



213vA048A

January 2, 2014

The Owners, Strata Plan BCS 1920  
c/o RE/MAX Property Management  
270 - 4311 Viking Way  
Richmond, BC 6V6 2K9

**Attn:** Karolina Kobayashi, Property Manager    **E-mail:** karolina.kobayashi@mypropertymanager.ca

Dear Council,

**Re:** Tribeca Lofts – 988 Richards St., Vancouver  
2013 Final Depreciation Report

Please find enclosed a copy of our Depreciation Report for your Strata.

#### **HALSALL AND DEPRECIATION REPORTS**

As per the *Strata Property Act* Regulations, we confirm our qualifications as follows:

- ▶ Halsall is a firm of engineers and consultants who has prepared Depreciation type reports across the Country since the early '90s; our Team is familiar with all building systems, their failure mechanisms and required maintenance, repair and replacement needs; and we have completed over 150 such reports in BC for Stratas since 2004. The authors of this report (Trevor Potts and Ted Denniston) have collectively in excess of 25 years' experience in delivering such reports.
- ▶ Halsall carries \$2,000,000 in errors and omissions insurance.
- ▶ At the time of writing this report, no employee of Halsall carries any ownership in BCS 1920, thereby solely providing independent 3<sup>rd</sup> party consulting services to the Strata.

#### **REPORT REVISIONS**

This final report incorporates the changes requested by the Council during our conversation with Council members on November 5, 2013.

#### **FUNDING PLAN**

Our analysis is summarized on the Reserve Fund Expenditure and Cash Flow tables within the Financial Analysis section of this report. Funding scenarios have been provided to give you the range of options available for funding future capital expenses. We have found that an increase over current contribution levels is required in order to reduce, or prevent, special levies. The Council could select from one of these options, or suggest an alternate cash flow plan that better suits their needs.

As required by the Strata Property Act, we have provided cash flow scenarios which provide sufficient funding to cover the capital expenditures projected over the next 30 years. Each of the cash flow scenarios in the report shows a different funding approach.

#### **Halsall Associates**

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**REPORT REVIEW**

This report incorporates our recommendations and perceptions of the standards that the Strata Council and Owners will wish to maintain in the future. It is important that this report be carefully reviewed to ensure that these assumptions are consistent with your intent.

In your review of this report, we suggest that you consider the following:

- ▶ You should advise if there are any items that we have included which are to be managed as part of the operating budget.
- ▶ You should advise if the scope of any capital works projects which we have identified significantly differs from any of your plans.
- ▶ Changes to the estimated times and costs for some items are possible, recognizing that changes could affect building standards.

Given the length of time to your first critical year, deferring and/or phasing project shown in the plan is not expected to have a significant impact on the contribution.

Once you have had an opportunity to review this document, please advise if there are any changes you wish to have incorporated into the analysis. Once we have received your comments, we will finalize the report. As per our proposal, there is no additional charge for these alterations if they are requested within 60 days of the date of this draft report. Revisions requested after this time will be billed on a time basis, as we will have to re-familiarize ourselves with the file.

Should there be any questions, please feel free to contact us at (604) 924-5575.

Yours very truly,

**HALSALL ASSOCIATES**

A Parsons Brinckerhoff Company



Trevor Potts, B.Sc.(Eng.)  
Project Manager



Kevin Grasty, P.Eng., LEED AP  
Project Principal

Attachments: 2013 Depreciation Report





## 2013 DEPRECIATION REPORT FOR

**Tribeca Lofts**  
988 Richards Street  
Vancouver, BC

January 2, 2014

Prepared For:

**The Owners, Strata Plan BCS 1920**  
c/o RE/MAX Property Management  
270 - 4311 Viking Way, Richmond, BC V6V 2K9  
Contact: Karolina Kobayashi, Property Manager

Prepared By:

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Project Number: 213vA048A



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## General Description

The facilities at your Strata include an eight-storey highrise tower with about 53 residential suites, constructed over a two-storey underground parking garage. Ground floor suites are accessed directly from the street and are referred to as townhouse units. Amenities are limited to the lobby, common corridors and two elevators. The complex was constructed in 2006.

The building is concrete-framed and clad in a combination of brick veneer, window wall and coated, cast-in-place concrete.

Heating is provided primarily by electric baseboard heaters. A rooftop make-up air unit provides fresh air to the corridors.

The main electrical service is rated at 600A, 600V.

There are no shared facilities.

The Strata's fiscal year end is December 31.

## Financial Analysis

A well planned Depreciation Report requires that contributions to the Contingency Reserve Fund be calculated on the basis of expected repair, or replacement costs and life expectancies of the common assets. The following Projected Expenditure table summarizes the timing and costs of the projects included in this report.

The *Strata Property Act* establishes regulations for minimum contributions into the Contingency Reserve Fund based on the operating fund. We have provided a range of funding options for your consideration and presume you will decide whether or not to adopt one of the scenarios presented, or set out another funding plan that better suits your needs.

We have included the following funding scenarios for consideration:

- Scenario 1 shows the special levies that would be required each year if you continue to contribute at your current contribution level. This benefits existing owners to the detriment of future owners.
- Scenario 2 shows the ideal contribution level that would be required so that all expenses are paid evenly by all owners regardless whether they own a unit early or late in the life of the building. These scenarios show the contribution level required so that it increases annually at a rate of inflation, and no special levies are required.
- Scenario 3 shows another approach to reaching the "ideal," inflation-matched contribution level shown in Scenario 2, but rather than achieving this level in one year, the necessary increase is phased-in over several years. This gives current unit owners time to react to the increase, rather than taking the increase all in one year. Many find this disclosure more reasonable than imposing a sudden increase.
- Scenario 4 shows an even more gradual approach to raising contribution levels. In this scenario, the contribution level is raised by a fixed percentage in each year of the analysis, and special levies are included where necessary to cover expenditures.

As required by the Strata Property Act, we have provided cash flow scenarios which provide sufficient funding to cover the capital expenditures projected over the next 30 years.



Tribeca Lofts, 988 Richards Street, Vancouver, BC, Canada							Projected Expenditures															
Item	Description	Class	Status	Present Cost	First Occur.	Cycle No.	Occur.	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
<b>1 STRUCTURE</b>																						
1.2.1	Balcony Condition Survey	3	Forecasted	\$6,825	2030	20																
1.2.2	Repair Concrete Balconies	3	Forecasted	\$75,630	2031	20																
1.2.3	Replace Balcony, Terrace and Townhouse Guards	3	Forecasted	\$113,631	2051	40																
1.4.1	Parking Garage Condition Evaluation	3	Forecasted	\$7,875	2017	12						\$8,524										
1.4.2	Repair Garage Slab Waterproofing	3	Forecasted	\$75,433	2018	24							\$83,284									
1.4.3	Re-Waterproof Suspended Parking Slab	3	Forecasted	\$131,816	2030	24																
1.4.4	Garage Roof Deck Waterproofing Repair Allowance	3	Forecasted	\$35,722	2030	40																
1.4.5	Re-Waterproof Garage Roof Deck	3	Forecasted	\$454,217	2046	40																
<b>2 BUILDING ENVELOPE</b>																						
2.1.1	Wall Condition Evaluation	3	Forecasted	\$11,025	2025	10														\$13,982		
2.1.2	Replace Exterior Sealants	3	Forecasted	\$104,451	2026	20															\$135,119	
2.1.3	Repair Masonry Walls	3	Forecasted	\$53,250	2026	20															\$68,885	
2.1.4	Recoat and Repair Concrete Walls	3	Forecasted	\$99,258	2026	20															\$128,401	
2.1.5	Replace Sheet Metal Cadding	3	Forecasted	\$5,512	2046	40																
2.2.1	Replace Double Glazing	3	Forecasted	\$13,125	2026	1	24														\$16,979	\$17,318
2.2.2	Replace Weatherstripping and Repair Window Hardware	3	Forecasted	\$31,999	2032	45																
2.2.3	Replace Windows and Balcony Doors	3	Forecasted	\$1,182,400	2051	45																
2.3.1	Replace Garage Gates	3	Forecasted	\$10,500	2033	20																
2.3.2	Replace Exterior Door(s)	3	Forecasted	\$22,470	2036	30																
2.4.1	Repair Flat Roofing	3	Forecasted	\$32,705	2021	25										\$38,319						
2.4.2	Replace Flat Roofing	3	Forecasted	\$208,740	2029	25																
2.4.3	Re-Waterproof Terraces	3	Forecasted	\$169,344	2029	25																
<b>3 FIRE SAFETY</b>																						
3.1.1	Replace Fire Alarm Panel	3	Forecasted	\$44,100	2026	20															\$57,048	
3.1.2	Replace Fire Alarm System Wiring and Devices	3	Forecasted	\$146,081	2046	40																
3.2.1	Dry Sprinkler System Replacement Allowance	3	Forecasted	\$103,950	2041	35																
3.2.2	Replace Fire Pump	3	Forecasted	\$28,875	2041	35																
3.3.1	Generator - Major Repairs	3	Forecasted	\$12,600	2031	35																
3.3.2	Replace Generator Fuel Storage Tank	3	Forecasted	\$15,750	2037	25																
3.3.3	Replace Generator and Transfer Switch	3	Forecasted	\$225,225	2042	35																
<b>4 FINISHES, FURNITURE AND EQUIPMENT</b>																						
4.1.1	Renovate Lobby	3	Forecasted	\$48,038	2026	20															\$62,142	
4.2.1	Renovate Corridors	3	Forecasted	\$75,783	2021	15										\$88,792						
4.2.2	Refurbish Elevator Cab Interiors	3	Forecasted	\$38,430	2029	25																
4.2.3	Renovate Parking Level Elevator Lobbies	3	Forecasted	\$6,533	2031	25																
4.3.1	Repaint Parking Garage	3	Forecasted	\$19,727	2021	15										\$23,113						
<b>5 SITE</b>																						
5.1.1	Re-waterproof Fountains	3	Forecasted	\$11,025	2026	40															\$14,262	
5.1.2	Replace Metal and Glass Awnings	3	Forecasted	\$18,375	2036	30																

Tribeca Lofts, 988 Richards Street, Vancouver, BC, Canada							Projected Expenditures																
Item	Description	Class	Status	Present Cost	First Occur.	Cycle No.	Occur.	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	
<b>5</b>	<b>SITE</b>																						
<b>6</b>	<b>HVAC</b>																						
6.1.1	Replace Garage CO Detection System	3	Forecasted	\$17,640	2026	20																\$22,819	
6.1.2	Replace Make-up Air Unit	3	Forecasted	\$69,300	2031	25																	
6.1.3	Replace Garage Supply and Exhaust Fans	3	Forecasted	\$18,480	2036	30																	
6.1.4	Replace Pressurization Fans	3	Forecasted	\$15,750	2036	30																	
<b>7</b>	<b>PLUMBING</b>																						
7.1.1	Overhaul Domestic Water Boilers	3	Forecasted	\$15,000	2018	20							\$16,561										
7.1.2	Replace Domestic Hot Water Storage Tank(s)	3	Forecasted	\$14,175	2021	15										\$16,608							
7.1.3	Replace Domestic Water Boilers	3	Forecasted	\$73,080	2026	20																\$94,537	
7.2.1	Install Back-flow Preventer (domestic line)	3	Forecasted	\$8,400	2016	25					\$8,914												
7.2.2	Replace Back-flow Preventers (fire and irrigation lines)	3	Forecasted	\$19,425	2031	25																	
7.2.3	Replace Hot Water Re-Circ. Piping and Valves	3	Forecasted	\$43,716	2021	15										\$51,220							
7.2.4	Replace Hot and Cold Supply Piping and Valves	3	Forecasted	\$213,906	2035	30																	
7.2.5	Replace Booster Pumps	3	Forecasted	\$21,000	2031	25																	
<b>8</b>	<b>ELECTRICAL</b>																						
8.1.1	Replace Main Switchgear	3	Forecasted	\$96,752	2046	40																	
8.1.2	Replace Transformers	3	Forecasted	\$46,200	2046	40																	
8.2.1	Replace Exterior Lighting	3	Forecasted	\$15,160	2031	25																	
8.2.2	Replace Garage Lighting	3	Forecasted	\$16,538	2031	25																	
8.2.3	Replace Stairwell and Service Room Lighting	3	Forecasted	\$19,740	2031	25																	
<b>9</b>	<b>CONVEYANCE</b>																						
9.1.1	Install Elevator Car Top Railings	3	Forecasted	\$7,350	2015					\$7,647													
9.1.2	Elevator System Modernization	3	Forecasted	\$314,738	2032	25																	
<b>10</b>	<b>MISCELLANEOUS</b>																						
10.2.1	Replace Closed Circuit Television System	3	Forecasted	\$10,500	2021	15										\$12,302							
10.2.2	Replace Enterphone System	3	Forecasted	\$6,300	2021	15										\$7,381							
10.2.3	Replace Card Access System	3	Forecasted	\$26,350	2021	15										\$33,217							
10.3.1	Contingency for Small/Unexpected Repairs/Replacements	3	Forecasted	\$2,500	2014	1		\$2,550	\$2,601	\$2,653	\$2,706	\$2,760	\$2,815	\$2,872	\$2,929	\$2,988	\$3,047	\$3,108	\$3,171	\$3,234	\$3,299		
10.4.1	2013 Depreciation Report	3	Forecasted	\$9,450	2013		\$9,450																
10.4.2	Depreciation Report Update	3	Forecasted	\$7,455	2016	3					\$7,911			\$8,396			\$8,909				\$9,455		
<b>Total Projected Expenditures</b>							\$9,450	\$2,550	\$10,248	\$19,478	\$11,230	\$102,606	\$11,211	\$2,872	\$273,882	\$11,897	\$3,047	\$3,108	\$26,608	\$603,425	\$20,617		

Tribeca Lofts, 988 Richards Street, Vancouver, BC, Canada							Projected Expenditures															
Item	Description	Class	Status	Present Cost	First Occur.	Cycle No.	Occur.	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
<b>1</b>	<b>STRUCTURE</b>																					
1.2.1	Balcony Condition Survey	3	Forecasted	\$6,825	2030	20				\$9,557												
1.2.2	Repair Concrete Balconies	3	Forecasted	\$75,630	2031	20					\$108,018											
1.2.3	Replace Balcony, Terrace and Townhouse Guards	3	Forecasted	\$113,631	2051	40																
1.4.1	Parking Garage Condition Evaluation	3	Forecasted	\$7,875	2017	12			\$10,811												\$13,711	
1.4.2	Repair Garage Slab Waterproofing	3	Forecasted	\$75,433	2018	24																\$133,957
1.4.3	Re-Waterproof Suspended Parking Slab	3	Forecasted	\$131,816	2030	24				\$184,574												
1.4.4	Garage Roof Deck Waterproofing Repair Allowance	3	Forecasted	\$35,722	2030	40				\$50,019												
1.4.5	Re-Waterproof Garage Roof Deck	3	Forecasted	\$454,217	2046	40																
<b>2</b>	<b>BUILDING ENVELOPE</b>																					
2.1.1	Wall Condition Evaluation	3	Forecasted	\$11,025	2025	10									\$17,044							
2.1.2	Replace Exterior Sealants	3	Forecasted	\$104,451	2026	20																
2.1.3	Repair Masonry Walls	3	Forecasted	\$53,250	2026	20																
2.1.4	Recoat and Repair Concrete Walls	3	Forecasted	\$99,258	2026	20																
2.1.5	Replace Sheet Metal Cladding	3	Forecasted	\$5,512	2046	40																
2.2.1	Replace Double Glazing	3	Forecasted	\$13,125	2026	1	24	\$17,665	\$18,018	\$18,378	\$18,746	\$19,121	\$19,503	\$19,893	\$20,291	\$20,697	\$21,111	\$21,533	\$21,964	\$22,403	\$22,851	\$23,308
2.2.2	Replace Weatherstripping and Repair Window Hardware	3	Forecasted	\$31,999	2032	45						\$46,617										
2.2.3	Replace Windows and Balcony Doors	3	Forecasted	\$1,182,400	2051	45																
2.3.1	Replace Garage Gates	3	Forecasted	\$10,500	2033	20							\$15,602									
2.3.2	Replace Exterior Door(s)	3	Forecasted	\$22,470	2036	30									\$35,433							
2.4.1	Repair Flat Roofing	3	Forecasted	\$32,705	2021	25																
2.4.2	Replace Flat Roofing	3	Forecasted	\$208,740	2029	25			\$286,555													
2.4.3	Re-Waterproof Terraces	3	Forecasted	\$169,344	2029	25			\$232,473													
<b>3</b>	<b>FIRE SAFETY</b>																					
3.1.1	Replace Fire Alarm Panel	3	Forecasted	\$44,100	2026	20																
3.1.2	Replace Fire Alarm System Wiring and Devices	3	Forecasted	\$146,081	2046	40																
3.2.1	Dry Sprinkler System Replacement Allowance	3	Forecasted	\$103,950	2041	35															\$180,979	
3.2.2	Replace Fire Pump	3	Forecasted	\$28,875	2041	35															\$50,272	
3.3.1	Generator - Major Repairs	3	Forecasted	\$12,600	2031	35				\$17,996												
3.3.2	Replace Generator Fuel Storage Tank	3	Forecasted	\$15,750	2037	25											\$25,333					
3.3.3	Replace Generator and Transfer Switch	3	Forecasted	\$225,225	2042	35																\$399,965
<b>4</b>	<b>FINISHES, FURNITURE AND EQUIPMENT</b>																					
4.1.1	Renovate Lobby	3	Forecasted	\$48,038	2026	20																
4.2.1	Renovate Corridors	3	Forecasted	\$75,783	2021	15										\$119,502						
4.2.2	Refurbish Elevator Cab Interiors	3	Forecasted	\$38,430	2029	25			\$52,756													
4.2.3	Renovate Parking Level Elevator Lobbies	3	Forecasted	\$6,533	2031	25					\$9,331											
4.3.1	Repaint Parking Garage	3	Forecasted	\$19,727	2021	15										\$31,107						
<b>5</b>	<b>SITE</b>																					
5.1.1	Re-waterproof Fountains	3	Forecasted	\$11,025	2026	40																
5.1.2	Replace Metal and Glass Awnings	3	Forecasted	\$18,375	2036	30										\$28,976						

Tribeca Lofts, 988 Richards Street, Vancouver, BC, Canada							Projected Expenditures															
Item	Description	Class	Status	Present Cost	First Occur.	Cycle No.	Occur.	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
<b>5</b>	<b>SITE</b>																					
<b>6</b>	<b>HVAC</b>																					
6.1.1	Replace Garage CO Detection System	3	Forecasted	\$17,640	2026	20																
6.1.2	Replace Make-up Air Unit	3	Forecasted	\$69,300	2031	25					\$98,977											
6.1.3	Replace Garage Supply and Exhaust Fans	3	Forecasted	\$18,480	2036	30										\$29,141						
6.1.4	Replace Pressurization Fans	3	Forecasted	\$15,750	2036	30										\$24,836						
<b>7</b>	<b>PLUMBING</b>																					
7.1.1	Overhaul Domestic Water Boilers	3	Forecasted	\$15,000	2018	20												\$24,609				
7.1.2	Replace Domestic Hot Water Storage Tank(s)	3	Forecasted	\$14,175	2021	15										\$22,353						
7.1.3	Replace Domestic Water Boilers	3	Forecasted	\$73,080	2026	20																
7.2.1	Install Back-flow Preventer (domestic line)	3	Forecasted	\$8,400	2016	25															\$14,625	
7.2.2	Replace Back-flow Preventers (fire and irrigation lines)	3	Forecasted	\$19,425	2031	25					\$27,744											
7.2.3	Replace Hot Water Re-Circ. Piping and Valves	3	Forecasted	\$43,716	2021	15										\$68,936						
7.2.4	Replace Hot and Cold Supply Piping and Valves	3	Forecasted	\$213,906	2035	30									\$330,694							
7.2.5	Replace Booster Pumps	3	Forecasted	\$21,000	2031	25					\$29,993											
<b>8</b>	<b>ELECTRICAL</b>																					
8.1.1	Replace Main Switchgear	3	Forecasted	\$98,752	2046	40																
8.1.2	Replace Transformers	3	Forecasted	\$46,200	2046	40																
8.2.1	Replace Exterior Lighting	3	Forecasted	\$15,160	2031	25					\$21,652											
8.2.2	Replace Garage Lighting	3	Forecasted	\$16,538	2031	25					\$23,620											
8.2.3	Replace Stairwell and Service Room Lighting	3	Forecasted	\$19,740	2031	25					\$28,194											
<b>9</b>	<b>CONVEYANCE</b>																					
9.1.1	Install Elevator Car Top Railings	3	Forecasted	\$7,350	2015																	
9.1.2	Elevator System Modernization	3	Forecasted	\$314,738	2032	25						\$458,514										
<b>10</b>	<b>MISCELLANEOUS</b>																					
10.2.1	Replace Closed Circuit Television System	3	Forecasted	\$10,500	2021	15										\$16,557						
10.2.2	Replace Enterphone System	3	Forecasted	\$6,300	2021	15										\$9,934						
10.2.3	Replace Card Access System	3	Forecasted	\$28,350	2021	15										\$44,705						
10.3.1	Contingency for Small/Unexpected Repairs/Replacements	3	Forecasted	\$2,500	2014	1		\$3,365	\$3,432	\$3,501	\$3,571	\$3,642	\$3,715	\$3,789	\$3,865	\$3,942	\$4,021	\$4,102	\$4,184	\$4,267	\$4,353	\$4,440
10.4.1	2013 Depreciation Report	3	Forecasted	\$9,450	2013																	
10.4.2	Depreciation Report Update	3	Forecasted	\$7,455	2016	3		\$10,033			\$10,648			\$11,299			\$11,991			\$12,725		
<b>Total Projected Expenditures</b>								\$31,063	\$604,045	\$266,029	\$398,489	\$527,893	\$38,820	\$34,982	\$371,895	\$456,120	\$62,456	\$50,244	\$26,147	\$39,395	\$286,790	\$561,669

## Scenario 1 - Special Levies

### Assumptions:

Opening Balance of the Reserve Fund:	<b>\$200,601</b>	Interest Rate Earned:	<b>4%</b>
Current Annual Contribution:	<b>\$42,000</b>	Expenditure Inflation Rate:	<b>2%</b>
Minimum Reserve Fund Balance:	<b>\$50,000</b>	Minimum Balance Inflation Rate:	<b>2%</b>
First Critical Year:	<b>N/A</b>	Number of Units:	<b>53</b>
Second Critical Year:	<b>N/A</b>	Fiscal Year End:	

### Results:

Year	Opening Balance	Recommended Annual Contributions		Estimated Inflation Adjusted Expenditure	Estimated Interest Earned	Recommended Annual Contribution Increase			Closing Balance
		Base	Other			Amount	Percentage (%)	per Unit per Month	
2013	\$200,601	\$42,000		\$9,450	\$8,675				\$241,826
2014	\$241,826	\$42,840		\$2,550	\$10,479	\$840	2	\$1.32	\$292,595
2015	\$292,595	\$43,697		\$10,248	\$12,373	\$857	2	\$1.35	\$338,416
2016	\$338,416	\$44,571		\$19,478	\$14,039	\$874	2	\$1.37	\$377,548
2017	\$377,548	\$45,462		\$11,230	\$15,787	\$891	2	\$1.40	\$427,566
2018	\$427,566	\$46,371		\$102,606	\$15,978	\$909	2	\$1.43	\$387,310
2019	\$387,310	\$47,299		\$11,211	\$16,214	\$927	2	\$1.46	\$439,612
2020	\$439,612	\$48,245		\$2,872	\$18,492	\$946	2	\$1.49	\$503,476
2021	\$503,476	\$49,210		\$273,882	\$15,646	\$965	2	\$1.52	\$294,450
2022	\$294,450	\$50,194		\$11,897	\$12,544	\$984	2	\$1.55	\$345,291
2023	\$345,291	\$51,198		\$3,047	\$14,775	\$1,004	2	\$1.58	\$408,216
2024	\$408,216	\$52,222		\$3,108	\$17,311	\$1,024	2	\$1.61	\$474,641
2025	\$474,641	\$53,266		\$26,608	\$19,519	\$1,044	2	\$1.64	\$520,818
2026	\$520,818	\$54,331	\$83,105	\$603,425	\$9,851	\$1,065	2	\$1.67	\$64,680
2027	\$64,680	\$55,418		\$20,617	\$3,283	\$1,087	2	\$1.71	\$102,765
2028	\$102,765	\$56,526		\$31,063	\$4,620	\$1,108	2	\$1.74	\$132,848
2029	\$132,848	\$57,657	\$482,179	\$604,045	\$0	\$1,131	2	\$1.78	\$68,639
2030	\$68,639	\$58,810	\$208,592	\$266,029	\$0	\$1,153	2	\$1.81	\$70,012
2031	\$70,012	\$59,986	\$339,903	\$398,489	\$0	\$1,176	2	\$1.85	\$71,412
2032	\$71,412	\$61,186	\$468,135	\$527,893	\$0	\$1,200	2	\$1.89	\$72,841
2033	\$72,841	\$62,410		\$38,820	\$3,385	\$1,224	2	\$1.92	\$99,816
2034	\$99,816	\$63,658		\$34,982	\$4,566	\$1,248	2	\$1.96	\$133,058
2035	\$133,058	\$64,931	\$251,205	\$371,895	\$0	\$1,273	2	\$2.00	\$77,299
2036	\$77,299	\$66,230	\$391,436	\$456,120	\$0	\$1,299	2	\$2.04	\$78,845
2037	\$78,845	\$67,554		\$62,456	\$3,256	\$1,325	2	\$2.08	\$87,199
2038	\$87,199	\$68,905		\$50,244	\$3,861	\$1,351	2	\$2.12	\$109,722
2039	\$109,722	\$70,284		\$26,147	\$5,272	\$1,378	2	\$2.17	\$159,130
2040	\$159,130	\$71,689		\$39,395	\$7,011	\$1,406	2	\$2.21	\$198,435
2041	\$198,435	\$73,123	\$98,619	\$286,790	\$3,664	\$1,434	2	\$2.25	\$87,051
2042	\$87,051	\$74,585	\$488,825	\$561,669	\$0	\$1,462	2	\$2.30	\$88,792

### Description:

This scenario shows the special levies that would be required in order to pay for future expenditures if your current annual CRF contribution level simply increases with inflation. Special levies are shown in the "Other" contribution column.

## Scenario 2 - Inflation Matched, 30-Year Analysis

### Assumptions:

Opening Balance of the Reserve Fund:	<b>\$200,601</b>	Interest Rate Earned:	<b>4%</b>
Current Annual Contribution:	<b>\$42,000</b>	Expenditure Inflation Rate:	<b>2%</b>
Minimum Reserve Fund Balance:	<b>\$50,000</b>	Minimum Balance Inflation Rate:	<b>2%</b>
First Critical Year:	<b>2036</b>	Number of Units:	<b>53</b>
Second Critical Year:	<b>2042</b>	Fiscal Year End:	

### Results:

Year	Opening Balance	Recommended Annual Contributions		Estimated Inflation Adjusted Expenditure	Estimated Interest Earned	Recommended Annual Contribution Increase			Closing Balance
		Base	Other			Amount	Percentage (%)	per Unit per Month	
2013	\$200,601	\$42,000		\$9,450	\$8,675				\$241,826
2014	\$241,826	\$101,642		\$2,550	\$11,655	\$59,642	142	\$93.78	\$352,573
2015	\$352,573	\$103,675		\$10,248	\$15,971	\$2,033	2	\$3.20	\$461,971
2016	\$461,971	\$105,748		\$19,478	\$20,204	\$2,073	2	\$3.26	\$568,446
2017	\$568,446	\$107,863		\$11,230	\$24,670	\$2,115	2	\$3.33	\$689,750
2018	\$689,750	\$110,021		\$102,606	\$27,738	\$2,157	2	\$3.39	\$724,902
2019	\$724,902	\$112,221		\$11,211	\$31,016	\$2,200	2	\$3.46	\$856,929
2020	\$856,929	\$114,465		\$2,872	\$36,509	\$2,244	2	\$3.53	\$1,005,031
2021	\$1,005,031	\$116,755		\$273,882	\$37,059	\$2,289	2	\$3.60	\$884,962
2022	\$884,962	\$119,090		\$11,897	\$37,542	\$2,335	2	\$3.67	\$1,029,697
2023	\$1,029,697	\$121,472		\$3,047	\$43,556	\$2,382	2	\$3.75	\$1,191,678
2024	\$1,191,678	\$123,901		\$3,108	\$50,083	\$2,429	2	\$3.82	\$1,362,554
2025	\$1,362,554	\$126,379		\$26,608	\$56,498	\$2,478	2	\$3.90	\$1,518,823
2026	\$1,518,823	\$128,907		\$603,425	\$51,263	\$2,528	2	\$3.97	\$1,095,567
2027	\$1,095,567	\$131,485		\$20,617	\$46,040	\$2,578	2	\$4.05	\$1,252,475
2028	\$1,252,475	\$134,114		\$31,063	\$52,160	\$2,630	2	\$4.14	\$1,407,686
2029	\$1,407,686	\$136,797		\$604,045	\$46,962	\$2,682	2	\$4.22	\$987,401
2030	\$987,401	\$139,533		\$266,029	\$36,966	\$2,736	2	\$4.30	\$897,870
2031	\$897,870	\$142,323		\$398,489	\$30,792	\$2,791	2	\$4.39	\$672,496
2032	\$672,496	\$145,170		\$527,893	\$19,245	\$2,846	2	\$4.47	\$309,018
2033	\$309,018	\$148,073		\$38,820	\$14,546	\$2,903	2	\$4.56	\$432,817
2034	\$432,817	\$151,035		\$34,982	\$19,634	\$2,961	2	\$4.66	\$568,504
2035	\$568,504	\$154,055		\$371,895	\$18,383	\$3,021	2	\$4.75	\$369,047
2036	\$369,047	\$157,136		\$456,120	\$8,782	\$3,081	2	\$4.84	\$78,846
2037	\$78,846	\$151,766		\$62,456	\$4,940	-\$5,371	-3.4	-\$8.44	\$173,096
2038	\$173,096	\$154,801		\$50,244	\$9,015	\$3,035	2	\$4.77	\$286,668
2039	\$286,668	\$157,897		\$26,147	\$14,102	\$3,096	2	\$4.87	\$432,519
2040	\$432,519	\$161,055		\$39,395	\$19,734	\$3,158	2	\$4.97	\$573,913
2041	\$573,913	\$164,276		\$286,790	\$20,506	\$3,221	2	\$5.06	\$471,906
2042	\$471,906	\$167,562		\$561,669	\$10,994	\$3,286	2	\$5.17	\$88,792

### Description:

This scenario shows a one-time increase in the CRF contribution level in 2014, with future CRF contributions simply increasing with inflation. This results in sufficient funds to pay for the expenditures projected over a 30 year analysis period without the need for special levies.

### Scenario 3 - Phased-In Increase, 30 Year Analysis

#### Assumptions:

Opening Balance of the Reserve Fund:	<b>\$200,601</b>	Interest Rate Earned:	<b>4%</b>
Current Annual Contribution:	<b>\$42,000</b>	Expenditure Inflation Rate:	<b>2%</b>
Minimum Reserve Fund Balance:	<b>\$50,000</b>	Minimum Balance Inflation Rate:	<b>2%</b>
First Critical Year:	<b>2036</b>	Number of Units:	<b>53</b>
Second Critical Year:	<b>2042</b>	Fiscal Year End:	

#### Results:

Year	Opening Balance	Recommended Annual Contributions		Estimated Inflation Adjusted Expenditure	Estimated Interest Earned	Recommended Annual Contribution Increase			Closing Balance
		Base	Other			Amount	Percentage (%)	per Unit per Month	
2013	\$200,601	\$42,000		\$9,450	\$8,675				\$241,826
2014	\$241,826	\$53,333		\$2,550	\$10,689	\$11,333	27	\$17.82	\$303,298
2015	\$303,298	\$64,892		\$10,248	\$13,225	\$11,560	21.7	\$18.18	\$371,167
2016	\$371,167	\$76,683		\$19,478	\$15,991	\$11,791	18.2	\$18.54	\$444,363
2017	\$444,363	\$88,710		\$11,230	\$19,324	\$12,027	15.7	\$18.91	\$541,167
2018	\$541,167	\$100,977		\$102,606	\$21,614	\$12,267	13.8	\$19.29	\$561,152
2019	\$561,152	\$113,489		\$11,211	\$24,492	\$12,512	12.4	\$19.67	\$687,922
2020	\$687,922	\$126,252		\$2,872	\$29,984	\$12,763	11.2	\$20.07	\$841,287
2021	\$841,287	\$128,777		\$273,882	\$30,749	\$2,525	2	\$3.97	\$726,931
2022	\$726,931	\$131,353		\$11,897	\$31,466	\$2,576	2	\$4.05	\$877,853
2023	\$877,853	\$133,980		\$3,047	\$37,733	\$2,627	2	\$4.13	\$1,046,519
2024	\$1,046,519	\$136,659		\$3,108	\$44,532	\$2,680	2	\$4.21	\$1,224,602
2025	\$1,224,602	\$139,393		\$26,608	\$51,240	\$2,733	2	\$4.30	\$1,388,626
2026	\$1,388,626	\$142,180		\$603,425	\$46,320	\$2,788	2	\$4.38	\$973,702
2027	\$973,702	\$145,024		\$20,617	\$41,436	\$2,844	2	\$4.47	\$1,139,545
2028	\$1,139,545	\$147,925		\$31,063	\$47,919	\$2,900	2	\$4.56	\$1,304,326
2029	\$1,304,326	\$150,883		\$604,045	\$43,110	\$2,958	2	\$4.65	\$894,274
2030	\$894,274	\$153,901		\$266,029	\$33,528	\$3,018	2	\$4.75	\$815,674
2031	\$815,674	\$156,979		\$398,489	\$27,797	\$3,078	2	\$4.84	\$601,960
2032	\$601,960	\$160,118		\$527,893	\$16,723	\$3,140	2	\$4.94	\$250,908
2033	\$250,908	\$163,321		\$38,820	\$12,526	\$3,202	2	\$5.03	\$387,935
2034	\$387,935	\$166,587		\$34,982	\$18,150	\$3,266	2	\$5.14	\$537,690
2035	\$537,690	\$169,919		\$371,895	\$17,468	\$3,332	2	\$5.24	\$353,182
2036	\$353,182	\$173,317		\$456,120	\$8,471	\$3,398	2	\$5.34	\$78,850
2037	\$78,850	\$151,765		\$62,456	\$4,940	-\$21,552	-12.4	-\$33.89	\$173,099
2038	\$173,099	\$154,800		\$50,244	\$9,015	\$3,035	2	\$4.77	\$286,670
2039	\$286,670	\$157,896		\$26,147	\$14,102	\$3,096	2	\$4.87	\$432,521
2040	\$432,521	\$161,054		\$39,395	\$19,734	\$3,158	2	\$4.97	\$573,915
2041	\$573,915	\$164,275		\$286,790	\$20,506	\$3,221	2	\$5.06	\$471,906
2042	\$471,906	\$167,561		\$561,669	\$10,994	\$3,286	2	\$5.17	\$88,792

#### Description:

This scenario shows an alternative to Scenario 2 in which a CRF contribution increase is phased-in over several years, such that there are sufficient funds to pay for the expenditures projected within a 30-year analysis period without the need for special levies.

## Scenario 4 - Gradual Contribution Increase and Special Levies

### Assumptions:

Opening Balance of the Reserve Fund:	<b>\$200,601</b>	Interest Rate Earned:	<b>4%</b>
Current Annual Contribution:	<b>\$42,000</b>	Expenditure Inflation Rate:	<b>2%</b>
Minimum Reserve Fund Balance:	<b>\$50,000</b>	Minimum Balance Inflation Rate:	<b>2%</b>
First Critical Year:	<b>N/A</b>	Number of Units:	<b>53</b>
Second Critical Year:	<b>N/A</b>	Fiscal Year End:	

### Results:

Year	Opening Balance	Recommended Annual Contributions		Estimated Inflation Adjusted Expenditure	Estimated Interest Earned	Recommended Annual Contribution Increase			Closing Balance
		Base	Other			Amount	Percentage (%)	per Unit per Month	
2013	\$200,601	\$42,000		\$9,450	\$8,675				\$241,826
2014	\$241,826	\$44,100		\$2,550	\$10,504	\$2,100	5	\$3.30	\$293,880
2015	\$293,880	\$46,305		\$10,248	\$12,476	\$2,205	5	\$3.47	\$342,413
2016	\$342,413	\$48,620		\$19,478	\$14,279	\$2,315	5	\$3.64	\$385,835
2017	\$385,835	\$51,051		\$11,230	\$16,230	\$2,431	5	\$3.82	\$441,886
2018	\$441,886	\$53,604		\$102,606	\$16,695	\$2,553	5	\$4.01	\$409,579
2019	\$409,579	\$56,284		\$11,211	\$17,285	\$2,680	5	\$4.21	\$471,937
2020	\$471,937	\$59,098		\$2,872	\$20,002	\$2,814	5	\$4.42	\$548,165
2021	\$548,165	\$62,053		\$273,882	\$17,690	\$2,955	5	\$4.65	\$354,026
2022	\$354,026	\$65,156		\$11,897	\$15,226	\$3,103	5	\$4.88	\$422,511
2023	\$422,511	\$68,414		\$3,047	\$18,208	\$3,258	5	\$5.12	\$506,086
2024	\$506,086	\$71,834		\$3,108	\$21,618	\$3,420	5	\$5.38	\$596,430
2025	\$596,430	\$75,426		\$26,608	\$24,834	\$3,592	5	\$5.65	\$670,081
2026	\$670,081	\$79,197		\$603,425	\$16,319	\$3,771	5	\$5.93	\$162,172
2027	\$162,172	\$83,157		\$20,617	\$7,738	\$3,960	5	\$6.23	\$232,449
2028	\$232,449	\$87,315		\$31,063	\$10,423	\$4,158	5	\$6.54	\$299,124
2029	\$299,124	\$91,681	\$285,000	\$604,045	\$7,418	\$4,366	5	\$6.86	\$79,178
2030	\$79,178	\$96,265	\$170,000	\$266,029	\$3,172	\$4,584	5	\$7.21	\$82,586
2031	\$82,586	\$101,078	\$300,000	\$398,489	\$3,355	\$4,813	5	\$7.57	\$88,530
2032	\$88,530	\$106,132	\$430,000	\$527,893	\$3,706	\$5,054	5	\$7.95	\$100,475
2033	\$100,475	\$111,439		\$38,820	\$5,471	\$5,307	5	\$8.34	\$178,566
2034	\$178,566	\$117,010		\$34,982	\$8,783	\$5,571	5	\$8.76	\$269,377
2035	\$269,377	\$122,861	\$80,000	\$371,895	\$7,394	\$5,851	5	\$9.20	\$107,737
2036	\$107,737	\$129,004	\$325,000	\$456,120	\$4,267	\$6,143	5	\$9.66	\$109,888
2037	\$109,888	\$135,454		\$62,456	\$5,855	\$6,450	5	\$10.14	\$188,742
2038	\$188,742	\$142,227		\$50,244	\$9,389	\$6,773	5	\$10.65	\$290,114
2039	\$290,114	\$149,338		\$26,147	\$14,068	\$7,111	5	\$11.18	\$427,374
2040	\$427,374	\$156,805		\$39,395	\$19,443	\$7,467	5	\$11.74	\$564,227
2041	\$564,227	\$164,645		\$286,790	\$20,126	\$7,840	5	\$12.33	\$462,208
2042	\$462,208	\$172,878	\$55,000	\$561,669	\$11,812	\$8,233	5	\$12.94	\$140,229

### Description:

This scenario shows a gradual increase in the base contribution level, with special levies as-needed. Special levies are shown in the "Other" contributions column.

## Reserve Fund Items

The registered Strata Plan includes site and floor layouts, and schedules, which define the boundaries of units and common assets of the property. Strata Lot boundaries are indicated as being to the outside of the exterior and fire walls. Patios and balconies are not included within the Strata Lot boundaries. There is no description of Strata Lot boundaries with respect to floors, roofs, windows, cladding systems, mechanical or electrical systems, or chimneys.

The *Strata Property Act* states that unless otherwise shown on the Strata Plan, if a Strata lot is separated from another Strata lot, the common property, or another parcel of land by a wall, floor or ceiling, the boundary of the Strata lot is midway between the surface of the structural portion of the wall, floor or ceiling that faces the lot, and the surface of the structural portion of the wall, floor or ceiling that faces the other Strata lot, the common property or another parcel of land. The Act also has easement provisions, reciprocally in favour of each Strata lot and common Strata property, in relation to services such as mechanical and electrical equipment.

Legal interpretations of the repair and maintenance obligations of the Strata Corporation as noted in the Statutes (*Condominium Act, Strata Property Act*) have generally stated that any component which plays an integral part in the performance, of say, the exterior wall, is generally the responsibility of the Strata Corporation (as opposed to an individual owner) to maintain, repair and replace.

The Strata may wish to have this reviewed by their solicitor for the appropriateness of our determinations, and our understanding of the unit boundaries and the responsibility thereof. These assumptions define the expenses included in the study.

Our interpretation of the Strata Plan and how we understand the Strata to be operating is that the following building components are the common elements which must be addressed as part of this report:

- Structural frame, including exclusive use balconies;
- Roofs;
- Exterior cladding, windows and doors, including exterior fireplace grilles;
- Interior finishes in common areas;
- Site finishes; and
- Common mechanical and electrical facilities.

We understand that components which are not common elements and are the responsibility of the individual owners include:

- Interior suite finishes;
- In-suite baseboard heaters;
- Suite fireplaces; and
- Suite-specific plumbing and electrical fixtures and associated piping and wiring.

The following sections summarize our opinion of budgets for Reserve Fund projects related to these components. Expenditures that are expected to be managed as part of normal operations are not shown. The budgets assume a prudent level of ongoing maintenance. Dollars shown are inflated and include contingencies (typically 5 to 15%) and allowances for design/project management (5 to 15%), where relevant. GST (5%) has been included.

The assumptions we have made about hidden conditions, predicting technical performance, and ongoing maintenance needs for the common elements are described in the "Repair and Replacement Rationale" document which can be found at [www.halsall.com/rfs](http://www.halsall.com/rfs) [password: RFSdocs]. Limitations, Halsall's Professional Liability Insurance Certificate, and the concepts and definitions that have been used in calculating the required contributions to the Reserve Fund can also be found here.

Section 92 of the *Strata Property Act* states that the operating fund is “for common expenses that usually occur either once a year or more often than once a year” and that the contingency reserve fund is “for common expense that usually occur less often than once a year or that do not usually occur”. The Contingency Reserve Fund Study should not duplicate the operating budget expenditures. We typically use a threshold of \$2,500 to decide which items have a dedicated line item in the study and include a contingency to cover the items which cost less. The contingency is checked against actual spending patterns in the prior three years at each update.

Operating expenditures should be carefully monitored. Conditions that require increasing expenditure may indicate problems that should be dealt with differently than how we have assumed. Further evaluation may be appropriate to determine if a more comprehensive repair or replacement program should be added to the Reserve Fund Study, or if programs already planned should be advanced. These types of changes would be reflected in updates.

## 1. STRUCTURE

### 1.1 Structural Frame

**Description:**

The structure is concrete-framed, with cast-in-place reinforced concrete slabs, supported by reinforced concrete columns and walls. The presence of post-tensioning could not be ruled out, but we noted no clear evidence of post-tensioned construction on site.

The foundation walls and lowest level are cast-in-place concrete.

The structure is generally protected from weather. No capital projects are expected for sheltered structural components. The exposed balconies and parking garage structure are discussed in other sections of this report.

**Condition:**

This building is located in an area with a relatively high risk of strong seismic activity. We have not completed a structural analysis to confirm whether the building meets current earthquake resistance requirements. Upgrading to meet current Code requirements is not mandatory, so we have not included a budget for any structural retrofits. However, retrofits could be required if a major renovation is carried out in the future.

## 1.2 Balconies

### Description:

There are balconies on the west and south elevations (most at levels 3 and 4) and on the east and north courtyard elevations (at levels 4, 6 and 7) - about 30 balconies in total. Some balconies are cantilevered extensions of the concrete floor slabs. Others span between the building's exterior walls. Balcony topsides are bare concrete; undersides are painted.

Balcony guards consist of prefinished metal frames and top rails, with glass infill panels. Some balconies have brick or concrete parapet walls, with or without top-mounted guards.

Terraces and townhouses have metal and glass guards similar to those at balconies.

Balconies with parapet walls have internal area drains and overflow scupper drains, while other balconies drain over the balcony edges.

Project Name	Present Cost	Inflated Cost	First Occur.	Cycle	# Occurrences	CL	Status
<b>1.2.1 Balcony Condition Survey</b>	<b>\$6,825</b>	<b>\$9,557</b>	<b>2030</b>	<b>20 yrs</b>	<b>recurring</b>	<b>3</b>	<b>Forecasted</b>
<p>Project Notes:</p> <p>This item allows for periodic balcony condition evaluations to confirm the scope of work and budget for planned balcony structure repairs.</p> <p>There is currently no waterproofing membrane installed on the balcony topsides. A membrane would provide added protection to the concrete and embedded reinforcing steel and can be effective in reducing future concrete repair needs. However, installing a membrane is a significant cost. This condition survey should include a cost benefit analysis for membrane installation. Pending the results of the evaluation, membrane installation is not budgeted in this report.</p>							
<b>1.2.2 Repair Concrete Balconies</b>	<b>\$75,630</b>	<b>\$108,018</b>	<b>2031</b>	<b>20 yrs</b>	<b>recurring</b>	<b>3</b>	<b>Forecasted</b>
<p>Project Notes:</p> <p>This item allows for periodic repairs to the balcony slabs, including concrete repairs and repainting the slab soffits.</p> <p>Repairs to the brick and concrete parapet walls are budgeted in the walls section of this report.</p>							
<b>1.2.3 Replace Balcony, Terrace and Townhouse Guards</b>	<b>\$113,631</b>	<b>\$241,159</b>	<b>2051</b>	<b>40 yrs</b>	<b>recurring</b>	<b>3</b>	<b>Forecasted</b>
<p>Project Notes:</p> <p>This item allows for periodic replacement of the metal and glass guards at balconies, terraces and townhouses. This project is timed to occur with the concrete balcony repair project to minimize suspended access costs. If the projects are completed separately, additional suspended access costs will apply. The suspended access costs are included in the balcony repair project.</p>							

## 1.3 Suspended Access Systems

### Description:

The building has a permanent roof anchor system. The majority of the system relies on cast-in-place and through-bolted anchors, which are required to be annually inspected, but not load-tested. Annual inspections are assumed to be an operating expense. Wholesale replacement of the system is not budgeted within the report term as it is not normally required.

## 1.4 Parking Garage

### Description:

There is a two-level underground parking garage with about 61 parking stalls. The garage is accessed from a lane at the P1 level (there is no ramp). There is a trench drain at the entrance. Internal area drains provide drainage for the parking slabs.

The suspended slab (P1) is protected by an elastomeric waterproof coating.

The lowest level (P2) is a concrete slab-on-grade.

The garage footprint extends beyond the building's exterior walls creating a buried garage roof deck at the rear courtyard, main entrance and between the building and a municipal sidewalk along Richards and Nelson Streets. The roof deck is covered with a combination of unit pavers, planters and fountains. There is presumably a waterproofing membrane below the unit pavers and landscaping, but this was not confirmed.

Project Name	Present Cost	Inflated Cost	First Occur.	Cycle	# Occurrences	CL	Status
<b>1.4.1 Parking Garage Condition Evaluation</b>	<b>\$7,875</b>	<b>\$8,524</b>	<b>2017</b>	<b>12 yrs</b>	<b>recurring</b>	<b>3</b>	<b>Forecasted</b>
Project Notes: This item allows for periodic parking garage condition evaluations to confirm an appropriate scope of work and budget for planned garage repairs.							
<b>1.4.2 Repair Garage Slab Waterproofing</b>	<b>\$75,433</b>	<b>\$83,284</b>	<b>2018</b>	<b>24 yrs</b>	<b>recurring</b>	<b>3</b>	<b>Forecasted</b>
Project Notes: Elastomeric traffic deck coatings require annual repairs to address isolated leakage and deterioration caused by wear-and-tear. These annual repairs are expected to be an operating expense, or paid for from the reserve contingency. Over time, the extent of wear-and-tear will warrant a more major refurbishment. This item allows to generally re-apply the wear course over all drive aisles (as the drive aisles are subject to greater wear), and complete local membrane repairs in the parking stalls. The budget also includes an allowance for nominal concrete repairs.							
<b>1.4.3 Re-Waterproof Suspended Parking Slab</b>	<b>\$131,816</b>	<b>\$184,574</b>	<b>2030</b>	<b>24 yrs</b>	<b>recurring</b>	<b>3</b>	<b>Forecasted</b>
Project Notes: Eventually, the entire waterproofing system will require general replacement. This project allows to remove and replace the existing traffic deck coating, including an allowance for some concrete repairs and drain replacement. Budgets assume that local membrane repairs will be completed in a timely manner, avoiding the need for major structural repairs to the concrete slab at the time of general re-waterproofing.							
<b>1.4.4 Garage Roof Deck Waterproofing Repair Allowance</b>	<b>\$35,722</b>	<b>\$50,019</b>	<b>2030</b>	<b>40 yrs</b>	<b>recurring</b>	<b>3</b>	<b>Forecasted</b>
Project Notes: Pending the results of the garage evaluation, some local repairs are expected to be completed and paid either from the operating budget or the reserve contingency. Occasionally, larger interim repairs to address leakage and deterioration will be required to maximize the service life of the buried waterproofing system. This budget allows for periodic local repairs to address leakage.							
<b>1.4.5 Re-Waterproof Garage Roof Deck</b>	<b>\$454,217</b>	<b>\$873,110</b>	<b>2046</b>	<b>40 yrs</b>	<b>recurring</b>	<b>3</b>	<b>Forecasted</b>
Project Notes: Pending the results of the garage evaluation, this budget item allows for concrete repairs, local leak repairs, drain repairs, excavating the site, installing a new membrane, and reinstating the fill and surface finishes below the main entrance and rear courtyard.							

## 2. BUILDING ENVELOPE

### 2.1 Walls

#### Description:

The walls are clad in a combination of drained brick veneer, coated cast-in-place concrete, and an aluminum-framed window wall system with metal spandrel panels. According to the architectural drawings, the concrete walls have mechanically fastened rigid insulation and vapour barrier in the interior surface. The drawings do not show the masonry wall assembly.

See the "Windows" section of this report for further discussion of the window wall system.

There is a small section of corrugated metal cladding on the elevator shaft walls at roof level.

There are sealants at cladding interfaces.

#### Condition:

A Building Enclosure Evaluation Report prepared by RDH Building Engineering Ltd. in 2011 identifies several work items including localized missing wall sealant, removing vegetation from roof drains, and replacing one failed IGU. No major or widespread issues were identified, so we assume the items have or will be addressed as part of regular maintenance.

Project Name	Present Cost	Inflated Cost	First Occur.	Cycle	# Occurrences	CL	Status
2.1.1 Wall Condition Evaluation	\$11,025	\$13,982	2025	10 yrs	recurring	3	Forecasted
Project Notes: This item allows for periodic wall condition evaluations to confirm an appropriate scope of work and budget for planned wall repairs. The budget includes for an engineering report, as well as an allowance for a contractor to provide suspended access.							
2.1.2 Repair Masonry Walls	\$53,250	\$68,885	2026	20 yrs	recurring	3	Forecasted
Project Notes: This item allows for periodic repairs to the masonry walls. The budget includes for some repointing and some masonry replacement. It should be considered a preliminary budget pending the findings of the planned wall condition evaluation. Repairs to the backup wall are not included in this budget, pending future evaluations, as they may or may not be needed.  This project is timed to occur with the caulking replacement project, in order to maximize economies of scale and to minimize mobilization/suspended access costs (currently included only in the caulking replacement project). If the projects are completed separately, additional mobilization/suspended access costs will apply.							
2.1.3 Replace Exterior Sealants	\$104,451	\$135,119	2026	20 yrs	recurring	3	Forecasted
Project Notes: This item allows for periodic replacement of all main wall joint seals.  This project is timed to occur with the masonry and concrete wall repair projects in order to maximize economies of scale and to minimize suspended access costs (currently included only in this project). If the projects are completed separately, additional suspended access costs will apply.							



<b>2.1.4 Recoat and Repair Concrete Walls</b>	<b>\$99,258</b>	<b>\$128,401</b>	<b>2026</b>	<b>20 yrs</b>	<b>recurring</b>	<b>3</b>	<b>Forecasted</b>
<p><b>Project Notes:</b>                  This item allows for periodic repairs to the concrete walls. The budget includes local concrete repairs, crack repair and recoating. It should be considered a preliminary budget pending the findings of the planned wall condition evaluation.</p> <p>Some concrete site features (fountains, planters) have a coating similar to the wall coating, which was noted to be peeling off in a few locations. No similar peeling was noted on the concrete walls. Given the small quantity of coating on these features and easy access to these areas, we assume the coating will be re-applied as necessary as an operating expense or from the reserve contingency.</p> <p>This project is timed to occur with the caulking replacement project, in order to maximize economies of scale and to minimize mobilization/suspended access costs (currently included only in the caulking replacement project). If the projects are completed separately, additional mobilization/suspended access costs will apply.</p> <p>Similarly, at-grade protection (scaffolding at street level) is included in the masonry repair project.</p>							
<b>2.1.5 Replace Sheet Metal Cladding</b>	<b>\$5,512</b>	<b>\$10,595</b>	<b>2046</b>	<b>40 yrs</b>	<b>recurring</b>	<b>3</b>	<b>Forecasted</b>
<p><b>Project Notes:</b>                  This item allows for periodic replacement of the sheet metal cladding at roof level. The timing assumes that the system will be periodically repainted to prevent corrosion of the base metal, and means of securement checked, maximizing the service life of the system. Repainting is assumed to be an operating expense, or paid from the reserve contingency.</p>							

## 2.2 Windows

### Description:

The aluminum-framed window wall system spans one, two or three-storey wall areas between sections of brick or concrete. The system incorporates double-glazed vision panels and metal spandrel panels. The majority of the vision panels are fixed, with some awning-style operable units (about three per suite).

Project Name	Present Cost	Inflated Cost	First Occur.	Cycle	# Occurrences	CL	Status
<b>2.2.1 Replace Double Glazing</b>	<b>\$13,125</b>	<b>\$16,979</b>	<b>2026</b>	<b>1 yrs</b>	<b>24</b>	<b>3</b>	<b>Forecasted</b>
Project Notes: This item allows for Insulated glazing unit ("IGU") replacement as the building ages. IGUs will fail over time as moisture gets past the perimeter seals and fogs up the units. Replacement needs to be handled on an as-needed basis. Annual costs are expected to be minimal in early years and escalate over time. Replacement in early years is expected to be minimal and to be handled from operating funds or the reserve contingency.							
<b>2.2.2 Replace Weatherstripping and Repair Window Hardware</b>	<b>\$31,999</b>	<b>\$46,617</b>	<b>2032</b>	<b>45 yrs</b>	<b>recurring</b>	<b>3</b>	<b>Forecasted</b>
Project Notes: This project allows for periodic replacement of the weatherstripping and window hardware, which will wear before the window frames and glass.							
<b>2.2.3 Replace Windows and Balcony Doors</b>	<b>\$1,182,400</b>	<b>\$2,509,406</b>	<b>2051</b>	<b>45 yrs</b>	<b>recurring</b>	<b>3</b>	<b>Forecasted</b>
Project Notes: The windows and balcony doors are eventually expected to require replacement, but the service life for these double-glazed modern systems is difficult to predict and, occasionally, the decision to generally replace the windows and doors is made based on other factors than operational performance criteria (i.e., to renew appearance, maintain marketability, or to take advantage of other opportunities such as energy savings rebate programs).  This budget allows for replacement of the window and balcony door systems (including frames, infill panels, etc.).							

## 2.3 Exterior Doors

### Description:

Main entrance doors and courtyard doors are aluminum-framed double swing doors with full-height glass inserts.

There are two power-operated, sectional overhead gates in the parking garage.

Ground floor exterior doors to the street and courtyard (including townhouse doors) are painted metal.

Service doors are painted metal in metal frames.

Project Name	Present Cost	Inflated Cost	First Occur.	Cycle	# Occurrences	CL	Status
<b>2.3.1 Replace Garage Gates</b>	<b>\$10,500</b>	<b>\$15,602</b>	<b>2033</b>	<b>20 yrs</b>	<b>recurring</b>	<b>3</b>	<b>Forecasted</b>
Project Notes: This project budgets for replacement of the overhead garage gates. Periodic repairs are assumed to be an operating expense, or to be paid from the reserve contingency.							
<b>2.3.2 Replace Exterior Door(s)</b>	<b>\$22,470</b>	<b>\$35,433</b>	<b>2036</b>	<b>30 yrs</b>	<b>recurring</b>	<b>3</b>	<b>Forecasted</b>
Project Notes: This item allows for periodic replacement of the main entrance doors and courtyard doors, as well as the exterior doors to the ground floor townhouse units. We assume power openers and painted steel exit/service room doors will be replaced individually as required using operating funds or the reserve contingency. Balcony/patio door replacement is included with the general window replacement project.							

## 2.4 Flat Roofing

### Description:

There is one main roof level and various other small roof areas, including two elevator shaft roofs. These roofs have an inverted roofing assembly with stone ballast over filter fabric and rigid insulation (as seen on site). The roofs have internal area drains. The architectural drawings indicate the main roof assembly consists of (from the top, down) stone ballast, filter fabric, 4" rigid insulation, drainage layer, and a waterproofing membrane (type not specified).

The building has stepped terraces at the 6th, 7th and 8th floors. There is also a large terrace at the rear ground-level courtyard. Terraces have patio stones and internal area drains. Some terraces have overflow perimeter drains. The courtyard also has a fountain and several cast-in-place concrete planters. The architectural drawings indicate the terrace roof assembly is the same as the main roof assembly, but with precast concrete pavers in place of stone ballast.

Terrace guards are the same style as the balcony guards and are budgeted for in the "Balconies" section of this report.

There are three small sections of sloped glazing at the main roof level consisting of IGUs in aluminum frames.

Project Name	Present Cost	Inflated Cost	First Occur.	Cycle	# Occurrences	CL	Status
<b>2.4.1 Repair Flat Roofing</b>	<b>\$32,705</b>	<b>\$38,319</b>	<b>2021</b>	<b>25 yrs</b>	<b>recurring</b>	<b>3</b>	<b>Forecasted</b>
Project Notes: This item allows for some repairs of greater consequence than routine maintenance, expected to be required toward the end of the expected service life of the roofs.							
<b>2.4.2 Replace Flat Roofing</b>	<b>\$208,740</b>	<b>\$286,555</b>	<b>2029</b>	<b>25 yrs</b>	<b>recurring</b>	<b>3</b>	<b>Forecasted</b>
Project Notes: This project allows for periodic replacement of the flat roofing including the sloped glazing.							
<b>2.4.3 Re-Waterproof Terraces</b>	<b>\$169,344</b>	<b>\$232,473</b>	<b>2029</b>	<b>25 yrs</b>	<b>recurring</b>	<b>3</b>	<b>Forecasted</b>
Project Notes: This project allows for periodic re-waterproofing of the terrace roofs.							



### 3. FIRE SAFETY

#### 3.1 Detection/Alarm

**Description:**

The building has a central fire alarm system manufactured by Mircom (model FX-2000) with firefighter handset and voice communication modules. The main panel is located in the lobby with an annunciator panel located in the P2 emergency distribution room.

The fire alarm system monitors smoke detectors in corridors and common areas, heat detectors in service rooms and supervised valves in the suppression system. Pull stations are located throughout the building. Minihorns in the garage and speakers in the corridors and suites provide audibility.

Project Name	Present Cost	Inflated Cost	First Occur.	Cycle	# Occurrences	CL	Status
<b>3.1.1 Replace Fire Alarm Panel</b>	<b>\$44,100</b>	<b>\$57,048</b>	<b>2026</b>	<b>20 yrs</b>	<b>recurring</b>	<b>3</b>	<b>Forecasted</b>
Project Notes: This item allows for periodic replacement of the fire alarm panel. Annual testing, monitoring and minor repairs, including individual device replacement required by the testing, are expected to be part of normal maintenance. This project assumes that the new panel will be compatible with the existing devices and wiring; if this is not the case, the budget will need to be adjusted accordingly.							
<b>3.1.2 Replace Fire Alarm System Wiring and Devices</b>	<b>\$146,081</b>	<b>\$280,801</b>	<b>2046</b>	<b>40 yrs</b>	<b>recurring</b>	<b>3</b>	<b>Forecasted</b>
Project Notes: This item allows for replacement of the wiring and devices, as these components typically become obsolete or incompatible due to technology changes. The budget excludes the panel, which is budgeted in a separate project.							

### 3.2 Suppression

#### Description:

The building has the following fire suppression systems:

- wet sprinkler system serving residential corridors and suites.
- dry sprinkler system serving the garage.
- standpipe system with connections in the stairwells.
- one 40hp fire pump.
- wall-mounted fire extinguishers in corridors, service rooms and other areas.

Project Name	Present Cost	Inflated Cost	First Occur.	Cycle	# Occurrences	CL	Status
<b>3.2.1 Dry Sprinkler System Replacement Allowance</b>	<b>\$103,950</b>	<b>\$180,979</b>	<b>2041</b>	<b>35 yrs</b>	<b>recurring</b>	<b>3</b>	<b>Forecasted</b>
Project Notes: This item allows for replacement of the dry sprinkler system piping and valves.  Wet sprinkler systems and standpipe systems are assumed to last the life of the building.  Wholesale replacement of the fire extinguishers is not anticipated. We assume individual units will be replaced on an as-needed basis as an operating expense or as part of the reserve contingency.							
<b>3.2.2 Replace Fire Pump</b>	<b>\$28,875</b>	<b>\$50,272</b>	<b>2041</b>	<b>35 yrs</b>	<b>recurring</b>	<b>3</b>	<b>Forecasted</b>
Project Notes: This item allows for replacement of the fire pump.							

### 3.3 Emergency Power

#### Description:

Emergency power is provided by one Cummins diesel generator with a capacity of 375 kVA, according to the dataplate. Fuel is stored in a double-walled storage tank with a capacity of 1140L. The generator and tank are located in the P1 generator room beside the garage entrance.

Emergency power is supplied through an automatic transfer switch rated at 400A, 600V. The switch is located in the P2 emergency distribution room.

Project Name	Present Cost	Inflated Cost	First Occur.	Cycle	# Occurrences	CL	Status
<b>3.3.1 Generator - Major Repairs</b>	<b>\$12,600</b>	<b>\$17,996</b>	<b>2031</b>	<b>35 yrs</b>	<b>recurring</b>	<b>3</b>	<b>Forecasted</b>
Project Notes: This item allows for periodic overhauls of the generator and related equipment. It also includes an allowance for the rental of a temporary power generator during the overhaul.							
<b>3.3.2 Replace Generator Fuel Storage Tank</b>	<b>\$15,750</b>	<b>\$25,333</b>	<b>2037</b>	<b>25 yrs</b>	<b>recurring</b>	<b>3</b>	<b>Forecasted</b>
Project Notes: This budget allows for periodic replacement of the fuel storage tank. We assume that the transfer pumps will be repaired or replaced from operating funds or from the reserve contingency.							
<b>3.3.3 Replace Generator and Transfer Switch</b>	<b>\$225,225</b>	<b>\$399,965</b>	<b>2042</b>	<b>35 yrs</b>	<b>recurring</b>	<b>3</b>	<b>Forecasted</b>
Project Notes: This project is for replacement of the emergency generator and transfer switch.							

## 4. FINISHES, FURNITURE AND EQUIPMENT

### 4.1 Entrance Lobby

#### Description:

The main entrance lobby has ceramic tile flooring, wood panel walls and a painted drywall ceiling. There are mailboxes on the south wall.

Project Name	Present Cost	Inflated Cost	First Occur.	Cycle	# Occurrences	CL	Status
4.1.1 Renovate Lobby	\$48,038	\$62,142	2026	20 yrs	recurring	3	Forecasted
Project Notes: This item is a periodic allowance to refresh the lobby, including replacement of the tile flooring and re-modeling the walls and ceiling.							

### 4.2 Corridors

#### Description:

Corridors have carpeted floors and painted drywall walls and ceilings. Suite doors and thresholds are stained wood.

Parking level lobbies have vinyl tile floors and painted walls and ceilings.

Project Name	Present Cost	Inflated Cost	First Occur.	Cycle	# Occurrences	CL	Status
4.2.1 Renovate Corridors	\$75,783	\$88,792	2021	15 yrs	recurring	3	Forecasted
Project Notes: This item allows for replacement of the corridor finishes, including the floor, wall and ceiling finishes, suite door refinishing and light fixture replacement. This is a preliminary estimate only, as costs can vary widely depending on the materials and products chosen. The budget will need to be revised once a design is established and actual cost estimates are developed.  We assume that suite door hardware will be repaired and replaced as-needed from the operating fund or from the reserve contingency.							
4.2.2 Refurbish Elevator Cab Interiors	\$38,430	\$52,756	2029	25 yrs	recurring	3	Forecasted
Project Notes: This project allows for periodic elevator cab finish refurbishment.							
4.2.3 Renovate Parking Level Elevator Lobbies	\$6,533	\$9,331	2031	25 yrs	recurring	3	Forecasted
Project Notes: This item allows for renovation of the parking level elevator lobbies.							

### 4.3 Stairwells/Service/Administration Areas

**Description:**

The parking garage has painted walls and columns and bare concrete ceilings.

Stairwells and service areas typically have painted concrete finishes.

Project Name	Present Cost	Inflated Cost	First Occur.	Cycle	# Occurrences	CL	Status
4.3.1 Repaint Parking Garage	\$19,727	\$23,113	2021	15 yrs	recurring	3	Forecasted

**Project Notes:**

This budget allows for periodic re-painting of the garage. Repainting of service rooms is assumed to be completed as an operating expense on an as-needed basis.

## 5. SITE

### 5.1 Site Features

#### Description:

The site consists mostly of unit pavers and cast-in-place concrete planters at the courtyard and along Nelson and Richards Streets. There are two fountains at the front entrance and one fountain in the courtyard. The fountains have an elastomeric waterproofing membrane. Fountain mechanical equipment includes pumps and sand filters (assumed to be replaced from the operating fund or reserve contingency).

There are metal and glass awnings above townhouse entrances and at the main entrance.

The landscaping and site features (except the awnings) will be replaced as part of the garage roof deck re-waterproofing project (costs are included in this project - see the "Parking Garage" section of this report). Annual maintenance of site features and landscaping is expected to be covered by either operating or reserve contingency funds.

Project Name	Present Cost	Inflated Cost	First Occur.	Cycle	# Occurrences	CL	Status
<b>5.1.1 Re-waterproof Fountains</b>	<b>\$11,025</b>	<b>\$14,262</b>	<b>2026</b>	<b>40 yrs</b>	<b>recurring</b>	<b>3</b>	<b>Forecasted</b>
Project Notes: Replacement of the fountain waterproofing is included in the garage roof deck re-waterproofing project (see the "Parking Garage" section of this report). However, the fountains are expected to require re-waterproofing more frequently than the garage deck. Therefore, this item allows for re-waterproofing the fountains between general garage roof deck re-waterproofing projects.							
<b>5.1.2 Replace Metal and Glass Awnings</b>	<b>\$18,375</b>	<b>\$28,976</b>	<b>2036</b>	<b>30 yrs</b>	<b>recurring</b>	<b>3</b>	<b>Forecasted</b>
Project Notes: This item allows for replacement of the awning at the main entrance and townhouse entrances.							

## 6. HVAC

### 6.1 General HVAC

#### Description:

Heating to the suites is provided by electric baseboard heaters. There are suspended electric heaters in some service areas.

Two Carrier split air conditioning systems supply cooling to the main electrical room, elevator machine room and other rooms in the garage. According to the dataplates, each unit has a cooling capacity of about two tons.

One Greenheck rooftop make-up air unit with gas-fired heating provides fresh air to the corridors. According to the dataplate, the unit has an input heating capacity of 350 MBH and an airflow capacity of about 13,000 cfm.

Four supply and exhaust fans, controlled by a carbon monoxide detection system, serve the garage levels. Some service rooms have small exhaust fans. Suites are exhausted directly to the exterior via in-slab ductwork by small individual exhaust fans.

Labels on the emergency electrical distribution panel indicate that there are three below-grade stairwell pressurization fans.

Most suites have gas fireplaces, which vent through the exterior walls. According to the Strata by-laws, the fireplaces are unit-owned.

Project Name	Present Cost	Inflated Cost	First Occur.	Cycle	# Occurrences	CL	Status
<b>6.1.1 Replace Garage CO Detection System</b>	<b>\$17,640</b>	<b>\$22,819</b>	<b>2026</b>	<b>20 yrs</b>	<b>recurring</b>	<b>3</b>	<b>Forecasted</b>
Project Notes: This item allows for periodic replacement of the CO detection system. We assume that replacement of individual components that fail in between general replacement programs will be completed as required using operating funds or the reserve contingency.							
<b>6.1.2 Replace Make-up Air Unit</b>	<b>\$69,300</b>	<b>\$98,977</b>	<b>2031</b>	<b>25 yrs</b>	<b>recurring</b>	<b>3</b>	<b>Forecasted</b>
Project Notes: This budget allows for periodic replacement of the make-up air unit.  We noted substantial corrosion and cracking of the make-up air unit exhaust flue. We recommend you address this condition as continued deterioration could significantly reduce the service life of this unit. This is based on a typical service life of about 25 years assuming the repairs are completed promptly. The cost of repairs is assumed to be paid from the operating fund or the reserve contingency, so no separate budget is included.							
<b>6.1.3 Replace Garage Supply and Exhaust Fans</b>	<b>\$18,480</b>	<b>\$29,141</b>	<b>2036</b>	<b>30 yrs</b>	<b>recurring</b>	<b>3</b>	<b>Forecasted</b>
Project Notes: This item allows for periodic replacement of the garage supply and exhaust fans. We assume small service room exhaust fans will be replaced, as needed, out of operating funds or reserve contingency.							
<b>6.1.4 Replace Pressurization Fans</b>	<b>\$15,750</b>	<b>\$24,836</b>	<b>2036</b>	<b>30 yrs</b>	<b>recurring</b>	<b>3</b>	<b>Forecasted</b>
Project Notes: This project allows for periodic replacement of the stairwell pressurization fans.							



## 7. PLUMBING

### 7.1 Domestic Water Boilers

#### Description:

Two domestic boilers provide hot water. The boilers are manufactured by Laars and have an input heating capacity of 400 MBH each, according to the dataplate.

Domestic hot water is stored in three glass-lined tanks, each with a capacity of 200 gallons.

The domestic boilers and storage tanks are located in the P1 boiler room.

Project Name	Present Cost	Inflated Cost	First Occur.	Cycle	# Occurrences	CL	Status
<b>7.1.1 Overhaul Domestic Water Boilers</b>	<b>\$15,000</b>	<b>\$16,561</b>	<b>2018</b>	<b>20 yrs</b>	<b>recurring</b>	<b>3</b>	<b>Forecasted</b>
Project Notes: This item allows for overhauling the domestic water boilers once before each general replacement.							
<b>7.1.2 Replace Domestic Hot Water Storage Tank(s)</b>	<b>\$14,175</b>	<b>\$16,608</b>	<b>2021</b>	<b>15 yrs</b>	<b>recurring</b>	<b>3</b>	<b>Forecasted</b>
Project Notes: This item allows for periodic replacement of the common domestic hot water storage tanks.							
<b>7.1.3 Replace Domestic Water Boilers</b>	<b>\$73,080</b>	<b>\$94,537</b>	<b>2026</b>	<b>20 yrs</b>	<b>recurring</b>	<b>3</b>	<b>Forecasted</b>
Project Notes: This item allows for periodic replacement of the domestic water boilers.							

## 7.2 Domestic Water Piping, Valves and Pumps

### Description:

The main water service enters the garage through the west foundation wall on the P1 level and continues to the water room in the southeast corner. The main line splits to a 6" fire line, 2" irrigation line and 3" domestic line. The fire line and irrigation lines have backflow preventers installed.

One booster pump set (2x 5hp) boosts the water pressure for the upper floors.

Distribution piping, where seen in service rooms, is copper.

There are two sanitary and two storm sump pumps on the lowest garage level (0.5 and 1hp each, respectively).

### Condition:

We assume the sump pumps will be replaced on an as-needed basis from the operating fund or reserve contingency, so no budget is included.

Project Name	Present Cost	Inflated Cost	First Occur.	Cycle	# Occurrences	CL	Status
<b>7.2.1 Install Back-flow Preventer (domestic line)</b>	<b>\$8,400</b>	<b>\$8,914</b>	<b>2016</b>	<b>25 yrs</b>	<b>recurring</b>	<b>3</b>	<b>Forecasted</b>
Project Notes: Many municipalities within the Greater Vancouver Area require the installation of a backflow preventer on domestic water lines in larger complexes to prevent contamination of potable drinking water. Although the local officials may not be strictly enforcing the bylaw at the moment, we suggest budgeting for the installation of a backflow preventer on the incoming service line in the near future as municipalities are beginning to actively enforce the bylaw as part of the Greater Vancouver Water District's Drinking Water Management Plan.							
<b>7.2.2 Replace Back-flow Preventers (fire and irrigation lines)</b>	<b>\$19,425</b>	<b>\$27,744</b>	<b>2031</b>	<b>25 yrs</b>	<b>recurring</b>	<b>3</b>	<b>Forecasted</b>
Project Notes: This item allows for periodic replacement of the irrigation and fire line backflow preventers.							
<b>7.2.3 Replace Hot Water Re-Circ. Piping and Valves</b>	<b>\$43,716</b>	<b>\$51,220</b>	<b>2021</b>	<b>15 yrs</b>	<b>recurring</b>	<b>3</b>	<b>Forecasted</b>
Project Notes: Recirculation lines are typically the first to fail, so these lines are budgeted for first. Quantities are estimated based on typical floor plans (from the Strata Plan). We recommend you ask your plumbing service contractor to confirm the length of piping as the project approaches.							
<b>7.2.4 Replace Hot and Cold Supply Piping and Valves</b>	<b>\$213,906</b>	<b>\$330,694</b>	<b>2035</b>	<b>30 yrs</b>	<b>recurring</b>	<b>3</b>	<b>Forecasted</b>
Project Notes: This project allows for replacement of the hot and cold water distribution piping. We have estimated the total length of riser piping based on the riser diagram in the plumbing drawings. We recommend you ask your plumbing service contractor to provide a detailed quote as the project approaches, in order to confirm the scope and budget requirements.							
<b>7.2.5 Replace Booster Pumps</b>	<b>\$21,000</b>	<b>\$29,993</b>	<b>2031</b>	<b>25 yrs</b>	<b>recurring</b>	<b>3</b>	<b>Forecasted</b>
Project Notes: This item allows for periodic replacement of the booster pumps and controls.							

## 8. ELECTRICAL

### 8.1 Electric Supply and Distribution

#### Description:

Electricity is fed underground to the main electrical room on the P1 level. The main switchgear unit contains a main disconnect rated at 600A, 600V. This switchgear serves a house distribution switchgear (400A, 600V) and suite distribution switchgear (1200A, 120/208V).

One 112.5 kVA transformer steps down a portion of the house service to 120/208V for loads, including electric heating, sump pumps and plugs. One 300 kVA transformer steps down the suite service to 120/208V. Each elevator also has a transformer (about 45 kVA).

Electricity is distributed to electrical closets on each floor containing suite meters and a 600A splitter (typical), then to in-suite distribution panels typically rated at 125A, 120/240V, where checked.

Project Name	Present Cost	Inflated Cost	First Occur.	Cycle	# Occurrences	CL	Status
<b>8.1.1 Replace Main Switchgear</b>	<b>\$98,752</b>	<b>\$189,824</b>	<b>2046</b>	<b>40 yrs</b>	<b>recurring</b>	<b>3</b>	<b>Forecasted</b>
Project Notes: This item allows for periodic replacement of the main switchgears.							
<b>8.1.2 Replace Transformers</b>	<b>\$46,200</b>	<b>\$88,807</b>	<b>2046</b>	<b>40 yrs</b>	<b>recurring</b>	<b>3</b>	<b>Forecasted</b>
Project Notes: This item allows for periodic replacement of the transformers.							

### 8.2 Lighting

#### Description:

Lighting systems include the following:

- Exterior: soffit-mounted lights at most balconies and terraces. Recessed pot lights at the main entrance. Recessed in-wall lighting at entrance stairs and courtyard.
- Parking garage: ceiling-mounted fluorescent fixtures with T8 fixtures; halogen fixtures in the visitor's area.
- Stairwells: ceiling-mounted fluorescent fixtures with T8 lamps.
- Corridors: included in finish budgets.

Project Name	Present Cost	Inflated Cost	First Occur.	Cycle	# Occurrences	CL	Status
<b>8.2.1 Replace Exterior Lighting</b>	<b>\$15,160</b>	<b>\$21,652</b>	<b>2031</b>	<b>25 yrs</b>	<b>recurring</b>	<b>3</b>	<b>Forecasted</b>
Project Notes: This project allows for the periodic replacement of the exterior light fixtures.							
<b>8.2.2 Replace Garage Lighting</b>	<b>\$16,538</b>	<b>\$23,620</b>	<b>2031</b>	<b>25 yrs</b>	<b>recurring</b>	<b>3</b>	<b>Forecasted</b>
Project Notes: This project allows for the periodic replacement of the parking garage light fixtures.							
<b>8.2.3 Replace Stairwell and Service Room Lighting</b>	<b>\$19,740</b>	<b>\$28,194</b>	<b>2031</b>	<b>25 yrs</b>	<b>recurring</b>	<b>3</b>	<b>Forecasted</b>
Project Notes: This project allows for periodic replacement of the stairwell and service room light fixtures.							



## 9. CONVEYANCE

### 9.1 Elevators

#### Description:

Two roped elevators serve all floors. Elevator machines and relay-type controls are located in the P2 elevator machine room. The system is manufactured and maintained by Richmond Elevators.

Machine guarding is installed.

Project Name	Present Cost	Inflated Cost	First Occur.	Cycle	# Occurrences	CL	Status
9.1.1 Install Elevator Car Top Railings	\$7,350	\$7,647	2015	N/A	One time	3	Forecasted
Project Notes: This item allows guardrails to be installed on all elevator car tops. Other provinces have recently issued Director's Order requiring the installation of elevator car top guardrails. While this requirement is not yet mandatory in British Columbia, it is likely that the province will follow suit within the next few years. We recommend budgeting for this upgrade. We did not access the hoistway, but we assume the car top rails are not currently present.							
9.1.2 Elevator System Modernization	\$314,738	\$458,514	2032	25 yrs	recurring	3	Forecasted
Project Notes: This item allows for periodic modernization of the elevator controls.							

## 10. MISCELLANEOUS

### 10.1 Waste Disposal/Collection

#### Description:

Waste is deposited manually into bins in the P1 garbage room. We assume that garbage bins will be replaced as-needed as an operating expense or from the reserve contingency, so no budget is included.

#### Condition:

We understand that a City of Vancouver bylaw is coming into effect in January 1, 2015 banning all food waste from city landfills. Therefore, garbage and food waste will need to be collected and stored separately on/after this date. As garbage pickup is currently provided privately, you will need to speak to your waste hauler to see if they can accommodate food waste removal as required to meet the new bylaw. We recommend you verify that there is sufficient space in the garbage room to accommodate the additional bins needed. Regarding ventilation, in theory, there is no new waste being generated, so ventilation systems should not be an issue. That said, consolidating all food waste may result in a faster decomposition of the organic material. If odors become a problem, options will include more frequent pick-up of food waste, supplying larger capacity ventilation fans, or relocating the disposal bins in an area with improved ventilation. At this time we have not included a budget for ventilation system upgrades.

### 10.2 Security Systems

#### Description:

The building has the following security/access control systems:

- Viscount enterphone system at the main entrance providing access to the building
- CCTV system with about five cameras (estimated)
- Card access system with readers at building entrances, elevators and some service rooms (about 12)

Project Name	Present Cost	Inflated Cost	First Occur.	Cycle	# Occurrences	CL	Status
10.2.1 Replace Enterphone System	\$6,300	\$7,381	2021	15 yrs	recurring	3	Forecasted
Project Notes: This project allows for periodic replacement of the enterphone panel.							
10.2.2 Replace Card Access System	\$28,350	\$33,217	2021	15 yrs	recurring	3	Forecasted
Project Notes: This project allows for periodic replacement of the card access system (readers and central equipment).							
10.2.3 Replace Closed Circuit Television System	\$10,500	\$12,302	2021	15 yrs	recurring	3	Forecasted
Project Notes: This project allows for periodic replacement of the cameras and central equipment. The number of cameras is an estimate based on those seen on site and can be adjusted if the actual number is provided.							



### 10.3 Contingencies

**Description:**

N/A

Project Name	Present Cost	Inflated Cost	First Occur.	Cycle	# Occurrences	CL	Status
10.3.1 Contingency for Small/Unexpected Repairs/Replacements	\$2,500	\$2,550	2014	1 yrs	recurring	3	Forecasted
Project Notes: This budget is a contingency for unexpected repairs/replacements that should be paid for from Reserve (i.e., unexpected repairs/replacements that are not specifically itemized, but which would qualify to be covered by the fund). It is based on standard budgets and can be modified as needed in future years to reflect actual spending patterns.							

### 10.4 Consulting Services

**Description:**

Depreciation Reports are defined and mandated by the Strata Property Act and can be paid from the Contingency Reserve Fund.

Project Name	Present Cost	Inflated Cost	First Occur.	Cycle	# Occurrences	CL	Status
10.4.1 2013 Depreciation Report	\$9,450	\$9,450	2013	N/A	One time	3	Forecasted
Project Notes: This item allows for the current Depreciation Report.							
10.4.2 Depreciation Report Update	\$7,455	\$7,911	2016	3 yrs	recurring	3	Forecasted
Project Notes: This item allows for Depreciation Report updates.							

## Scope Of Work

### Authorization

This Depreciation Report was commissioned by Strata Plan No. BCS 1920 in accordance with our proposal, dated June 13, 2013, and authorization to proceed received March 14, 2013.

### Mandate

The *Strata Property Act* requires that Strata Corporations obtain a depreciation report estimating the repair and replacement cost for major items in the Strata Corporation and the expected life of those items to assist in determining the amount of the annual contribution to the Contingency Reserve Fund.

In preparing this Depreciation Report for the Strata, we:

- Reviewed and visually evaluated the condition of the major common element components (without completing any destructive testing);
- Prepared an inventory of common elements we expect to deteriorate and require repairs or replacement based on our best interpretation of Corporation documentation; where documents were unclear to us, we have recommended review by your legal counsel;
- Estimated the scope of repairs or replacement which is likely to be required;
- Predicted the times when repairs or replacements will be necessary and the life expectancies following the repairs;
- Provided our opinion of the costs required to carry out the repairs or replacements; and
- Calculated a schedule of contributions to the Reserve Fund so that the estimated expenditures can be accommodated without a deficit.

We include items which typically require replacement because their service life is shorter than the service life of the building (such as caulking, roofing, equipment, etc.). We also include items which would not have been anticipated to be required when the building was new, but which have become necessary due to building specific deterioration (concrete repair related to poor durability, window modifications due to loss of internal seals, etc.). There may be expenses which arise which we have not anticipated, related to concealed conditions or unexpected deterioration. As long as these relate to the repair or replacement of the common elements, they can often be paid out of the Reserve Fund provided the study is updated to account for the impact of these expenditures.

If you are in doubt about whether or not an expenditure can be paid for out of the Reserve Fund, we recommend you check with your legal counsel or chartered accountant.

### Survey Method

Halsall reviewed the building on August 21, 2013, except the suites which were reviewed on September 6, 2013.

The survey consisted of visual review of portions of the building, including:

- the exterior walls and balconies from grade;
- the windows from interior and exterior;
- the roofs;
- the parking garage;

- suites: 101, 102, TH487, TH481, 401, PH01;
- service rooms: main electrical room, emergency distribution room, elevator machine room, water room, boiler room, some locker and bike storage rooms; and
- the perimeter site.

There was no access to the elevator pit or hoistway.

## Information Provided

We have reviewed the following documents:

- Strata plan;
- Bylaws;
- Architectural drawings prepared by Hancock, Bruckner, Eng + Wright Architects, dated March 31, 2005 (construction copy)
- Mechanical drawings prepared by Hancock, Bruckner, Eng + Wright Architects, dated March 11, 2005 (construction copy)
- Plumbing drawings prepared by Hancock, Bruckner, Eng + Wright Architects, dated March 11, 2005 (construction copy)
- Financial statements for a portion of 2013; and
- 2011 Building enclosure evaluation report, prepared by RDH.

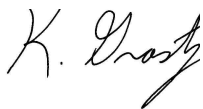
Karolina Kobayashi (Property Manager) answered questions about the history of performance of the various systems, described existing capital plans, etc.

A financial questionnaire was completed by the Strata and the results were incorporated.

Respectfully submitted,  
**HALSALL ASSOCIATES**  
A Parsons Brinckerhoff Company



Trevor Potts B.Sc. (Eng.)  
Project Manager



Kevin Grasty, P.Eng., LEED AP  
Project Principal

Draft Report Issued: October 24, 2013  
Revised Draft Report Issued: November 18, 2013  
Approved by Council: December 18, 2013  
Final Report Issued: January 2, 2014



Photo No. 1: West elevation



Photo No. 2: North and east elevations and courtyard



Photo No. 3: Balconies

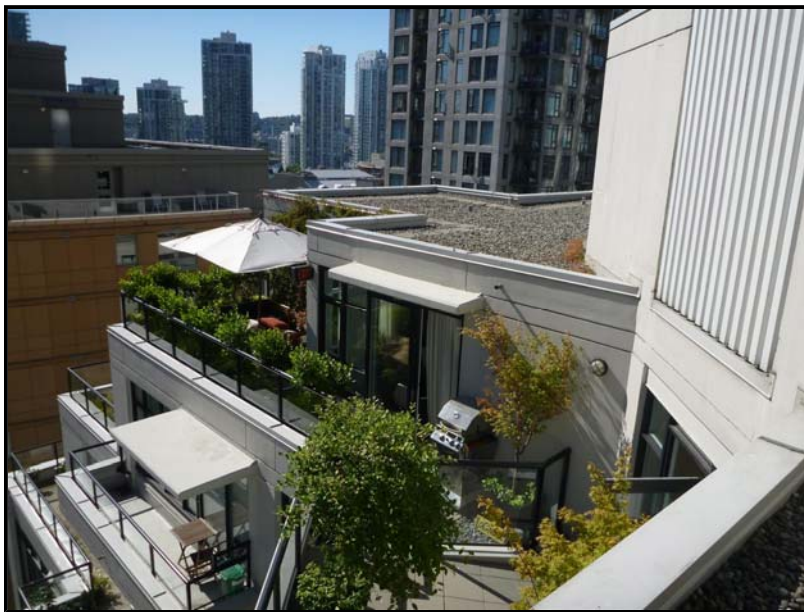


Photo No. 4: Typical terraces and main roof

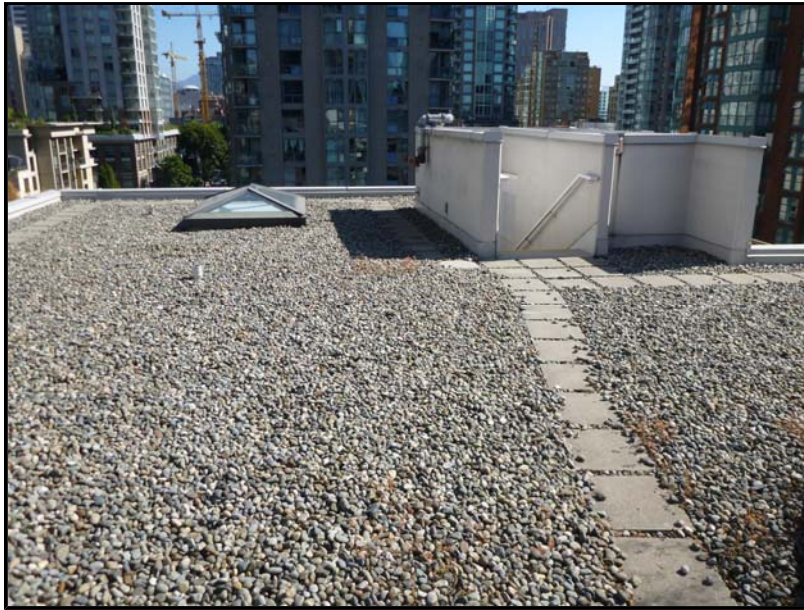


Photo No. 5: Main roof and skylight



Photo No. 6: Courtyard



Photo No. 7: Main entrance



Photo No. 8: Typical townhouse entrance



Photo No. 9: Fire alarm panel



Photo No. 10: Generator



Photo No. 11: Automatic transfer switch and emergency distribution panels



Photo No. 12: Lobby



Photo No. 13: Typical corridor



Photo No. 14: Make-up air unit



Photo No. 15: Air conditioning unit condensers



Photo No. 16: Domestic hot water boilers and storage tanks



Photo No. 17: Booster pumps



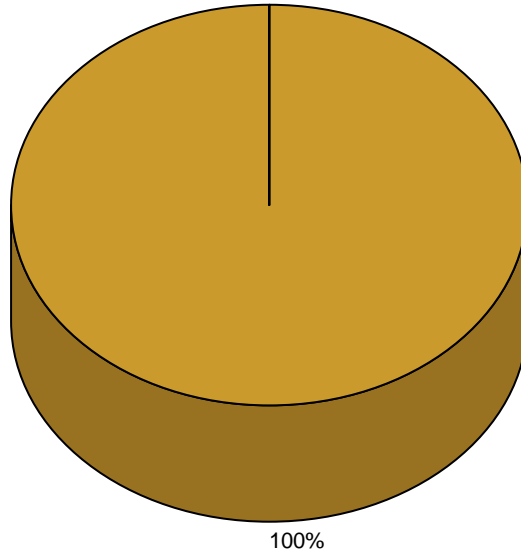
Photo No. 18: Main electrical equipment



Photo No. 19: Elevator machine

## 2014 - Total Annual Expenditures by System

Generated on 1/2/2014



MISCELLANEOUS

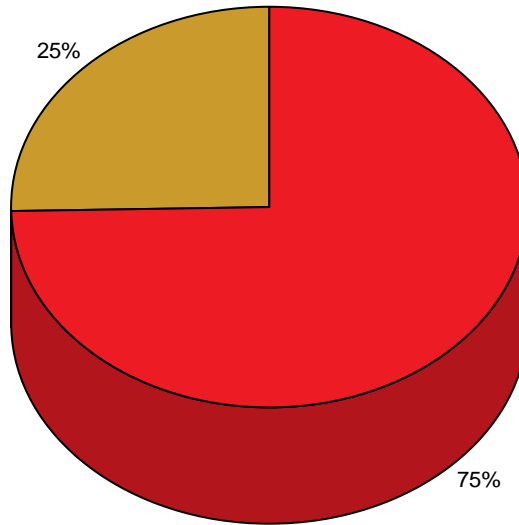
### Projects for 2014 listed by System

#### MISCELLANEOUS

Contingency for Small/Unexpected Repairs/Replacements	Forecasted	\$2,550
	<b>TOTAL:</b>	<b>\$2,550</b>

## 2015 - Total Annual Expenditures by System

Generated on 1/2/2014



■ CONVEYANCE

■ MISCELLANEOUS

### Projects for 2015 listed by System

#### CONVEYANCE

Install Elevator Car Top Railings	Forecasted	\$7,647
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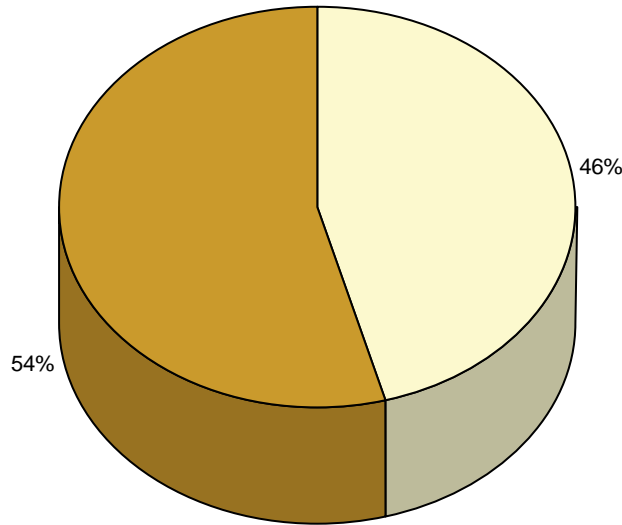
#### MISCELLANEOUS

Contingency for Small/Unexpected Repairs/Replacements	Forecasted	\$2,601
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<b>TOTAL:</b>		<b>\$10,248</b>
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## 2016 - Total Annual Expenditures by System

Generated on 1/2/2014



PLUMBING

MISCELLANEOUS

### Projects for 2016 listed by System

#### PLUMBING

Install Back-flow Preventer (domestic line)	Forecasted	\$8,914
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#### MISCELLANEOUS

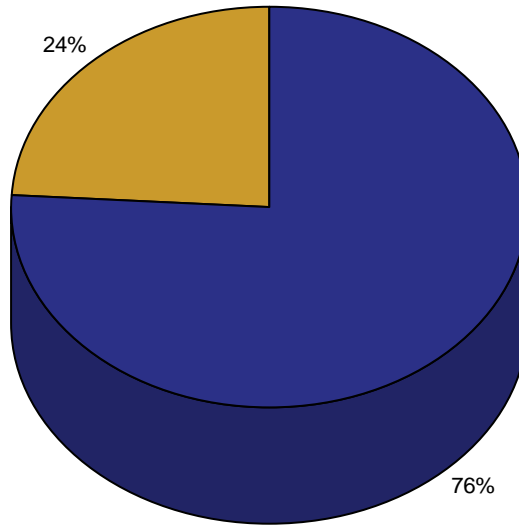
Contingency for Small/Unexpected Repairs/Replacements	Forecasted	\$2,653
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Depreciation Report Update	Forecasted	\$7,911
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<b>TOTAL:</b>		<b>\$19,478</b>
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## 2017 - Total Annual Expenditures by System

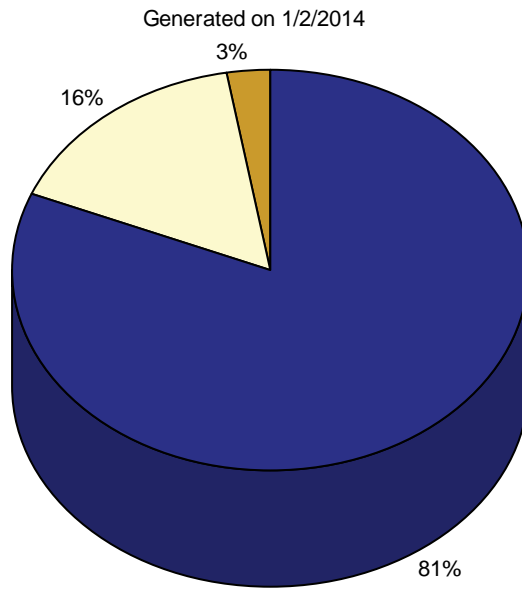
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<span style="color: blue;">■</span> STRUCTURE	<span style="color: gold;">■</span> MISCELLANEOUS
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Projects for 2017 listed by System		
<b>STRUCTURE</b>		
Parking Garage Condition Evaluation	Forecasted	\$8,524
<b>MISCELLANEOUS</b>		
Contingency for Small/Unexpected Repairs/Replacements	Forecasted	\$2,706
	<b>TOTAL:</b>	<b>\$11,230</b>

## 2018 - Total Annual Expenditures by System



<span style="color: blue;">■</span> STRUCTURE	<span style="color: yellow;">■</span> PLUMBING	<span style="color: brown;">■</span> MISCELLANEOUS
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Projects for 2018 listed by System		
<b>STRUCTURE</b>		
Repair Garage Slab Waterproofing	Forecasted	\$83,284
<b>PLUMBING</b>		
Overhaul Domestic Water Boilers	Forecasted	\$16,561
<b>MISCELLANEOUS</b>		
Contingency for Small/Unexpected Repairs/Replacements	Forecasted	\$2,760
	<b>TOTAL:</b>	<b>\$102,605</b>