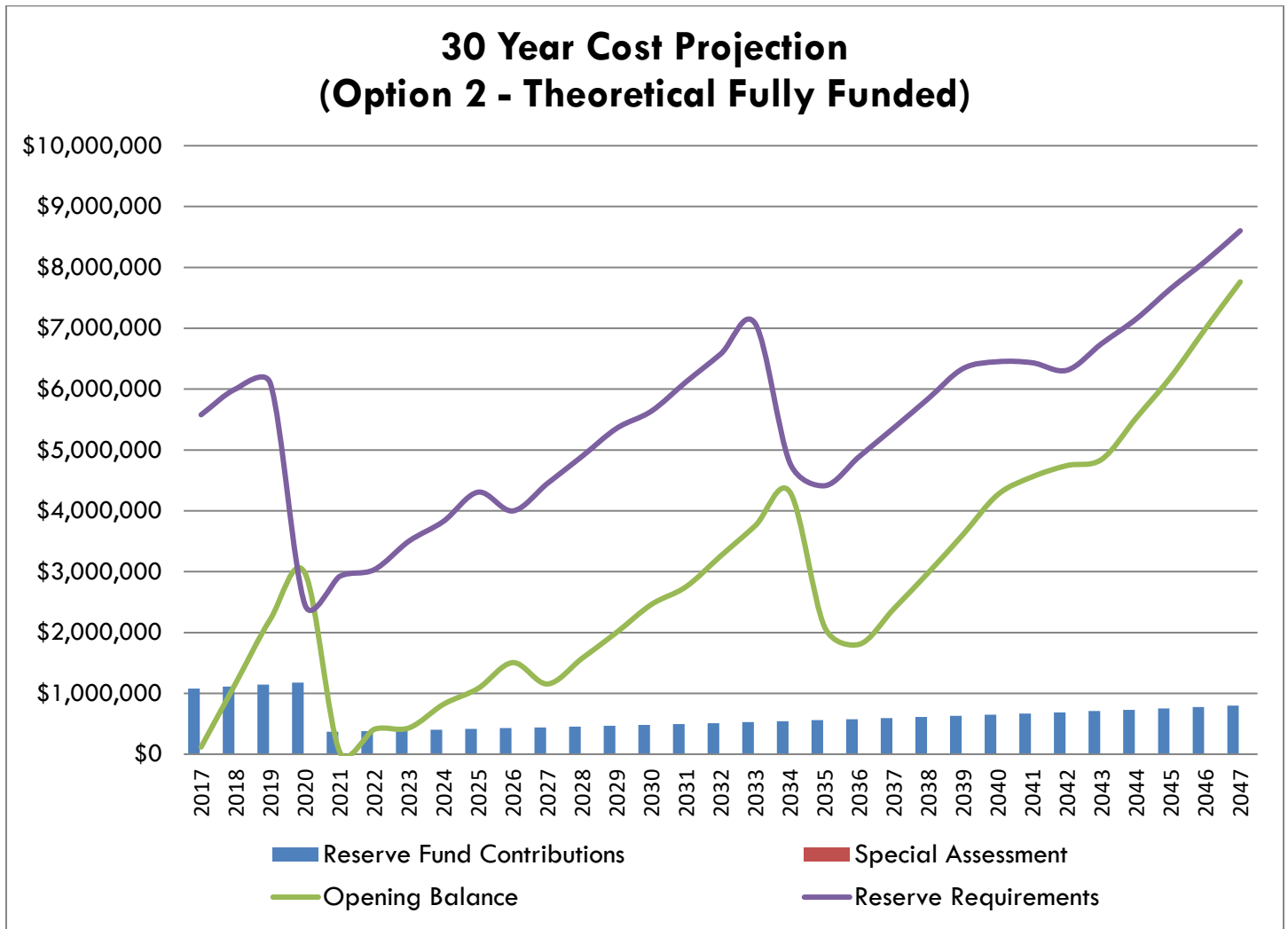




OPTION 2 (THEORETICAL FULLY FUNDED)

This model shows annual contributions (increasing with inflation) that would allow for a sufficient and fully funded CRF that should theoretically not require special levies during the 30-year outlook. This contribution level is immediate and based on the objective of achieving a positive value in the accumulated CRF balance after 30 years.

Fully funded contributions are usually much higher than the amount the Owners are actually contributing to the CRF. Therefore, it is usually impractical and difficult to achieve this immediately.

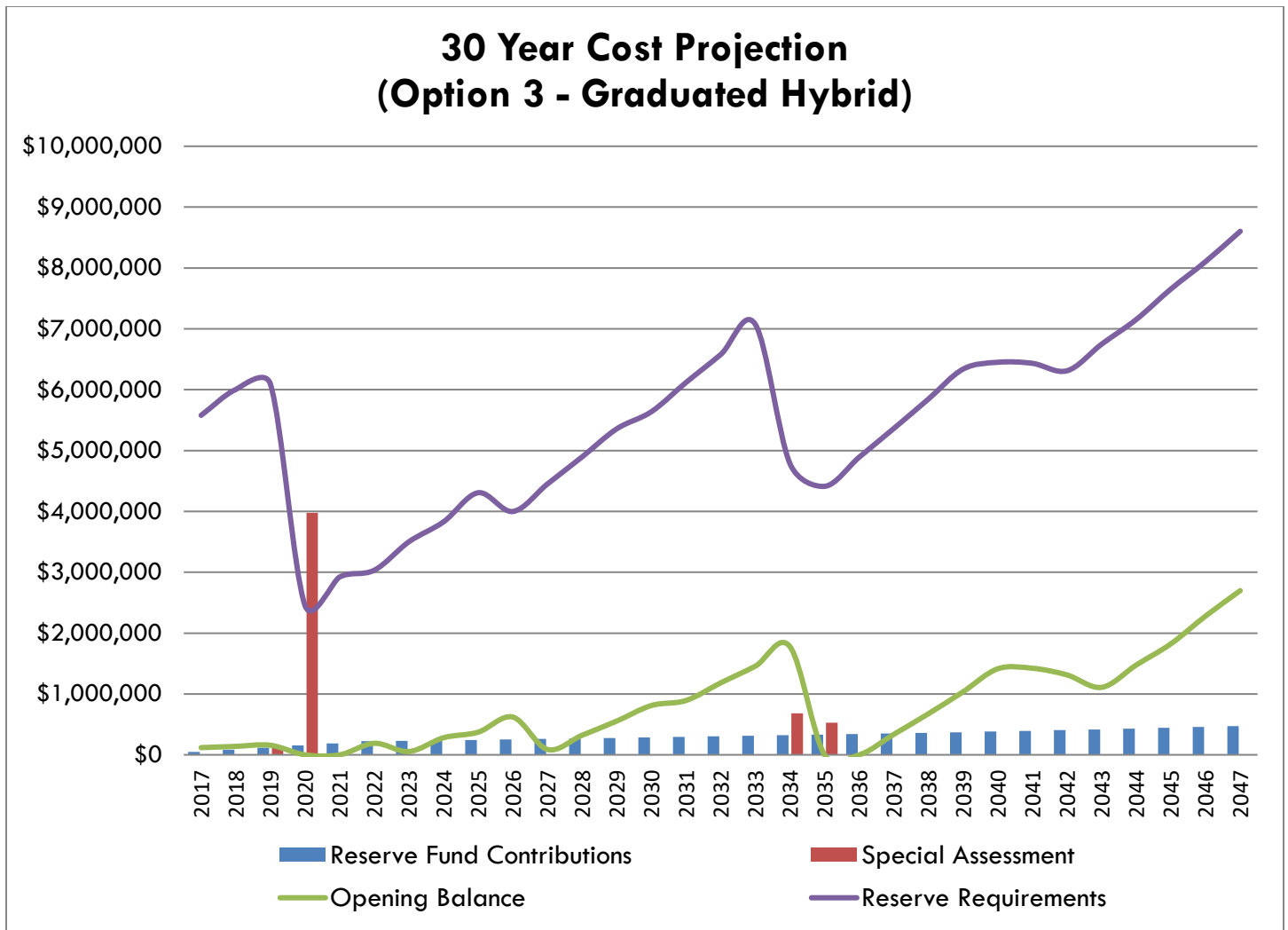


WESTHAMPTON		YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR
SAMPLE 30-YEAR PROJECTION		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	
OPENING BALANCE (CRF)		118,072	1,168,224	2,220,186	2,974,358	39,663	409,325	431,692	821,516	1,082,096	1,505,209	1,154,241	1,576,104	2,003,753	2,460,791	2,752,317	3,257,465	3,755,833	4,308,037	2,090,403	1,805,670	2,390,450	2,986,422	3,612,278	4,265,707	4,559,094	4,744,061	4,845,080	5,528,302	6,202,645	6,995,721	7,762,422	
Reserve Fund Contributions	3.00%	1,077,349	1,109,669	1,142,959	1,177,248	369,392	380,474	391,888	403,645	415,754	428,227	441,074	454,306	467,935	481,973	496,432	511,325	526,665	542,465	558,739	575,501	592,766	610,549	628,865	647,731	667,163	687,178	707,794	729,027	750,898	773,425	796,628	
Special Assessment			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Reserve Fund Interest Income	0.68%	803	7,944	15,097	20,226	270	2,783	2,936	5,586	7,358	10,235	7,849	10,718	13,626	16,733	18,716	22,151	25,540	29,295	14,215	12,279	16,255	20,308	24,563	29,007	31,002	32,260	32,947	37,592	42,178	47,571	52,784	
TOTAL CASH RESOURCES		1,196,224	2,285,837	3,378,243	4,171,832	409,325	792,582	826,516	1,230,747	1,505,209	1,943,671	1,603,164	2,041,127	2,485,313	2,959,498	3,267,465	3,790,941	4,308,037	4,879,797	2,663,357	2,393,450	2,999,471	3,617,278	4,265,707	4,942,445	5,257,259	5,463,498	5,585,820	6,294,922	6,995,721	7,816,717	8,611,835	
RESERVE FUND EXPENDITURES																																	
BUILDING ENVELOPE AND STRUCTURE																																	
1 Concrete Structure (Parkade Walls/Stairs/Slabs)	35,891	3,000	--	--	--	--	--	--	--	--	--	--	--	--	--	10,000	--	--	89,884	--	--	--	--	--	--	--	--	--	--	--	--	--	
2 Balcony Guardrails	57,375	--	--	--	69,661	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
3 Balcony Membrane Assemblies	400,000	--	--	--	546,364	--	--	--	--	--	--	--	--	--	--	--	--	--	--	851,217	--	--	--	--	--	--	--	--	--	--	--	--	
4 Exterior Walls (Wood Siding)	1,773,132	12,000	--	--	2,152,833	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
5 Exterior Walls (Brick)	257,256	--	--	--	312,345	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
6 Window Assemblies	245,219	--	--	--	297,731	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
7 Sliding doors	186,300	--	--	--	226,194	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
8 Swing Doors	1,350	--	--	--	1,639	--	--	--	--	--	--	--	--	--	--	--	--	--	--	150	--	--	--	--	--	--	--	--	--	--	--	--	
9 Service Doors	34,056	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	85,287	--	--	--	--	--	--	--	--	--	--	--	--	--	
10 Entrance Doors	24,137	--	--	--	28,848	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1,320	--	--	--	--	--	--	--	--	--	--	--	--	
11 Paint Coating	91,940	--	--	--	143,522	--	--	--	--	--	--	--	--	--	192,882	--	--	--	--	--	--	--	--	--	--	259,217	--	--	--	--	--	--	
12 Fireplace Vents	42,694	--	--	--	--	--	--	--	63,646	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
13 Sealant	5,386	--	--	--	8,407	--	--	--	--	--	--	--	--	--	11,299	--	--	--	--	--	--	--	--	--	--	--	15,185	--	--	--	--	--	
14 Steep Slope Asphaltic Shingles	384,768	--	--	--	--	--	--	--	--	--	784,430	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
15 Gutters and Downspouts	2,598	--	--	--	--	--	--	--	--	--	--	--	--	18,522	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	28,857	--	--	
16 Below Grade Membrane	233,508	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	584,777	--	--	--	--	--	--	--	--	--	--	--	--	--	
INTERIOR																																	
17 Lobby	768	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	54,295	--	
18 Interior Doors	22,770	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	57,023	--	--	--	--	--	--	--	--	--	--	--	--	--	
19 Finishes in Hallways, Stairwells, Common Areas	210,152	--	--	--	--	--	324,831	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	586,681	--	--	--	--	--	
CONVEYANCE																																	
20 Elevator	280,000	5,000	--	318,270	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
21 Elevator Cab Finishes	31,200	--	--	38,192	--	--	--	--	--	--	--	--	--	--	--	--	--	--	59,503	--	--	--	--	--	--	--	--	--	--	--	--	--	
MECHANICAL																																	
22 Domestic Cold Water Pipes	225,000	8,000	--	--	273,182	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
23 Domestic Hot Water Pipes	50,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	508,199	--	--	--	--	--	
24 Gas Pipes	3,697	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	9,258	--	--	--	--	--	--	--	--	--	--	--	--	--	
25 Boilers	7,200	--	--	--	--	--	--	--	--	--	--	--	22,148	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
26 Furnaces	4,950	--	--	--	--	--	--	--	--	--	--	--	15,227	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
27 Hot Water Storage Tank	4,200	--	--	--	6,119	--	--	--	--	--	--	--	--	--	--	--	8,725	--	--	--	--	--	--	--	--	--	--	--	12,439	--	--	--	
28 Mechanical Room Components	6,000	--	--	--	--	--	13,911	--	--	--	--	--	--	--	--	--	18,696	--	--	--	--	--	--	--	--	--	25,125	--	--	--	--	--	
29 HVAC- Building	46,923	--	--	--	60,323	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	108,950	--	--	--	--	--	--	--	--	--	--	
ELECTRICAL																																	
30 Service Distribution	5,465	--	3,000	--	--	--	--	--	3,000	--	--	--	--	--	3,000	--	--	--	13,686	--	3,000	--	--	--	--	--	--	3,000	--	--	--	--	
31 Power Distribution	45,769	--	--	--	--	--	--	--	68,230	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
32 Enterphone System	22,629	--	--	25,462	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
33 Security Access, System and Cameras	5,760	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	29,751	--	--	--	--	--	--	--	--	--	--	--	--	--	
34 Fire Alarm Panel and Emergency Lighting	42,297	--	45,068	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
SPECIALTY																																	
35 Mailboxes	7,179	--	--	--	--	--	--	--	--	--	--	14,471	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
36 Laundry Room	5,095	--	--	--	--	--	--	--	--	--	--	10,270	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
37 Fitness Room	16,388	--	17,583	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	36,815	--	--	--	--	--	
38 Sauna	3,667	--	--	--	--	--	6,376	--	--	--	--	--	--	--	--	--	--	--	--	--	9,934	--	--	--	--	--	--	--	--	--	--	--	
39 Changeroom/Washrooms Fixtures	1,280	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	20,703	--	--	--	--	
SITE SERVICES																																	
40 SoftScaping	673,096	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1,685,645	--	--	--	--	--	--	--	--	--	--	--	--	--	
41 Hardscaping	65,591	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	164,260	--	--	--	--										



OPTION 3 (GRADUATED HYBRID)

This model shows annual contributions that increases by intervals of \$35,337 each year until 2022. These increases can be revised during the 3 year updates based on a number of factors: actual CRF contributions, recent upgrades, anticipated short term expenditures, as well as current interest and inflation factors. This model generally indicates that eventually (5 years) the CRF contribution level achieves 50% of the fully funded contribution level (\$224,559) and is likely the most prudent option that the general Ownership would be willing to accept. The owners can ultimately revise the percent of annual increases and time it takes to get to this value.



[illegible]



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Appendix D

Cash Flow Table

**RESERVE FUND – CASH FLOW TABLE**

The Cash Flow Table presented below is for JRS' recommended Graduated Hybrid Funding Model. It demonstrates estimated cash flow over a 30-year period as the funding model is applied, including opening balance, of reserve fund contributions and expenditures as major components are expected to be replaced.

YEAR	OPENING BALANCE	RECOMMENDED ANNUAL CONTRIBUTION	SPECIAL ASSESSMENT	ESTIMATED INFLATION- ADJUSTED EXPENDITURES	ESTIMATED INTEREST EARNED 0.68	% INCREASE IN RECOMMENDED ANNUAL CONTRIBUTIONS	CLOSING BALANCE
2017	118,072	47,872	-	28,000	803	--	138,747
2018	138,747	83,209	-	65,651	943	73.82%	157,249
2019	157,249	118,547	127,020	403,885	1,069	42.47%	0
2020	-	153,884	3,978,284	4,132,169	-	29.81%	-
2021	-	189,222	-	-	-	22.96%	189,222
2022	189,222	224,559	-	360,890	1,287	18.68%	54,177
2023	54,177	231,296	-	5,000	368	3.00%	280,841
2024	280,841	238,235	-	148,650	1,910	3.00%	372,335
2025	372,335	245,382	-	-	2,532	3.00%	620,249
2026	620,249	252,743	-	789,430	4,218	3.00%	87,780
2027	87,780	260,325	-	27,060	597	3.00%	321,642
2028	321,642	268,135	-	37,374	2,187	3.00%	554,590
2029	554,590	276,179	-	24,522	3,771	3.00%	810,019
2030	810,019	284,465	-	207,181	5,508	3.00%	892,811
2031	892,811	292,999	-	10,000	6,071	3.00%	1,181,881
2032	1,181,881	301,789	-	35,108	8,037	3.00%	1,456,598
2033	1,456,598	310,842	-	-	9,905	3.00%	1,777,345
2034	1,777,345	320,167	679,795	2,789,394	12,086	3.00%	-
2035	-	329,772	527,914	857,687	-	3.00%	-
2036	-	339,666	-	3,000	-	3.00%	336,666
2037	336,666	349,856	-	13,050	2,289	3.00%	675,761
2038	675,761	360,351	-	5,000	4,595	3.00%	1,035,707
2039	1,035,707	371,162	-	-	7,043	3.00%	1,413,912
2040	1,413,912	382,297	-	383,351	9,615	3.00%	1,422,472
2041	1,422,472	393,766	-	513,199	9,673	3.00%	1,312,712
2042	1,312,712	405,579	-	618,418	8,926	3.00%	1,108,798
2043	1,108,798	417,746	-	57,518	7,540	3.00%	1,476,566
2044	1,476,566	430,278	-	92,277	10,041	3.00%	1,824,608
2045	1,824,608	443,187	-	-	12,407	3.00%	2,280,202
2046	2,280,202	456,482	-	54,295	15,505	3.00%	2,697,894
2047	2,697,894	470,177	-	9,188	18,346	3.00%	3,177,229



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Appendix E

Reserve Fund Study Team



OUR RESERVE PLANNING TEAM



Wesley Narciso, P.Eng., CRP, PRA, LEED® AP

Senior Project Engineer | Division Manager

Wesley is a senior project engineer, division manager and part owner at JRS Engineering. For approximately 15 years, Wesley has been providing engineering consulting services in Canada and in the United States. This includes 5 years in materials testing and failure analysis and 10 years in building envelope consulting, consisting of over 400 building condition, materials testing and failure analysis reports. His experience includes design, project management, financial analysis/capital asset planning, litigation support and warranty dispute resolution, for a variety of projects throughout the Pacific Northwest.

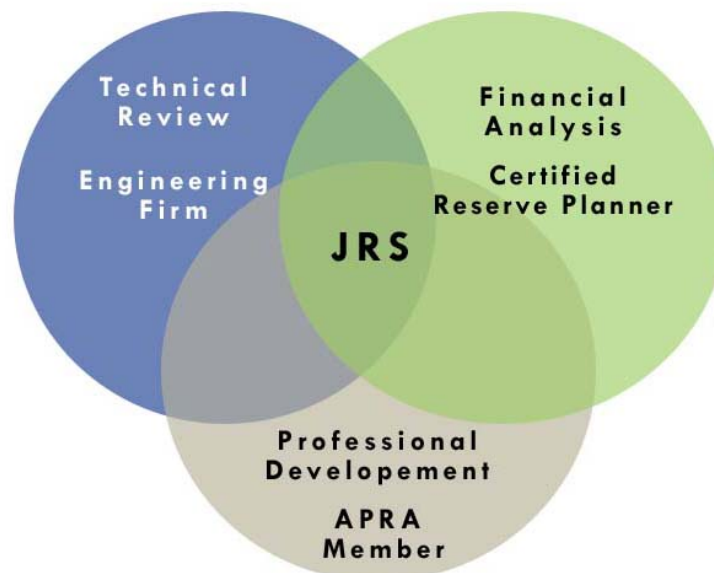
Wesley has an undergraduate degree in Materials Engineering at The University of British Columbia and is currently completing his Masters Degree in Building Science at the British Columbia Institute of Technology.

Wesley was the first Professional Engineer in BC to obtain his CRP (Certified Reserve Planner) designation through the REIC (Real Estate Institute of Canada) and the only P.Eng. in North America to also be a PRA (Professional Reserve Analyst) with the APRA (Association of Professional Reserve Analysts).

Wesley maintains current technical knowledge through active participation in the building science industry by attending, organizing, and presenting at various industry conferences, seminars, and courses (APEGBC, BCBECE, BCIT, APRA, PAMA, BOMA, CHBA), by publishing articles in industry related magazines and journals (CHOA, BCREC) and serving on industry related committees (ASTM, REIC, IREM).

Wesley is an official Mentor with APEGBC and, in 2012, was awarded Mentor of the Year. The author is also a recipient of ABEGBC's 2014 Young Professional Award, a coveted President's Award that is the top honour for engineering in British Columbia.

All reserve planners are engineers registered with the Association of Professional Engineers and Geoscientists of British Columbia (APEGBC).



No other consulting firm offers all 3 facets of reserve planning

**Leigh Rollins, P.Eng.****Mechanical Engineer**

Leigh is a project engineer at JRS. His expertise in the field extends from building envelope condition assessments and investigations to design, field review and contract administration on large and small restoration projects. Leigh leads the production of engineered shop drawings for architectural cladding attachment at JRS.

Curtis Schlamb, BAsC., EIT**Mechanical Engineer**

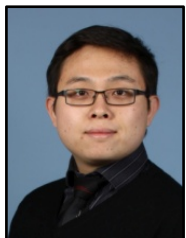
Curtis Schlamb is responsible for all aspects of generating Depreciation Reports, Warranty Reviews and Maintenance Manuals. He conducts enhanced field reviews onsite and specializes in roofing review and design. His field work consists of window testing, leak investigation and visual reviews.

**Jeffrey Sevold, BA, BS, EIT****Civil/Structural Engineer**

With a broad variety of building envelope and structural experience, Jeffrey is responsible for performing tasks related to design development, shop drawings review, construction documents, site visits, window testing and enhanced field reviews. His scope of experience includes producing Depreciation Reports, Warranty Reviews and Building Envelope Condition Assessments.

Kevin Calbick, BSc, EIT**Integrated Engineer**

With a strong background in building construction and project management in the Lower Mainland and northern Alberta, Kevin has a keen eye for buildings as a whole and how they are constructed. He works on a variation of rehabilitations, depreciation reports and new construction projects assisting with in-house coordination and providing the bulk of field services throughout construction.

**Ren Bai, M.Eng., EIT****Mechanical Engineer**

Ren is responsible for a broad range of projects including depreciation reports, maintenance manuals, warranty reviews, building envelope condition assessments, design development, thermal modeling and NFRC certification. With skills in a variety of areas, Ren is adept in communicating complex concepts in clear and concise terms.

Justin Unger, BAsC., EIT**Mechanical Engineer**

Justin specializes in Depreciation Reports, Warranty Reviews, and Window Testing services for our clients. He finds interest in energy efficient building design material selection. Justin is meticulous in his approach to all projects; including technical accuracy, foresight and correction of potential problems before they impact projects.





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Appendix F

Glossary of Terms



GLOSSARY OF TERMS

ANNUNCIATOR PANEL: A central fire alarm display panel usually located in close proximity to the building entrance. It is used to allow for easy identification of fire hazard areas by fire rescue personnel during an emergency and is linked with fire sensor devices throughout the building. It is a requirement in many Canadian bylaws and requires periodic testing, which can be performed in conjunction with other fire protection equipment.

ASBESTOS: A natural fibrous mineral that has carcinogenic and other negative health properties. It was heavily used in building construction in the early to mid twentieth century due to its strength, corrosion and fire resistant properties. In the late 20th century, the carcinogenic effects of asbestos were better understood and it was then banned from use in developed countries in the 1980s and 1990s. Typically, buildings built earlier than 1990 should have asbestos testing performed, if interior finishes are disturbed.

BACKFLOW PREVENTER VALVE: A mechanical piping component that is used to prevent backflow of fluid (fluid flowing opposite to intended direction). Its use may be required by municipal regulations and can prevent contaminants from entering potable water. The City of Vancouver requires this device for use in "larger complexes" to prevent backflow into potable water from fire sprinkler systems, underground irrigation systems, and commercial/residential boiler systems with and without antifreeze. NFPA 25 (Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems) includes a specification for testing of fire sprinkler system backflow. These devices require annual testing according to the Vancouver Water Works Bylaw 4848.

BASELINE FUNDING: A CRF funding regime that typically represents how much the Strata Corporation is currently contributing or whatever the statutory minimum is, whichever is higher. This usually describes a CRF growth strategy that tries to keep contributions low or similar to current or minimum statutory requirements, usually with minor annual adjustments due to inflation. This funding strategy will allow for minimal disturbance to owners' annual Contingency Reserve Fund (CRF) contributions, but will likely lead to frequent special assessments to fund larger future projects (dependant on the health of the current CRF balance).

BELOW-GRADE MEMBRANE: A waterproofing material that is applied to surfaces that are below grade, often buried under a nominal amount of landscaping ("at-grade" waterproofing is often at a trafficable surface or at close proximity to a trafficable surface). The material is designed to prevent water ingress into the substrate (e.g. concrete wall) where hydrostatic pressure is expected. A common example of a below grade membrane is 2-ply SBS (Styrene Butadiene Styrene) over an underground parkade roof.

BENCHMARK ANALYSIS: Backbone of the Depreciation Report's financial analysis. It consists of an asset inventory along with information regarding installation dates, typical life expectancies, effective ages, remaining life, projected future renewal dates, estimated current and future costs for renewal as well as other CRF related financial information, including the annual reserve fund assessment values.

BOILER: A mechanical vessel designed for heating fluid (air or water) for the purpose of air or domestic water distribution. A boiler is often used for heating the building, where, for example, the heated medium is pumped to radiant heaters and its energy is dissipated to its surroundings.

BOOSTER PUMP: A mechanical device used to increase/maintain the pressure or flow rate of a fluid. Booster pumps are not typically intended to be used independently but as an auxiliary unit to a usually larger and more complex pumping device. Booster pumps are commonly used in mechanical sprinkler systems in buildings and for domestic water use in highrise buildings.

BUILDING CONDITION ASSESSMENT: A technical review of all the physical assets of a property and often includes associated costs of short term renewals. It is similar to a Depreciation Report, except technically more detailed and without the cost projections and cash flow tables associated with long term capital asset planning.

BUILDING ENVELOPE: The shell of the building that separates the interior environment from the exterior environment. Its purpose is to protect the interior space from environmental and manmade elements. Parts of the building envelope include windows, walls, roofs, and floors. Other noteworthy components can include attics, parkades, garages, carports and balconies.

BUILDING ENVELOPE CONDITION ASSESSMENT: Unlike Depreciation Reports/Reserve Fund Studies or Building Condition Assessments, this type of assessment focuses only on building envelope systems/components and at a greater detail, often including interior and/or exterior exploratory openings, moisture probes and other analytical methods/tools to diagnose the building envelope's condition in greater detail.

BYLAWS: Sets of rules, regulations or subsidiary laws imposed onto a community, group, or organization by consensus or legislation and registered in the Land Title Office. All strata corporations should have a set of bylaws to address specific concerns where the standard Strata Property Act and Regulation are not sufficient. It should be noted that not all rules voted into the bylaws may be legal and should be reviewed by legal professionals.

CANOPY: A physical overhanging component commonly installed over fenestrations such as windows and doors. It is used to deflect precipitation and/or provide shading for users.



- CAPITAL RESERVE PLAN:** A formalized plan/strategy that compiles all major assets of a property and projects what major remedial actions may be required along with their costs. The term is used interchangeably with Depreciation Report (used mainly in BC), Reserve Study and Reserve Fund Study and is used more often with Housing Co-ops and commercial property.
- CASH FLOW METHOD:** A CRF contribution strategy or option where contributions are designed to offset the variable annual expenditures from the CRF. The CRF is considered one large pool of money, where annual contributions (or special levies) offset the scheduled CRF expenditures from the fund, regardless of what the money is intended for on that particular year.
- CASH FLOW TABLE:** A summary table in a depreciation report or reserve fund study that summarizes the pertinent and more practical financial values within a projected outlook (e.g. balances, recommended annual contributions, possible special assessments, estimated expenditures, estimated interest earned).
- CEDAR SHAKES:** A thin tapered piece of cedar that is often used in an offset layered pattern such as roofing or cladding. Shakes are similar in appearance to shingles, but have differences in application, surface, and dimension. Compared to shingles, shakes are slightly thicker (1/2" to 3/4" at butt end) and have a more irregular surface finish causing them to not lay as flat after installation. Because of this, roofing shakes typically utilize felt paper between courses.
- CEDAR SHINGLES:** A thin tapered piece of cedar that is often used in an offset layered pattern such as roofing or cladding. Shingles are similar in appearance to shakes, but have differences in application, surface, and dimension. Compared to shakes, shingles are slightly thinner (3/8" to 1/2" at butt end) and have a more precise surface finish. Shingles do not typically have felt interweaving.
- CHILLER SYSTEM:** A mechanical system that is used to removed heat. It uses either vapour-compression or absorption refrigeration cycle processes to cool a fluid, which is then run through further equipment (e.g. heat exchanger) to remove heat from a space or equipment.
- CHLORINATOR:** A mechanism used to treat a substrate, most commonly water, with chlorine or a chloride compound for the purpose of disinfection.
- CIRCUIT BREAKER:** An electrical device that is composed of mechanical switches, which are designed to automatically switch off in case of high current flow. The equipment is used for safety purposes and is usually required by law.
- CLADDING:** The exterior material or component of a building (typically at walls) designed to provide a deflection mechanism for weather precipitation and the first line of defence against the environment.
- CONDOMINIUM BOARD:** The condominium board is usually elected by, and made up of, individual condominium or property owners. The board meets regularly to handle policy, finances, and make decisions about the upkeep and repair of the common property. In BC, these are referred to as strata councils.
- CONTINGENCY RESERVE FUND:** A fund or financial account used to pay for asset repairs, rehabilitation work, renovations and renewals that occur less often than once per year. The fund may be built up over time through annual strata fees so that future common expenses can be paid for partially or fully from the fund.
- CONVEYANCE:** Part of the building that transports (vertically or horizontally) supplies and/or building occupants from one point to another (e.g. elevators, escalators, wheelchair lifts).
- COOLING TOWER:** A type of mechanical equipment that rejects waste heat to the atmosphere by way of cooling water. This type of heat rejection is "evaporative", where it allows a small portion of the water to evaporate into a moving air stream and provide significant cooling to the rest of that water stream. Common applications are found in air conditioning, manufacturing and electric power generation.
- COST PROJECTION:** For Depreciation Reports and Reserve Studies, the cost projections relate to the future costs of asset renewals within a given timeframe.
- CPI (CONSUMER PRICE INDEX):** An indicator of changes in consumer prices experienced by Canadians. It is obtained by comparing, over time, the cost of a fixed basket of goods and services purchased by consumers. This value should not be mistaken for the construction inflation rate and should not used for projecting future asset renewal costs in a Depreciation Report or Reserve Study.
- DECK:** A deck is a low slope surface capable of supporting weight, similar to a floor, but typically constructed outdoors, often elevated from the ground, and usually connected to a building. More specifically, the term deck refers to a roof over living space and may be designed to be used in a fashion similar to a balcony.
- DEPRECIATION REPORT UPDATES:** An update to a previous Depreciation Report, typically performed by the same company. This includes an update in interest and inflation values, history of CRF transactions and asset renewals, another interview with building representatives and in most jurisdictions, a site visit. Currently, strata corporations in BC are required to obtain depreciation report updates every three years unless voted down by a 3/4 vote and require a site visit. The updates, if performed by the same company, are usually much cheaper than the previous Depreciation Report.
- DISCONNECT SWITCHES:** A disconnect switch is a piece of mechanical equipment that has the capability to interrupt power to an electrical circuit or to a group of electrical circuits. Disconnect switches are used in a wide



variety of settings, and are primarily employed as safety devices, which de-energize circuits so that people can work on them safely.

DISTRIBUTION PANELS: A distribution panel is also known as a breaker panel. It consists of circuit breakers, fuses and switches. The panel is connected to the main feeder lines and branch lines and are used to distribute electricity within a building.

DOMESTIC WATER PIPE ASSESSMENT: This is a comprehensive assessment conducted on the potable water and pipes to review the current condition of the domestic water distribution system. Information including, but are not limited to, water quality, corrosion, leakage due to pitting, pipe breakage and serviceability, will be documented such that informed decisions regarding repair, rehabilitation or replacement of the pipelines can be made.

DUE DILIGENCE REPORT: These reports typically refer to technical reviews or condition assessments on buildings that are being re-financed or changing possession. The interested party commissions the due diligence report from building/construction professionals/consultants in order to ascertain any potential financial liabilities.

EAVE: The bottom horizontal edge of a roof that overhangs the face of a wall. The primary function of eaves is to keep rain water off the windows and walls and to prevent the ingress of water at the junction where the roof meets the wall. The eaves may also protect walkways around a building, prevent erosion of the footings, and reduce splatter on the walls.

EFFECTIVE AGE: The age of a component or asset based on its condition. This is usually chronological by default (time since installation), but may be younger or older, depending on the asset's condition.

ELEVATOR MODERNIZATION: This typically refers to overhauling the elevator for most, if not all, of the mechanical and electrical components, as well as the interior finishes, with the exception of the structural cab.

EMERGENCY GENERATOR: Equipment that uses fuel to produce emergency electricity when the electricity source from the centralized electrical grid is cut off, interrupted, or reduced. Emergency generators are often installed in buildings and are dormant when the building is obtaining electricity from the central grid.

EMERGENCY LIGHTING: A battery-packed or generator-sourced lighting device that switches on automatically when a building experiences a power outage. Emergency lights are standard in new commercial and high occupancy residential buildings.

ENTERPHONE: A standalone voice communication system for use within a building or small collection of buildings, functioning independently of the public telephone network. Enterphones are generally mounted permanently in buildings and can incorporate connections to public address loudspeaker systems, walkie-talkies, telephones, and other intercom systems. Some intercom systems incorporate control of devices such as signal lights and door latches.

EXPANSION TANK: A mechanical vessel that is typically filled with air and is used to regulate water pressure by allowing the flow of expanding water into the tank and release pressure within the system. Expansion tanks are typically installed as part of the water supply line to the water heater. When the water temperature within the water heater rises, the water will expand due to its incompressibility.

FASCIA: Usually consists of long, straight boards (e.g. wood or fibre cement) that run along the lower edge of a roof or balcony. Roof fascias are usually fixed directly to the trusses and act as backing for gutters.

FIRE PANELS: A control unit for a building's fire alarm system. The purpose of this panel is to monitor fires, alert people to the location of a fire and supply power to fire detectors. There are two categories of fire alarm panels: conventional and addressable. In conventional fire alarm panels, a series of circuits link all the fire sensors to the central panel. The building is divided into zones, which devices are wired accordingly. Addressable fire alarm panels have the system wired in one or more loops so that a fire can be pinpointed to its exact location.

FLASHING: Usually refers to thin material (most often metal or polymeric) installed to deflect water away from a structure, joint, fenestration, etc. It often plays a key role in the weather resistant barrier (WRB) system.

FOB ACCESS: A small security hardware device with built-in authentication, used to control, monitor and secure access to certain areas. In buildings, key fobs can be used to access lobby doors, storage areas, fitness rooms, pool rooms, etc. The FOB communicates via a reader pad with a central server for the building to grant access to a particular area within customizable durations.

FULLY FUNDED OR FULL FUNDING: A funding option proposed in most depreciation reports that allow for all projected expenses to be paid completely by the CRF with no projected special levies for the entire 30 year scope of the report. This funding strategy is usually impractical and requires substantial increases to CRF contributions and subsequently the strata fees. In other provinces where reserve planning has been legislated for much longer (e.g. Alberta), fully funded models are reasonable and attainable goals.

FUNDING MODELS: Funding models utilize mathematical framework to establish appropriate funding strategies towards the proper maintenance and asset renewal of a property. These models incorporate various parameters such as inflation rates, interest rates, predicted special levies, as well as allowances for targeted work and consulting. The purpose of proposing funding models is to quantify the level of unfunded liabilities and empower the building owners with information to make informed financial decisions. The Strata Property Regulation in BC requires that Depreciation Reports include at least 3 funding models.



- FUSE:** A type of low resistance resistor that acts as a sacrificial device to provide over current protection of either the load or source circuit. The primary component is a metal wire or strip that melts when too much current flows through it, interrupting the circuit that it connects. Short circuits, overloading, mismatched loads, or device failure are the prime reasons for excessive current.
- GEAR TRACTION ELEVATOR:** An elevator that is driven by an AC or DC electric motor using a worm-and-gear-type reduction unit, which turns the hoisting sheave. While the lift rates are slower than in a typical gearless elevator, the gear reduction offers the advantage of requiring a less powerful motor to turn the sheave.
- GRADUATED HYBRID:** A type of funding model that combines the Baseline and Fully Funded models to achieve a balanced approach and gradual increase in CRF contributions. It starts with the current contribution levels and eventually reaches a 50% to 75% fully funded contribution level (this target percentage can be adjusted based on the financial condition of the property). Special levies may still occur but at smaller quantities and less frequently than the baseline model. This funding strategy allows for a more customized and pragmatic funding plan.
- HEAT PUMP:** A mechanical device that uses electrical energy to extract heat from an area of lower heat content and transfer it to an area of higher heat content. A refrigerator is a common example of a heat pump device.
- HEATING VENTILATION AIR CONDITIONING (HVAC):** Refers to either a professional field, area of study, or type of mechanical system/equipment. The HVAC of a building focuses on using mechanical systems and design to maintain reasonable air quality and interior environmental comfort through heating, ventilation, and air conditioning.
- HOSE BIB:** An outdoor water threaded faucet, protruding from a building, also known as a wall hydrant. In colder climates, exterior house bibs should be installed in line with an interior wall (thermal barrier) such that it can be recessed within the wall to provide freezing protection or protected with exterior grade foam insulation.
- HOT WATER STORAGE TANKS:** A mechanical vessel, such as an insulated tank, that is used for storing hot water for domestic use. Hot water tanks may have a built-in gas or oil burner system, electric immersion heaters, or may use an external heat exchanger to heat water from another energy source.
- HOUSING CO-OP:** A legal entity, usually a corporation, which owns real estate, consisting of one or more residential buildings, where individual parties own a share instead of equity in the property. There are two types of housing co-operatives: non-profit and for-profit. In BC, there are also government subsidized and non-subsidized housing co-ops.
- HYDRAULIC ELEVATOR:** An elevator that is powered by a piston that travels inside a cylinder. An electric motor pumps oil into the cylinder to move the piston, which then lifts the elevator cab. Electrical valves control the release of the oil for a gentle decent. They do not use large overhead hoisting machinery the way gear traction systems do.
- INFLATION RATE:** A sustained increase in the general price level of materials and/or services in an economy over a period of time. Also defined as the percentage rate of change of a price index over time. For renewal costs, a construction inflation rate is used, rather than the CPI.
- INFRARED (IR):** A type of electromagnetic radiation that has a wavelength greater than the red end of the visible light spectrum. It is invisible to the human eye. All objects on earth emit infrared radiation as heat, which is detectable by electronic sensors. IR cameras are used to assist with air leakage and discontinuities in thermal insulation.
- INSPECTION:** Refers to a highly detailed and systematic review of a property with a well defined scope of work and objective (e.g. roof, home). Most professional engineers do not provide "inspections," instead, provide assessments, observations or technical reviews of buildings and/or targeted systems or equipment.
- INTEREST RATE:** Also known as the annual percentage rate of the principal, is an amount that is charged to borrowers for the use of money from the lenders. It may be understood as the cost of borrowing money. Rates can change by lenders, government policies as well as inflation.
- IRRIGATION:** The application of water to vegetation by means of pipes, sprinklers, ditches, or streams. It may refer to as a mechanical system (often automated) installed on a property for the purpose of watering trees, grass or plants.
- LIFE CYCLE ANALYSIS (LCA):** LCA is often applied to construction products, building assemblies, whole structures, building portfolios and highways. It is often referred to as cradle-to-grave or cradle-to-cradle analysis and is essential for making green decisions, whether in product manufacturing or in building design. It is life cycle thinking applied to a product: what is involved to make a product and transport it to an installation site; what inputs (e.g. raw materials) and outputs (e.g. products, waste) will occur related to making and using the product over its expected life as well as what will happen to the product when it is no longer needed.
- MAINTENANCE MANUAL:** A report that acts as an information source, which includes building envelope assemblies, warranties, and guides end users in the understanding a building. The manual should define the building construction and its systems, along with the processes and procedures required for it to be maintained efficiently and safely. The manual should also provide recommendations, requirements and checklists for the proper maintenance and long term performance of the respective system or equipment.



- MAINTENANCE REVIEW:** A report that consists of a site visit to a property and typically a review of the building envelope systems and components, which comments on the effectiveness of current maintenance processes and procedures, and offers recommendations for further maintenance actions.
- MAJOR MAINTENANCE:** Maintenance is casually defined in the Strata Property Act as actions performed more often than once a year. Major maintenance consist of action items such as painting and sealant renewals, that are likely to occur less frequently than once a year and if not performed, have potentially significant financial and physical impact to the buildings.
- MAKE UP AIR UNIT:** A piece of equipment used to accept, filter and regulate airflow and distribute it throughout the building as part of the HVAC system. Usually contains a blower, heating or cooling elements, and filter racks.
- MEMBRANE:** A layer or multiple layers of material or a combination of materials that serve as a moisture barrier or as an air and vapour barrier as well. An example would be a balcony or deck membrane (e.g. PVC or polyurethane), which protects the substrate below from water ingress. Other common membranes consist of asphalt, rubber, TPO and polyolefin.
- MIXING VALVE:** A mechanical device that blends hot and cold water together to ensure constant safe outlet temperatures. The storage of water at a high temperature limits the possible breeding ground for bacteria, and the use of a mixing valve allows for water to be stored at high enough temperatures and still be used safely.
- MOULD:** A form of organic growth, such as fungi, that may grow on construction materials. Mould needs three things to be created and sustain growth: food source, water and suitable temperature. It can be any colour and can contribute to poor indoor air quality, adverse health effects, and material deterioration. It reproduces by releasing small "spores" into the air that can lay dormant for long periods of time.
- OBSOLESCENCE (TYPES: FUNCTIONAL, AESTHETIC, ECONOMIC):** The state at which a piece of equipment, service, or practice is no longer needed even though it may still be in good working order. Obsolescence frequently occurs because a replacement has become available that has, in sum, more advantages than the inconvenience related to repurchasing the replacement.
- PARKADE VESTIBULE:** A parkade vestibule is a lobby, entrance hall, or passage that serves to connect the parkade space to the rest of the building interior.
- PATIO:** A ground level area intended for recreational use, commonly adjoining to a residence. Patios can be paved (e.g. stone, concrete, brick, etc.) or built up from the ground (e.g. wood) and not typically suspended or cantilevered from a building. Balconies are often suspended or cantilevered and roof decks are over living space.
- PAVER:** A cementitious/masonry unit commonly used at patios, roof decks, or walkways to provide a walking/traffic surface, a drainage pathway, and/or protection for underlying membranes/surfaces. Pavers are often made from concrete, stone, or brick.
- 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.
- PRESSURE REDUCING VALVE (PRV):** A mechanical device used in plumbing to provide a lower pressure fluid output from a higher pressure fluid input, with the purpose of preventing damage that high pressure could cause to lines and plumbing devices on the output side. In many municipalities, supply water pressure is higher than what is recommended for domestic water lines (in some cases supply mains can exceed 200 psi). Many plumbing codes require PRVs where supply pressures exceed 80 psi.
- RAKE:** The sloped edge of a roof at the ends or sides of a building. Rakes typically do not consist of an overhang, but should as it greatly assists in water deflection, especially if window penetrations exist below.
- REAL ESTATE INSTITUTE OF CANADA (REIC):** An organization that provides education and designation programs for real estate industry professionals in Canada.
- RECIRCULATION PIPE:** Recirculation pipes are used to circulate hot water continuously so that plumbing fixtures (e.g. faucet) will better provide hot water on demand.
- RESERVE FUND STUDY:** Also known as a depreciation report, a report that reviews the current financial well-being of a property as well as provides a visual assessment of the quantities and conditions of common assets of the property, and estimates whether there are sufficient funds available for anticipated major repairs or replacement of these common assets in the future. This report assists in long term financial planning; it strives to examine all the systems and other physical aspects and gives a reasonable expectation as to when they will need to be replaced or have non-routine repairs, and how much this will cost at that projected time in the future. BC is one of the only jurisdictions in North America that uses the term "Depreciation Report."
- ROCK BALLAST:** Part of an assembly that consists of coarse aggregate (rocks or gravel) that is typically used to protect or hold something in place and/or provide a drainage plane. Rock ballasts are used frequently on built-up or inverted, low-slope roofing systems.
- ROOFING CONTRACTORS ASSOCIATION OF BC (RCABC):** An organization that includes professional roofing contractors, manufacturers, and suppliers, and offers training, support, and leadership to its members.



- SAND FILTER:** A device that uses sand as a natural filtration substance to purify water by removing suspended solids. This type of filter is environmentally friendly and commonly used in swimming pools. Regular maintenance (via backwashing or reversing the water flow through the filter) should be performed to maintain good water filtration.
- SBS MEMBRANE:** A type of low-slope roofing membrane (styrene-butadiene-styrene) otherwise known as modified bitumen, made from asphalt and a variety of rubber modifiers and solvents. Techniques or methods to install SBS roofing membrane consist of heat applied, hot-mopped, mechanically fastened and cold-applied adhesives.
- SKYLIGHT:** A type of fenestration installed in a roof or ceiling (typically at 45 degrees or smaller), fitted with safety glass (i.e. tempered, laminated or wire reinforced) to allow for the transmission of daylight.
- SOFFIT:** A flat material installed under roof overhangs, or balcony joist spaces. It may be used for aesthetic purposes but may also be useful in preventing unwanted animal habitation. Soffits are often perforated or have vents installed to allow for venting of the enclosed space. Soffits can be made from a variety of materials such as aluminum, vinyl, fiber cement, wood, steel, etc.
- SPECIAL LEVY OR ASSESSMENT:** An amount of money that owners are required to provide to their Strata Corporation, in addition to their normal strata fees, to pay for essential items such as major maintenance, emergency repairs, legal fees/costs, renewal and rehabilitation of common assets, when there is a shortfall in available funds normally used for these types of expenses.
- STANDPIPE:** A standpipe is part of a series of pipes that transport water to hose valves located within the building. It is designed to provide constant water flow for fire protection purposes and sometimes serves as a backup system for buildings with sprinklers.
- STATUTORY FUNDING:** The minimum CRF funding level that is required to meet the statutory requirements for strata corporations. In BC, the minimum statutory CRF contribution is 10% of the strata corporation's operating budget, unless the CRF balance is at 25% of the operating budget. This is misleading as it indicates that 10% is sufficient when it typically is not.
- STRATA CORPORATION:** A legal entity created by the deposit of a strata plan in the Land Title Office. Its purpose is to divide a building (or buildings) and/or a parcel of land into separate components individually owned where common components are owned by all of the owners. The owners of the strata lots are the members of the strata corporation. An elected strata council governs and maintains the strata corporation.
- STRATA PLAN:** A strata plan outlines the areas, boundaries and dimensions of the strata lots on a horizontal plane by reference to survey makers and not by reference to the floors, walls or ceilings of a building. This document is registered in the Land Title Office.
- STRATA PROPERTY ACT:** The Strata Property Act came into effect on July 1, 2000, (replacing the Condominium Act) and provides a legal framework for all creations and operations of strata corporations in British Columbia. It contains pertinent information affecting strata corporations. Owners and residents in all strata properties must comply with the Strata Property Act, which requires every strata corporation to maintain property insurance on the buildings on a strata plan and to maintain liability insurance. Under the Strata Property Act, a strata corporation has a Schedule of Standard Bylaws, which governs the use, safety and condition of common property and common assets.
- STRATA PROPERTY REGULATION:** Regulations are part of the Strata Property Act and are made by the Lieutenant Governor in Council. Along with the Strata Property Act, the Regulations are the applicable and practical component that allows for specific governance of a strata corporation's operation.
- SUMP PUMP:** A pump used to remove water that has accumulated in a water collection sump basin commonly found in the lower sections of buildings. Sump pumps are especially used where the water table is above the foundation of the home. They will divert the water away from a house to a location that can withstand and deal with water flow such as a storm drain.
- THEORETICAL FULLY FUNDED:** This refers to the annual allocation of funds that is required so that the owners will theoretically never require a special levy. In BC, where CRF balances and contributions (as well as strata fees) are relatively lower than the rest of Canada, it is often an unrealistic target for the short term, but is useful to reference when setting targets and financial goals.
- THRESHOLD FUNDING:** Threshold funding represents a reference funding level where the contingency reserve contribution is set at a predetermined amount.
- TRANSFORMER:** An electrical device that converts electricity of one voltage into another. It does so by increasing or reducing the voltage of an alternating current.
- TRIM:** Generally a strip of material used to help transition between different underlying substrates or cladding components. Trims offer increased protection at vulnerable locations, facilitate construction, and/or provide an aesthetic element to a building. Common areas for trim usage include around windows and doors, at cladding inside/outside corners, floor lines, between different types of cladding, and at the base of walls. Common trim materials include comb-faced spruce, fiber cement board, metal and polyvinyl sheets.



UNIFORMAT: UniFormat is a North American based technical standard used for building asset life cycle and cost analysis as well as building specifications. It has been adopted by ASTM (American Society for Testing and Materials).

WARRANTY REVIEW: A warranty review is a technical report written for a building generally 12, 15, 24, 60 and 120 months following construction. This report often includes a questionnaire for owners, a site visit by engineers for the purpose of reviewing the condition of various warrantable assets, and a professional opinion on construction deficiencies that may be warrantable by the insurance company. This report is most often commissioned by the owner(s) of the building. Types of warranty reviews will differ depending on what is covered, given a certain timeframe, but it is important to understand that only the insurer (not the engineer or contractor) can determine what a warrantable defect is. If there is disagreement, litigation can ensue, which would be costly to the property owners and insurance company.

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