

# Flanders Loft



## FY 2025 RESERVE STUDY AND MAINTENANCE SCHEDULE

PREPARED FOR:

**Flanders Loft Community  
Association**

**c/o  
Bluestone Real Estate  
Services**

PROJECT NUMBER:

**23-040**

REPORT DATE:

**February 20, 2025**

**FINAL**

PREPARED BY:

**FORENSIC**  
BUILDING CONSULTANTS

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## EXECUTIVE SUMMARY

<b>Client Name:</b>	Flanders Loft Community Association c/o Erin Black Bluestone Real Estate Services	<b>Property Name:</b>	Flanders Loft (Property)
<b>Client Address:</b>	4915 SW Griffith Dr. Suite 300 Beaverton, OR 97005	<b>Property Address:</b>	725 NW Flanders St Portland, OR 97209
<b>Report Type:</b>	Level 3 Reserve Study Update & Maintenance Plan	<b>Report Date:</b>	February 20, 2025

Dear Flanders Loft Community Association:

As requested, Forensic Building Consultants (Forensic) has prepared a 30-year Reserve Study and Maintenance Schedule for the (Property).

The following report consists of the following:

- 1) A physical analysis of the current condition of a limited representative sample of the Property's commonly owned building components, and
- 2) A financial analysis of the Association's current reserve fund balance, contribution, and anticipated replacement schedule, and
- 3) A recommended maintenance schedule for the commonly owned building components.

The intent of this Reserve Study is to evaluate the results of the physical and financial analyses to help the Association assess their current reserve funding and to arrive at an appropriate annual reserve fund contribution for the Property, based on the anticipated replacements and renewals of major commonly owned building components over the next thirty (30) years.

Recommendations provided in the Forensic Building Enclosure Condition Assessment dated February 3<sup>rd</sup>, 2020 form the basis for the condition of the various components and have been integrated into this report whenever applicable.

### RESERVE STUDY SCOPE

This Reserve Study (RS) update was limited to information provided by the Association and 2021-22 Reserve Study Update, Property. Note that Forensics' RS was limited to the following:

- **Update without Site Visit (Level III)** – The reserve provider conducts life and valuation estimates to determine the “fund status” and “funding plan.”

## GENERAL ASSESSMENT OF RESERVE FUND STATUS

### ESTIMATED RESERVE FUND BALANCE

The FY2025 estimated reserve fund starting balance of \$240,000 places the reserve fund at an approximately 46% funding level. Ideally, a reserve fund would be approximately 80 to 100% funded, meaning that most or all depreciation of existing components is held in reserve. Currently, the Association is at a low to medium risk for special assessment should any unplanned expenses or component failures occur.

### RECOMMENDED RESERVE FUND CONTRIBUTION

The recommended reserve fund contribution has been calculated to meet all projected expenses and maintain a positive threshold through the 30 years projected in this report.

A contribution of \$51,500 in fiscal year 2025, followed by 3% annual increases through fiscal year 2054, is recommended to meet the above criteria and is projected to an ending balance of approximately \$469,422 in fiscal year 2054.

Costs provided in this report are estimates based on best available information. Forensic strongly recommends the Association obtain bids for future projects to ensure proper funding.

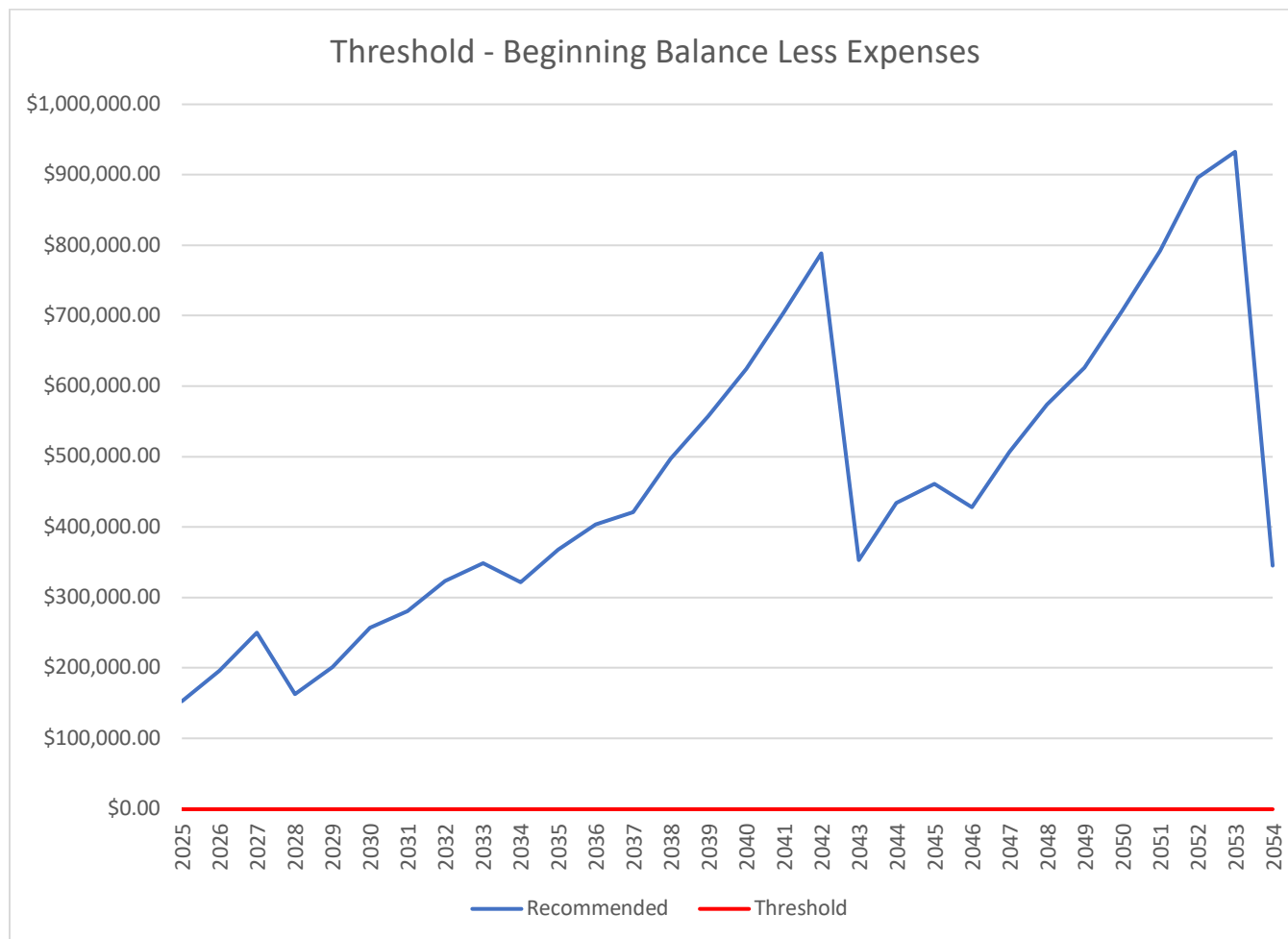
Recommended Annual Reserve Fund Contributions	
FY 2025	\$ 51,500 (3% increase)
FY 2026 - FY 2054	3% annual increases

See '**Recommended Cash Flow – Annual**' for more detailed information.

## RESERVE FUND ANNUAL CONTRIBUTION METRICS

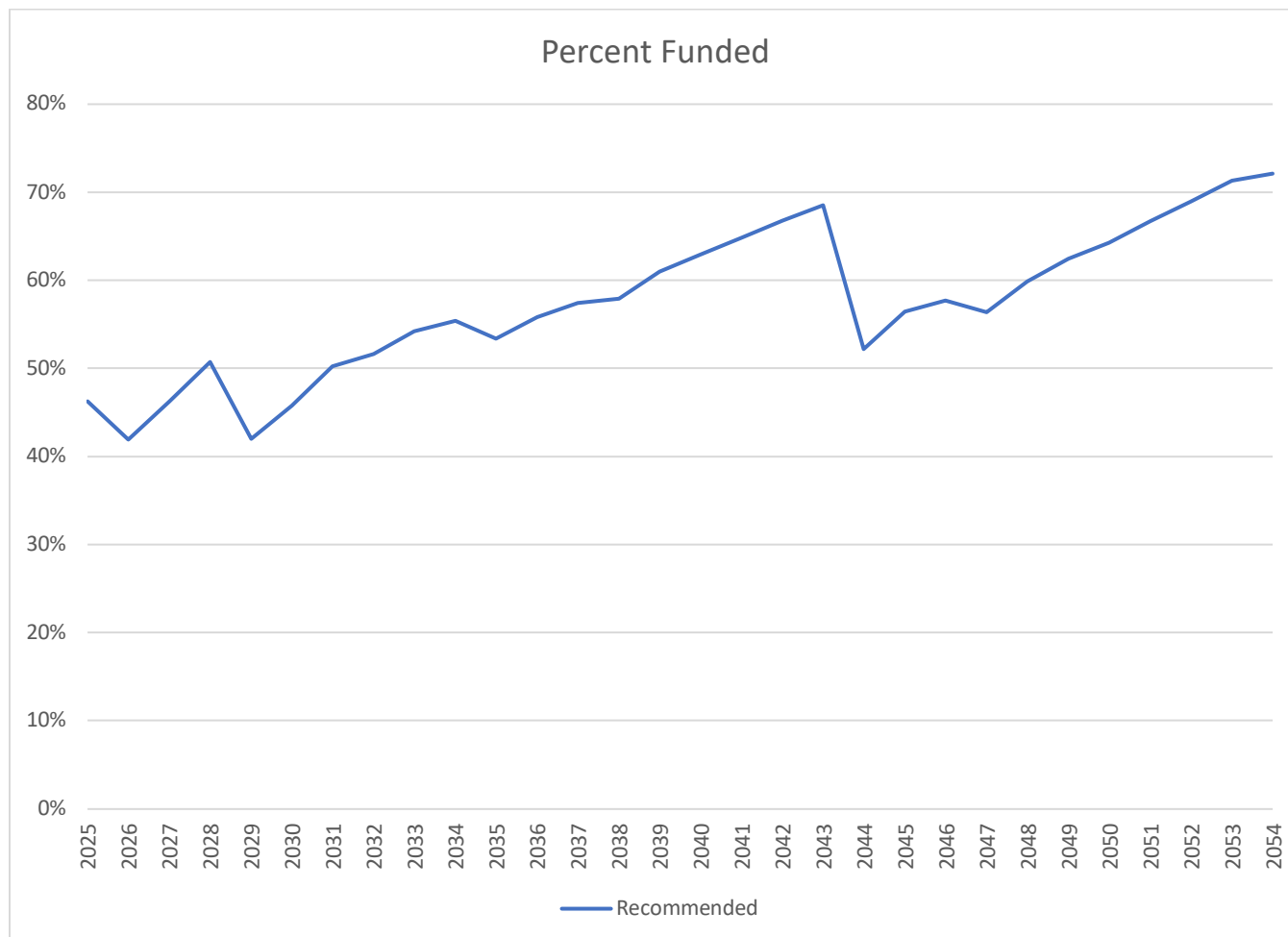
### THRESHOLD CHART

For the purposes of this report, threshold is defined as the difference between a fiscal year's beginning balance and its projected expenses. Negative thresholds can lead to deferral of projects due to lack of funding at the beginning of the year. The recommended contribution maintains a positive threshold throughout the 30 years of this study, as illustrated in the graph below.



## PERCENT FUNDED CHART

The recommended contribution schedule will lead to an approximately 72% funded reserve by 2054 as illustrated in the graph below.



## RECOMMENDED CASH FLOW – ANNUAL

### EXPLANATORY NOTES

The recommended cash flow projections provided in this spreadsheet has been calculated based on the recommended cash flow detailed under 'General Assessment of Reserve Fund Status'.

	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Begin Balance	240,000	205,098	250,468	306,356	219,710	260,543	317,967	343,452	388,387	415,527
Contribution	51,500	53,045	54,636	56,275	57,964	59,703	61,494	63,339	65,239	67,196
Average Per Unit	1,907	1,965	2,024	2,084	2,147	2,211	2,278	2,346	2,416	2,489
Percent Change	0.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Interest	821	1,007	1,253	887	1,043	1,294	1,411	1,605	1,726	1,620
Less Expenditures	87,224	8,682	0	143,809	18,173	3,573	37,419	20,009	39,825	93,829
Ending Balance	205,098	250,468	306,356	219,710	260,543	317,967	343,452	388,387	415,527	390,514

	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
Begin Balance	390,514	438,973	477,220	497,294	575,336	638,368	707,701	791,406	877,520	442,616
Contribution	69,212	71,288	73,427	75,630	77,898	80,235	82,643	85,122	87,675	90,306
Average Per Unit	2,563	2,640	2,720	2,801	2,885	2,972	3,061	3,153	3,247	3,345
Percent Change	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Interest	1,819	1,989	2,078	2,413	2,694	2,999	3,367	3,749	1,888	2,166
Less Expenditures	22,572	35,030	55,431	0	17,561	13,902	2,304	2,756	524,468	7,753
Ending Balance	438,973	477,220	497,294	575,336	638,368	707,701	791,406	877,520	442,616	527,335

	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054
Begin Balance	527,335	557,287	526,744	608,309	679,107	734,522	818,477	907,318	1,015,703	1,055,701
Contribution	93,015	95,805	98,679	101,640	104,689	107,830	111,065	114,396	117,828	121,363
Average Per Unit	3,445	3,548	3,655	3,764	3,877	3,994	4,114	4,237	4,364	4,495
Percent Change	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Interest	2,305	2,173	2,513	2,827	3,072	3,437	3,828	4,305	4,490	1,968
Less Expenditures	65,368	128,521	19,628	33,668	52,346	27,312	26,052	10,316	82,320	709,610
Ending Balance	557,287	526,744	608,309	679,107	734,522	818,477	907,318	1,015,703	1,055,701	469,422



## RESERVE STUDY PARAMETERS

### EXPLANATORY NOTES

The following data (provided by the Association) forms the basis for the funding model inputs.

<b>Level of Service:</b>	Level 3 (Full Study Update – No Site Visit)	<b>Description:</b>	Reserve Study includes Component Inventory, Life and Valuation Estimates, Fund Status & Funding Plan
<b>Fiscal Year Start:</b>	January 1, 2025	<b>Fiscal Year End:</b>	December 31, 2025
<b>Model Interest Rate:</b>	0.45 %	<b>Inflation Rate:</b>	2.15 %
<b>Estimated FY2025 Reserve Fund Beginning Balance:</b>	\$ 240,000	<b>Previous Fiscal Year Contribution:</b>	\$ 50,000
<b>Funding Parameters:</b>	Maintain positive thresholds and build to higher percent funding.	<b>Number of Units:</b>	25 Residential 2 Commercial
<b>Property Occupancy Type:</b>	Mixed Use Condominiums	<b>Date of Original Construction:</b>	1921, with 1998 addition/renovation
<b>General Description of Property:</b> <ul style="list-style-type: none"> <li>The Property consists of a single six (6) story building with no basement. The building is of concrete and wood frame construction.</li> <li>Exterior wall assemblies are a mixture of fiber cement panel siding, stucco/EIFS, and corrugated steel panels.</li> <li>The roof is a built-up roof membrane with limited areas of asphalt shingles. A fluid applied membrane is scheduled to be applied over the built-up roofing in 2023.</li> <li>Balconies are a mix of metal balconies on floors 2 and 3, wood deck boards over built-up roof membrane of floors 4 and 6.</li> </ul>			

### NOTE REGARDING INFLATION

Unprecedented inflation levels over the last fiscal year have proven problematic regarding future inflation models. Future costs have been projected at a historically stable 2.15% annual rate of inflation, however, annual inflation in the near term may prove to be higher.

While Forensic always recommends annual reserve study updates, it is even more important in the coming years to perform annual reserve study updates to accurately account for inflation and maintain a healthy reserve fund status.

## PROPERTY SITE OVERVIEW

### AERIAL PHOTOGRAPH

The aerial image below, obtained from Google Maps, illustrates the overall site conditions at the Property. Note that this image is orientated with “North” corresponding with the top of the page.





## BUILDING ELEVATION PHOTOGRAPHS



South



South-West





West Elevation



South Elevation

## RESERVE STUDY EXCLUSIONS

### EXPLANATORY NOTES

The following components and systems have been excluded from this Reserve Study. Any pricing and component information for these systems contained within this report was provided by the Association, was included only for budgeting purposes, and has not been independently assessed or verified by Forensic:

- Site Utilities
- Foundation and Concealed Structural Components
- Mechanical and HVAC Systems
- Low-Voltage Electrical Systems
- Emergency Power Systems
- Plumbing Systems
- Fire Detection and Alarm Systems
- Fire Suppression Systems
- Electrical Systems
- Accessibility Items

These systems (where they exist) will likely require periodic renewal and replacement during the next 30 years. However, the condition assessment and verification of replacement costs of these systems are beyond the scope of this Reserve Study.

It is recommended that the Association and their Community Management firm have these systems evaluated by qualified professionals prior to inclusion in future Reserve Studies for the Property.

## COMPONENT INVENTORY

### EXPLANATORY NOTES

To compile the 30-year funding forecast, this reserve study estimates the expected useful life (EUL) and remaining useful life (RUL) of the various building components and systems (components) included within the scope of the study and provides estimated replacement or renewal costs for those components.

Each common element component is identified as being primarily in one of four categories, and an appropriate modification to the components' remaining useful life (RUL) was made for each, based on the actual condition and nature of the component

<b>Interior Component (Aesthetic):</b>	Maximum 100% extension of expected useful life (EUL)	<b>Exterior Component (Aesthetic):</b>	Maximum 50% extension of expected useful life (EUL)
<b>Interior Component (Performance):</b>	Maximum 50% extension of expected useful life (EUL)	<b>Exterior Component (Performance):</b>	Maximum 25% extension of expected useful life (EUL)

Note that the component inventory tables on the following pages incorporate the abbreviations and terminology listed below:

- **Replace Date** – First anticipated replacement date for a given component, based upon RUL
- **Basis Cost** – The cost of a given component per unit of measurement
- **Quantity** – Quantity of a given component with unit of measurement
- **Current Cost** – Current cost of replacement for a given component
- **Adj Life** – Adjusted expected useful life of given component
- **Rem Life (RUL)** – Remaining useful life of given component
- **Future Cost** – Future cost of replacement for a given component based on replacement date and inflation

## COMPONENT LIST – SUMMARY

Components Component	Replace Date	Basis Cost	Quantity	Current Cost	Adj Life	Rem Life	Future Cost
<b>Building Components</b>							
Building Envelope Sealing	01/01/2028	\$ 17,797.00	1 Total	\$ 17,797	30:00	3:00	\$ 18,982
Stairs & Railings - Steel - Replace	01/01/2068	0.00	20 Unfund	0	70:00	43:00	0
				17,797			18,982
<b>Contingency</b>							
Insurance - Deductible	01/01/2025	\$ 25,000.00	1 Total	\$ 25,000	1:00	0:00	\$ 25,000
				25,000			25,000
<b>Decks and Railings</b>							
Balconies - Steel - Repairs	01/01/2033	\$ 463.95	18 Ea	\$ 8,351	10:00	8:00	\$ 9,917
Decks - 4th Floor Roof - Membrane - Re	01/01/2043	15.98	1,843 SF	29,451	20:00	18:00	43,353
Decks - 4th Floor Roof - Wood - Replace	01/01/2043	28.35	1,843 SF	52,249	20:00	18:00	76,913
Decks - 6th Floor Roof - Built-up	01/01/2043	15.98	3,110 SF	49,698	20:00	18:00	73,157
Decks - Railings - Repair	01/01/2034	5,155.00	1 Total	5,155	36:00	9:00	6,254
				144,904			209,595
<b>Doors and Windows</b>							
Door - Lobby - Replacement	01/01/2032	\$ 1,634.17	1 Total	\$ 1,634	34:00	7:00	\$ 1,899
Doors - Common Area - Exterior - Repla	01/01/2043	1,551.02	6 Ea	9,306	45:00	18:00	13,699
Doors - Common Area - Interior - Replac	01/01/2047	679.77	18 Ea	12,236	49:00	22:00	19,628
Doors - Panic Bars - Replacement	01/01/2032	481.35	12 Ea	5,776	34:00	7:00	6,713
Windows - Lobby Area - Replacement	01/01/2032	9,805.04	1 Total	9,805	34:00	7:00	11,396
				38,757			53,336
<b>Equipment</b>							
Elevator - Upgrade	01/01/2028	\$ 115,752.87	1 Total	\$ 115,753	37:00	3:00	\$ 123,458
Elevator Cab - Refurbish	01/01/2036	12,754.52	1 Total	12,755	37:00	11:00	16,154
Parking Garage - Overhead Door - Repla	01/01/2029	5,101.81	1 Total	5,102	25:00	4:00	5,560
Parking Garage - Overhead Door Lifter -	01/01/2039	13,000.00	1 Total	13,000	15:00	14:00	17,561
Roof - Ventilation System - Replacemen	01/01/2046	80,224.69	1 Allow	80,225	25:00	21:00	125,955
				226,834			288,688
<b>Fencing/Security</b>							
Security Camera System - Repairs	01/01/2029	\$ 11,575.28	1 Total	\$ 11,575	8:00	4:00	\$ 12,614
Security System - Call Box - Replacemen	01/01/2036	13,269.17	1 Total	13,269	15:00	11:00	16,806
				24,844			29,420
<b>Fire Suppression Systems</b>							
Fire Alarm - Annunciation Panel - Replac	01/01/2042	\$ 1,913.16	1 Total	\$ 1,913	20:00	17:00	\$ 2,756
Fire Detection System - Replacement	01/01/2025	12,754.52	1 Total	12,755	26:00	0:00	12,755
Fire Suppression / Wet Sprinkler: Repair	01/01/2025	15,000.00	1 Allow	15,000	10:00	0:00	15,000
				29,668			30,511

## COMPONENT LIST – SUMMARY

Components Component	Replace Date	Basis Cost	Quantity	Current Cost	Adj Life	Rem Life	Future Cost
<b>Gutters and Downspouts</b>							
Gutters & Downspouts - Replacement	01/01/2048	\$ 2,745.42	1 Total	\$ 2,745	25:00	23:00	\$ 4,500
				2,745			4,500
<b>Inspections</b>							
Building Envelope Inspection	01/01/2025	\$ 3,208.99	1 Total	\$ 3,209	13:00	0:00	\$ 3,209
				3,209			3,209
<b>Interior Furnishings</b>							
Flooring - Replacement	01/01/2033	\$ 4.75	2,550 SF	\$ 12,113	10:00	8:00	\$ 14,384
				12,113			14,384
<b>Lighting</b>							
Lights - Stairwell LED	01/01/2028	\$ 160.45	8 Ea	\$ 1,284	30:00	3:00	\$ 1,369
				1,284			1,369
<b>Mailboxes</b>							
Mailboxes - Replacement	01/01/2054	\$ 1,631.57	1 Total	\$ 1,632	55:00	29:00	\$ 3,042
				1,632			3,042
<b>Painting</b>							
Exterior - Painting	01/01/2025	\$ 5.21	6,000 SF	\$ 31,260	20:00	0:00	\$ 31,260
Interior - Painting	01/01/2033	13,073.38	1 Total	13,073	10:00	8:00	15,525
Parking Garage - Painting	01/01/2026	6,863.52	1 Total	6,864	17:00	1:00	7,013
Parking Garage - Restripe	01/01/2026	1,634.17	1 Total	1,634	21:00	1:00	1,670
				52,831			55,467
<b>Roofing</b>							
Roof - 3 Tab Composition - Replacemen	01/01/2073	\$ 6.95	1,200 SF	\$ 8,340	50:00	48:00	\$ 23,386
Roof - Built-up With Mineral Cap - Repla	01/01/2043	2,010.45	75 Square	150,784	20:00	18:00	221,961
				159,124			245,347
<b>Siding</b>							
Siding - Composite Panels - Replacemen	01/01/2054	\$ 18.73	18,000 SF	\$ 337,140	50:00	29:00	\$ 628,566
Siding - Metal Standing-Seam - Replace	01/01/2054	12.03	974 SF	11,717	50:00	29:00	21,846
Siding - Stucco/EIFS - Replacement	01/01/2034	12.03	6,000 SF	72,180	30:00	9:00	87,575
				421,037			737,986
				1,161,779			1,720,833



## EXPENDITURES – ANNUAL LIST

Date	Component	Code	Service Date	Estimated Life	Expenditure
<b>Year : 2025</b>					
01/01/2025	Building Envelope Inspection	910-000-0003	01/01/2012	13:00	\$ 3,208.99
01/01/2025	Exterior - Painting	910-000-0018	01/01/2005	20:00	31,260.00
01/01/2025	Fire Detection System - Replacement	910-000-0020	01/01/1999	26:00	12,754.52
01/01/2025	Fire Suppression / Wet Sprinkler: Repairs	910-000-0055	01/01/2015	10:00	15,000.00
01/01/2025	Insurance - Deductible	910-000-0023		1:00	25,000.00
					<hr/> 87,223.51
<b>Year : 2026</b>					
01/01/2026	Parking Garage - Painting	910-000-0038	01/01/2009	17:00	\$ 7,012.55
01/01/2026	Parking Garage - Restripe	910-000-0039	01/01/2005	21:00	1,669.65
					<hr/> 8,682.20
<b>Year : 2028</b>					
01/01/2028	Building Envelope Sealing	910-000-0004	01/01/1998	30:00	\$ 18,981.64
01/01/2028	Elevator - Upgrade	910-000-0016	01/01/1991	37:00	123,457.85
01/01/2028	Lights - Stairwell LED	910-000-0025		30:00	1,369.04
					<hr/> 143,808.53
<b>Year : 2029</b>					
01/01/2029	Parking Garage - Overhead Door - Replacem	910-000-0036	01/01/2004	25:00	\$ 5,559.56
01/01/2029	Security Camera System - Repairs	910-000-0048	01/01/2021	8:00	12,613.84
					<hr/> 18,173.40
<b>Year : 2030</b>					
01/01/2030	Building Envelope Inspection	910-000-0003	01/01/2025	5:00	\$ 3,572.84
					<hr/> 3,572.84
<b>Year : 2031</b>					
01/01/2031	Exterior - Painting	910-000-0018	01/01/2025	6:00	\$ 35,560.09
01/01/2031	Parking Garage - Restripe	910-000-0039	01/01/2026	5:00	1,858.96
					<hr/> 37,419.05
<b>Year : 2032</b>					
01/01/2032	Door - Lobby - Replacement	910-000-0010	01/01/1998	34:00	\$ 1,899.33
01/01/2032	Doors - Panic Bars - Replacement	910-000-0015	01/01/1998	34:00	6,713.44
01/01/2032	Windows - Lobby Area - Replacement	910-000-0054	01/01/1998	34:00	11,395.99
					<hr/> 20,008.76

## EXPENDITURES – ANNUAL LIST

Date	Component	Code	Service Date	Estimated Life	Expenditure
<b>Year : 2033</b>					
01/01/2033	Balconies - Steel - Repairs	910-000-0001	01/01/2023	10:00	\$ 9,916.89
01/01/2033	Flooring - Replacement	910-000-0021	01/01/2023	10:00	14,383.53
01/01/2033	Interior - Painting	910-000-0024	01/01/2023	10:00	15,524.57
					<u>39,824.99</u>
<b>Year : 2034</b>					
01/01/2034	Decks - Railings - Repair	910-000-0009	01/01/1998	36:00	\$ 6,254.45
01/01/2034	Siding - Stucco/EIFS - Replacement	910-000-0052	01/01/2004	30:00	87,574.50
					<u>93,828.95</u>
<b>Year : 2035</b>					
01/01/2035	Building Envelope Inspection	910-000-0003	01/01/2030	5:00	\$ 3,977.94
01/01/2035	Fire Suppression / Wet Sprinkler: Repairs	910-000-0055	01/01/2025	10:00	18,594.35
					<u>22,572.29</u>
<b>Year : 2036</b>					
01/01/2036	Elevator Cab - Refurbish	910-000-0017	01/01/1999	37:00	\$ 16,154.10
01/01/2036	Parking Garage - Restripe	910-000-0039	01/01/2031	5:00	2,069.74
01/01/2036	Security System - Call Box - Replacement	910-000-0049	01/01/2021	15:00	16,805.93
					<u>35,029.77</u>
<b>Year : 2037</b>					
01/01/2037	Exterior - Painting	910-000-0018	01/01/2031	6:00	\$ 40,451.69
01/01/2037	Security Camera System - Repairs	910-000-0048	01/01/2029	8:00	14,978.88
					<u>55,430.57</u>
<b>Year : 2039</b>					
01/01/2039	Parking Garage - Overhead Door Lifter - Rep	910-000-0037	01/01/2024	15:00	\$ 17,560.99
					<u>17,560.99</u>
<b>Year : 2040</b>					
01/01/2040	Building Envelope Inspection	910-000-0003	01/01/2035	5:00	\$ 4,428.97
01/01/2040	Parking Garage - Painting	910-000-0038	01/01/2026	14:00	9,472.87
					<u>13,901.84</u>
<b>Year : 2041</b>					
01/01/2041	Parking Garage - Restripe	910-000-0039	01/01/2036	5:00	\$ 2,304.42

## EXPENDITURES – ANNUAL LIST

Date	Component	Code	Service Date	Estimated Life	Expenditure
					2,304.42
<b>Year : 2042</b>					
01/01/2042	Fire Alarm - Annunciation Panel - Replacem	910-000-0019	01/01/2022	20:00	\$ 2,756.41
					2,756.41
<b>Year : 2043</b>					
01/01/2043	Balconies - Steel - Repairs	910-000-0001	01/01/2033	10:00	\$ 12,293.21
01/01/2043	Decks - 4th Floor Roof - Membrane - Replac	910-000-0005	01/01/2023	20:00	43,353.45
01/01/2043	Decks - 4th Floor Roof - Wood - Replacemen	910-000-0006	01/01/2023	20:00	76,913.04
01/01/2043	Decks - 6th Floor Roof - Built-up	910-000-0007	01/01/2023	20:00	73,157.48
01/01/2043	Doors - Common Area - Exterior - Replacem	910-000-0013	01/01/1998	45:00	13,699.04
01/01/2043	Exterior - Painting	910-000-0018	01/01/2037	6:00	46,016.18
01/01/2043	Flooring - Replacement	910-000-0021	01/01/2033	10:00	17,830.17
01/01/2043	Interior - Painting	910-000-0024	01/01/2033	10:00	19,244.63
01/01/2043	Roof - Built-up With Mineral Cap - Replace	910-000-0043	01/01/2023	20:00	221,960.72
					524,467.92
<b>Year : 2044</b>					
01/01/2044	Decks - Railings - Repair	910-000-0009	01/01/2034	10:00	\$ 7,753.17
					7,753.17
<b>Year : 2045</b>					
01/01/2045	Building Envelope Inspection	910-000-0003	01/01/2040	5:00	\$ 4,931.15
01/01/2045	Fire Detection System - Replacement	910-000-0020	01/01/2025	20:00	19,599.44
01/01/2045	Fire Suppression / Wet Sprinkler: Repairs	910-000-0055	01/01/2035	10:00	23,049.99
01/01/2045	Security Camera System - Repairs	910-000-0048	01/01/2037	8:00	17,787.34
					65,367.92
<b>Year : 2046</b>					
01/01/2046	Parking Garage - Restripe	910-000-0039	01/01/2041	5:00	\$ 2,565.70
01/01/2046	Roof - Ventilation System - Replacement	910-000-0047	01/01/2021	25:00	125,955.33
					128,521.03
<b>Year : 2047</b>					
01/01/2047	Doors - Common Area - Interior - Replacem	910-000-0014	01/01/1998	49:00	\$ 19,627.82
					19,627.82

## EXPENDITURES – ANNUAL LIST

Date	Component	Code	Service Date	Estimated Life	Expenditure
<b>Year : 2048</b>					
01/01/2048	Building Envelope Sealing	910-000-0004	01/01/2028	20:00	\$ 29,168.44
01/01/2048	Gutters & Downspouts - Replacement	910-000-0022	01/01/2023	25:00	4,499.61
					<u>33,668.05</u>
<b>Year : 2049</b>					
01/01/2049	Exterior - Painting	910-000-0018	01/01/2043	6:00	\$ 52,346.11
					<u>52,346.11</u>
<b>Year : 2050</b>					
01/01/2050	Building Envelope Inspection	910-000-0003	01/01/2045	5:00	\$ 5,490.26
01/01/2050	Elevator Cab - Refurbish	910-000-0017	01/01/2036	14:00	21,821.70
					<u>27,311.96</u>
<b>Year : 2051</b>					
01/01/2051	Parking Garage - Restripe	910-000-0039	01/01/2046	5:00	\$ 2,856.61
01/01/2051	Security System - Call Box - Replacement	910-000-0049	01/01/2036	15:00	23,195.15
					<u>26,051.76</u>
<b>Year : 2052</b>					
01/01/2052	Doors - Panic Bars - Replacement	910-000-0015	01/01/2032	20:00	\$ 10,316.31
					<u>10,316.31</u>
<b>Year : 2053</b>					
01/01/2053	Balconies - Steel - Repairs	910-000-0001	01/01/2043	10:00	\$ 15,238.95
01/01/2053	Flooring - Replacement	910-000-0021	01/01/2043	10:00	22,102.69
01/01/2053	Interior - Painting	910-000-0024	01/01/2043	10:00	23,856.09
01/01/2053	Security Camera System - Repairs	910-000-0048	01/01/2045	8:00	21,122.38
					<u>82,320.11</u>
<b>Year : 2054</b>					
01/01/2054	Decks - Railings - Repair	910-000-0009	01/01/2044	10:00	\$ 9,611.01
01/01/2054	Mailboxes - Replacement	910-000-0035	01/01/1999	55:00	3,041.91
01/01/2054	Parking Garage - Overhead Door - Replacem	910-000-0036	01/01/2029	25:00	9,511.84
01/01/2054	Parking Garage - Overhead Door Lifter - Rep	910-000-0037	01/01/2039	15:00	24,237.27
01/01/2054	Parking Garage - Painting	910-000-0038	01/01/2040	14:00	12,796.38
01/01/2054	Siding - Composite Panels - Replacement	910-000-0050	01/01/2004	50:00	628,565.59
01/01/2054	Siding - Metal Standing-Seam - Replacemen	910-000-0051	01/01/2004	50:00	21,845.65
					<u>709,609.65</u>

## EXPENDITURES MATRIX

Category	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
<b>Building Components</b>										
Building Envelope Sealing				18,982						
	0	0	0	18,982	0	0	0	0	0	0
<b>Contingency</b>										
Insurance - Deductible	25,000									
	25,000	0	0	0	0	0	0	0	0	0
<b>Decks and Railings</b>										
Balconies - Steel - Repairs									9,917	
Decks - Railings - Repair										6,254
	0	0	0	0	0	0	0	0	9,917	6,254
<b>Doors and Windows</b>										
Door - Lobby - Replacement								1,899		
Doors - Panic Bars - Replacement								6,713		
Windows - Lobby Area - Replacement								11,396		
	0	0	0	0	0	0	0	20,009	0	0
<b>Equipment</b>										
Elevator - Upgrade				123,458						
Parking Garage - Overhead Door - Rep					5,560					
	0	0	0	123,458	5,560	0	0	0	0	0
<b>Fencing/Security</b>										
Security Camera System - Repairs					12,614					
	0	0	0	0	12,614	0	0	0	0	0
<b>Fire Suppression Systems</b>										
Fire Detection System - Replacement	12,755									
Fire Suppression / Wet Sprinkler: Rep	15,000									
	27,755	0	0	0	0	0	0	0	0	0

## EXPENDITURES MATRIX

Category	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
<b>Inspections</b>										
Building Envelope Inspection	3,209					3,573				
	3,209	0	0	0	0	3,573	0	0	0	0
<b>Interior Furnishings</b>										
Flooring - Replacement									14,384	
	0	0	0	0	0	0	0	0	14,384	0
<b>Lighting</b>										
Lights - Stairwell LED				1,369						
	0	0	0	1,369	0	0	0	0	0	0
<b>Painting</b>										
Exterior - Painting	31,260						35,560			
Interior - Painting									15,525	
Parking Garage - Painting		7,013								
Parking Garage - Restripe		1,670					1,859			
	31,260	8,682	0	0	0	0	37,419	0	15,525	0
<b>Siding</b>										
Siding - Stucco/EIFS - Replacement										87,575
	0	0	0	0	0	0	0	0	0	87,575
	87,224	8,682	0	143,809	18,173	3,573	37,419	20,009	39,825	93,829

## EXPENDITURES MATRIX

Category	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
<b>Decks and Railings</b>										
Balconies - Steel - Repairs									12,293	
Decks - 4th Floor Roof - Membrane - R									43,353	
Decks - 4th Floor Roof - Wood - Repla									76,913	
Decks - 6th Floor Roof - Built-up									73,157	
Decks - Railings - Repair										7,753
	0	0	0	0	0	0	0	0	205,717	7,753
<b>Doors and Windows</b>										
Doors - Common Area - Exterior - Repl									13,699	
	0	0	0	0	0	0	0	0	13,699	0
<b>Equipment</b>										
Elevator Cab - Refurbish		16,154								
Parking Garage - Overhead Door Lifter					17,561					
	0	16,154	0	0	17,561	0	0	0	0	0
<b>Fencing/Security</b>										
Security Camera System - Repairs			14,979							
Security System - Call Box - Replacem		16,806								
	0	16,806	14,979	0	0	0	0	0	0	0
<b>Fire Suppression Systems</b>										
Fire Alarm - Annunciation Panel - Repl								2,756		
Fire Suppression / Wet Sprinkler: Rep	18,594									
	18,594	0	0	0	0	0	0	2,756	0	0
<b>Inspections</b>										
Building Envelope Inspection	3,978					4,429				
	3,978	0	0	0	0	4,429	0	0	0	0

## EXPENDITURES MATRIX

Category	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
<b>Interior Furnishings</b>										
Flooring - Replacement									17,830	
	0	0	0	0	0	0	0	0	17,830	0
<b>Painting</b>										
Exterior - Painting			40,452						46,016	
Interior - Painting									19,245	
Parking Garage - Painting						9,473				
Parking Garage - Restripe		2,070					2,304			
	0	2,070	40,452	0	0	9,473	2,304	0	65,261	0
<b>Roofing</b>										
Roof - Built-up With Mineral Cap - Rep									221,961	
	0	0	0	0	0	0	0	0	221,961	0
	22,572	35,030	55,431	0	17,561	13,902	2,304	2,756	524,468	7,753



## EXPENDITURES MATRIX

Category	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054
<b>Building Components</b>										
Building Envelope Sealing				29,168						
	0	0	0	29,168	0	0	0	0	0	0
<b>Decks and Railings</b>										
Balconies - Steel - Repairs									15,239	
Decks - Railings - Repair										9,611
	0	0	0	0	0	0	0	0	15,239	9,611
<b>Doors and Windows</b>										
Doors - Common Area - Interior - Repl			19,628							
Doors - Panic Bars - Replacement								10,316		
	0	0	19,628	0	0	0	0	10,316	0	0
<b>Equipment</b>										
Elevator Cab - Refurbish						21,822				
Parking Garage - Overhead Door - Rep										9,512
Parking Garage - Overhead Door Lifter										24,237
Roof - Ventilation System - Replaceme		125,955								
	0	125,955	0	0	0	21,822	0	0	0	33,749
<b>Fencing/Security</b>										
Security Camera System - Repairs	17,787								21,122	
Security System - Call Box - Replacem							23,195			
	17,787	0	0	0	0	0	23,195	0	21,122	0
<b>Fire Suppression Systems</b>										
Fire Detection System - Replacement	19,599									
Fire Suppression / Wet Sprinkler: Rep	23,050									
	42,649	0	0	0	0	0	0	0	0	0

## EXPENDITURES MATRIX

Category	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054
<b>Gutters and Downspouts</b>										
Gutters & Downspouts - Replacement				4,500						
	0	0	0	4,500	0	0	0	0	0	0
<b>Inspections</b>										
Building Envelope Inspection	4,931					5,490				
	4,931	0	0	0	0	5,490	0	0	0	0
<b>Interior Furnishings</b>										
Flooring - Replacement									22,103	
	0	0	0	0	0	0	0	0	22,103	0
<b>Mailboxes</b>										
Mailboxes - Replacement										3,042
	0	0	0	0	0	0	0	0	0	3,042
<b>Painting</b>										
Exterior - Painting					52,346					
Interior - Painting									23,856	
Parking Garage - Painting										12,796
Parking Garage - Restripe		2,566					2,857			
	0	2,566	0	0	52,346	0	2,857	0	23,856	12,796
<b>Siding</b>										
Siding - Composite Panels - Replacem										628,566
Siding - Metal Standing-Seam - Replac										21,846
	0	0	0	0	0	0	0	0	0	650,411
	65,368	128,521	19,628	33,668	52,346	27,312	26,052	10,316	82,320	709,610

## COMPONENT LIST – FULL DETAIL

### Building Envelope Sealing

<b>Item Number</b>	4
<b>Type</b>	Common Area
<b>Category</b>	Building Components
<b>Measurement Basis</b>	Total
<b>Estimated Useful Life</b>	20 Years
<b>Basis Cost</b>	\$ 17,797.00
<b>Tracking</b>	Logistical
<b>Method</b>	Adjusted



Code	Desc.	Service Date	Replace Date	Rem Life	Adj Life	Quantity	Current Cost	Future Cost
910-000-0004		01/01/1998	01/01/2028	3:00	30:00	1	17,797.00	18,981.64
							17,797.00	18,981.64

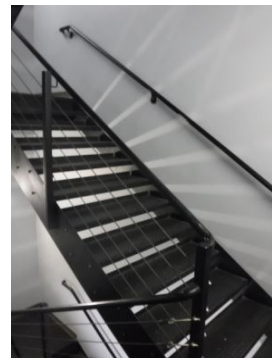
### Comments

This provision is for the sealing of the building envelope.

Sealant joints were observed by Forensic to be in overall good condition. See Forensic BECA for more information.

### Stairs & Railings - Steel - Replace

<b>Item Number</b>	53
<b>Type</b>	Common Area
<b>Category</b>	Building Components
<b>Measurement Basis</b>	Unfund
<b>Estimated Useful Life</b>	50 Years
<b>Basis Cost</b>	\$ 0.00
<b>Tracking</b>	Logistical
<b>Method</b>	Adjusted



<b>Code</b>	<b>Desc.</b>	<b>Service Date</b>	<b>Replace Date</b>	<b>Rem Life</b>	<b>Adj Life</b>	<b>Quantity</b>	<b>Current Cost</b>	<b>Future Cost</b>
910-000-0053		01/01/1998	01/01/2068	43:00	70:00	20	0.00	0.00

### Comments

This component funds for the replacement of the two steel stairways, landings, and handrails.

According to the prior study, these items will require periodic maintenance of achieve their useful expected life.

### Insurance - Deductible

<b>Item Number</b>	23
<b>Type</b>	Common Area
<b>Category</b>	Contingency
<b>Measurement Basis</b>	Total
<b>Estimated Useful Life</b>	1 Year
<b>Basis Cost</b>	\$ 25,000.00
<b>Tracking</b>	Logistical
<b>Method</b>	One Time

Code	Desc.	Service Date	Replace Date	Rem Life	Adj Life	Quantity	Current Cost	Future Cost
910-000-0023			01/01/2025	0:00	1:00	1	25,000.00	25,000.00
							25,000.00	25,000.00

### Comments

This component is for the insurance deductible in the event a claim is made.

Many Associations include the insurance deductible in the reserve study as a component. Generally this amount is \$10,000 but can vary based on insurance coverages.

The insurance deductible component is only included as an expenditure in the first year of the study.

**FY2025 Update:** Updated the cost from \$5,000 to \$25,000

### Balconies - Steel - Repairs

<b>Item Number</b>	1
<b>Type</b>	Common Area
<b>Category</b>	Decks and Railings
<b>Measurement Basis</b>	Ea
<b>Estimated Useful Life</b>	10 Years
<b>Basis Cost</b>	\$ 463.95
<b>Tracking</b>	Logistical
<b>Method</b>	Adjusted



Code	Desc.	Service Date	Replace Date	Rem Life	Adj Life	Quantity	Current Cost	Future Cost
910-000-0001		01/01/2023	01/01/2033	8:00	10:00	18	8,351.10	9,916.89
							8,351.10	9,916.89

### Comments

This component funds for minor repairs to the steel balconies, including tightening of fasteners.

According to the prior reserve study, there are 18 balconies.

The cost and useful life estimates are based on information provided by the Association.

This item has been delayed per the Association.

The Association should obtain a bid to confirm this cost.

### Decks - 4th Floor Roof - Membrane - Replacement

<b>Item Number</b>	5
<b>Type</b>	Common Area
<b>Category</b>	Decks and Railings
<b>Measurement Basis</b>	SF
<b>Estimated Useful Life</b>	20 Years
<b>Basis Cost</b>	\$ 15.98
<b>Tracking</b>	Logistical
<b>Method</b>	Adjusted



Code	Desc.	Service Date	Replace Date	Rem Life	Adj Life	Quantity	Current Cost	Future Cost
910-000-0005		01/01/2023	01/01/2043	18:00	20:00	1,843	29,451.14	43,353.45
							29,451.14	43,353.45

### Comments

This component funds for the replacement of the membrane over the roofing portion and under the wood flooring of the 4th floor deck.

Replaced in FY2023.

The cost and useful life estimates are based on information provided by the Association.

The Association should obtain a bid to confirm this cost.

### Decks - 4th Floor Roof - Wood - Replacement

<b>Item Number</b>	6
<b>Type</b>	Common Area
<b>Category</b>	Decks and Railings
<b>Measurement Basis</b>	SF
<b>Estimated Useful Life</b>	20 Years
<b>Basis Cost</b>	\$ 28.35
<b>Tracking</b>	Logistical
<b>Method</b>	Adjusted



Code	Desc.	Service Date	Replace Date	Rem Life	Adj Life	Quantity	Current Cost	Future Cost
910-000-0006		01/01/2023	01/01/2043	18:00	20:00	1,843	52,249.05	76,913.04
							52,249.05	76,913.04

### Comments

This component funds for the replacement of the wood flooring on the 4th floor roof deck.

Replaced in FY2023

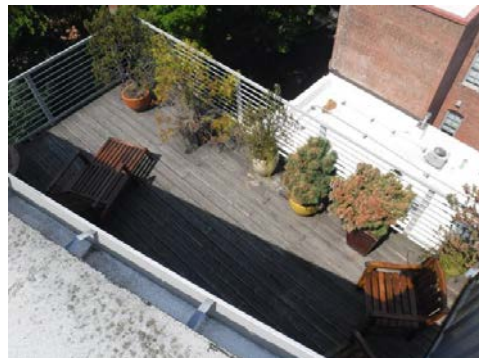
The cost and useful life estimates are based on information provided by the Association.

The Association should obtain a bid to confirm this cost.



### Decks - 6th Floor Roof - Built-up

<b>Item Number</b>	7
<b>Type</b>	Common Area
<b>Category</b>	Decks and Railings
<b>Measurement Basis</b>	SF
<b>Estimated Useful Life</b>	20 Years
<b>Basis Cost</b>	\$ 15.98
<b>Tracking</b>	Logistical
<b>Method</b>	Adjusted



Code	Desc.	Service Date	Replace Date	Rem Life	Adj Life	Quantity	Current Cost	Future Cost
910-000-0007		01/01/2023	01/01/2043	18:00	20:00	3,110	49,697.80	73,157.48
							49,697.80	73,157.48

### Comments

This component funds for the replacement of the built-up material under the wood flooring of the 6th floor deck.

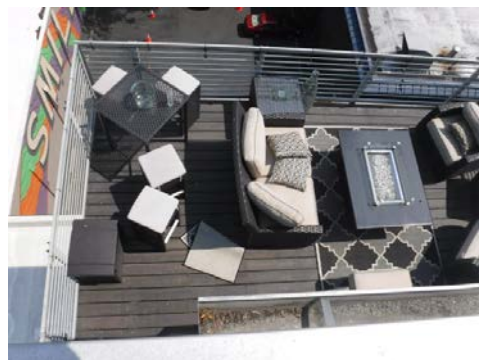
Replaced in FY2023

The cost and useful life estimates are based on information provided by the Association.

The Association should obtain a bid to confirm this cost.

## Decks - Railings - Repair

<b>Item Number</b>	9
<b>Type</b>	Common Area
<b>Category</b>	Decks and Railings
<b>Measurement Basis</b>	Total
<b>Estimated Useful Life</b>	10 Years
<b>Basis Cost</b>	\$ 5,155.00
<b>Tracking</b>	Logistical
<b>Method</b>	Adjusted



Code	Desc.	Service Date	Replace Date	Rem Life	Adj Life	Quantity	Current Cost	Future Cost
910-000-0009		01/01/1998	01/01/2034	9:00	36:00	1	5,155.00	6,254.45
							5,155.00	6,254.45

## Comments

This component funds for the replacement of the steel railings on the 4th through the 6th floor of the building.

The cost and useful life estimates are based on information provided by the Association.

The Association should obtain a bid to confirm this cost.

### Door - Lobby - Replacement

<b>Item Number</b>	10
<b>Type</b>	Common Area
<b>Category</b>	Doors and Windows
<b>Measurement Basis</b>	Total
<b>Estimated Useful Life</b>	30 Years
<b>Basis Cost</b>	\$ 1,634.17
<b>Tracking</b>	Logistical
<b>Method</b>	Adjusted



Code	Desc.	Service Date	Replace Date	Rem Life	Adj Life	Quantity	Current Cost	Future Cost
910-000-0010		01/01/1998	01/01/2032	7:00	34:00	1	1,634.17	1,899.33
							1,634.17	1,899.33

### Comments

This component funds for the replacement of the lobby area door.

The count of 1 lobby area double pane glass and aluminum door is per the prior reserve study.

The cost and useful life estimates are based on information provided by the Association.

The Association should obtain a bid to confirm this cost.

### Doors - Common Area - Exterior - Replacement

<b>Item Number</b>	13
<b>Type</b>	Common Area
<b>Category</b>	Doors and Windows
<b>Measurement Basis</b>	Ea
<b>Estimated Useful Life</b>	30 Years
<b>Basis Cost</b>	\$ 1,551.02
<b>Tracking</b>	Logistical
<b>Method</b>	Adjusted



Code	Desc.	Service Date	Replace Date	Rem Life	Adj Life	Quantity	Current Cost	Future Cost
910-000-0013		01/01/1998	01/01/2043	18:00	45:00	6	9,306.12	13,699.04
							9,306.12	13,699.04

### Comments

This component funds for the replacement of the common area exterior doors.

The count of 6 exterior doors is per the prior reserve study.

The cost and useful life estimates are based on information provided by the Association.

This item has been delayed per the Association.

The Association should obtain a bid to confirm this cost.

### Doors - Common Area - Interior - Replacement

<b>Item Number</b>	14
<b>Type</b>	Common Area
<b>Category</b>	Doors and Windows
<b>Measurement Basis</b>	Ea
<b>Estimated Useful Life</b>	30 Years
<b>Basis Cost</b>	\$ 679.77
<b>Tracking</b>	Logistical
<b>Method</b>	Adjusted



Code	Desc.	Service Date	Replace Date	Rem Life	Adj Life	Quantity	Current Cost	Future Cost
910-000-0014		01/01/1998	01/01/2047	22:00	49:00	18	12,235.86	19,627.82
							12,235.86	19,627.82

### Comments

This component funds for the replacement of the common area interior doors.

Doors were observed by Forensic to be in good condition and the useful life has been extended.

The count of 18 interior doors is per the prior reserve study.

The cost and useful life estimates are based on information provided by the Association.

The Association should obtain a bid to confirm this cost.

### Doors - Panic Bars - Replacement

<b>Item Number</b>	15
<b>Type</b>	Common Area
<b>Category</b>	Doors and Windows
<b>Measurement Basis</b>	Ea
<b>Estimated Useful Life</b>	20 Years
<b>Basis Cost</b>	\$ 481.35
<b>Tracking</b>	Logistical
<b>Method</b>	Adjusted



Code	Desc.	Service Date	Replace Date	Rem Life	Adj Life	Quantity	Current Cost	Future Cost
910-000-0015		01/01/1998	01/01/2032	7:00	34:00	12	5,776.20	6,713.44
							5,776.20	6,713.44

### Comments

This component funds for the replacement of the panic bars on the common area doors. Observed to be in good condition and useful life has been extended.

The count of 14 panic bars is per the prior reserve study. Panic bars were added to the lobby entrance door in 2021.

The cost and useful life estimates are based on information provided by the Association. This item has been delayed per the Association.

The Association should obtain a bid to confirm this cost. prior reserve study.

### Windows - Lobby Area - Replacement

<b>Item Number</b>	54
<b>Type</b>	Common Area
<b>Category</b>	Doors and Windows
<b>Measurement Basis</b>	Total
<b>Estimated Useful Life</b>	25 Years
<b>Basis Cost</b>	\$ 9,805.04
<b>Tracking</b>	Logistical
<b>Method</b>	Adjusted



Code	Desc.	Service Date	Replace Date	Rem Life	Adj Life	Quantity	Current Cost	Future Cost
910-000-0054		01/01/1998	01/01/2032	7:00	34:00	1	9,805.04	11,395.99
							9,805.04	11,395.99

### Comments

This component funds for the replacement of the any of the lobby area windows.

According to the Association, \$265.65 of window repairs was completed by O'Merrick, LLC in 2018.

The cost and useful life estimates are based on information provided by the Association.

This item has been delayed per the Association.

The Association should obtain a bid to confirm this cost.

### Elevator - Upgrade

<b>Item Number</b>	16
<b>Type</b>	Common Area
<b>Category</b>	Equipment
<b>Measurement Basis</b>	Total
<b>Estimated Useful Life</b>	35 Years
<b>Basis Cost</b>	\$ 115,752.87
<b>Tracking</b>	Logistical
<b>Method</b>	Adjusted



Code	Desc.	Service Date	Replace Date	Rem Life	Adj Life	Quantity	Current Cost	Future Cost
910-000-0016		01/01/1991	01/01/2028	3:00	37:00	1	115,752.87	123,457.85
							115,752.87	123,457.85

### Comments

This component funds for the modernization of the elevators and includes all mechanical systems, ADA and state standards, phone systems, fire alarm systems, and infra-red alerts.

The cost and useful life estimates are per Eric at Kone Elevators (503) 652-1011 ext. 25.

The Association should obtain a bid to confirm this cost.



### Elevator Cab - Refurbish

<b>Item Number</b>	17
<b>Type</b>	Common Area
<b>Category</b>	Equipment
<b>Measurement Basis</b>	Total
<b>Estimated Useful Life</b>	14 Years
<b>Basis Cost</b>	\$ 12,754.52
<b>Tracking</b>	Logistical
<b>Method</b>	Adjusted



Code	Desc.	Service Date	Replace Date	Rem Life	Adj Life	Quantity	Current Cost	Future Cost
910-000-0017		01/01/1999	01/01/2036	11:00	37:00	1	12,754.52	16,154.10
							12,754.52	16,154.10

### Comments

This component funds for the re-finishing of the floor and walls in the elevator and any other work needed to refurbish to like-new condition, including any painting or ceiling work, and wall and doorway covers (plastic/polycart - polished aluminum) and pads.

The cost and useful life estimates are based on information provided by the Association.

This item has been delayed per the Association.

The Association should obtain a bid to confirm this cost.

### Parking Garage - Overhead Door - Replacement

Item Number	36
Type	Common Area
Category	Equipment
Measurement Basis	Total
Estimated Useful Life	25 Years
Basis Cost	\$ 5,101.81
Tracking	Logistical
Method	Adjusted



Code	Desc.	Service Date	Replace Date	Rem Life	Adj Life	Quantity	Current Cost	Future Cost
910-000-0036		01/01/2004	01/01/2029	4:00	25:00	1	5,101.81	5,559.56
							5,101.81	5,559.56

### Comments

This component funds for the removal and replacement of the 6 panel 10' wide by 12' high perforated panel aluminum door.

The cost and useful life estimates are per John Krueger at Metro Overhead Door.

This item has been delayed to coincide with replacement of the Overhead Door Opener per the Association.

The Association should obtain a bid to confirm this cost.

**FY2025 Update:** Association reported replacement of the overhead door operator and springs.

### Parking Garage - Overhead Door Lifter - Replacemet

<b>Item Number</b>	37
<b>Type</b>	Common Area
<b>Category</b>	Equipment
<b>Measurement Basis</b>	Total
<b>Estimated Useful Life</b>	15 Years
<b>Basis Cost</b>	\$ 13,000.00
<b>Tracking</b>	Logistical
<b>Method</b>	Adjusted



Code	Desc.	Service Date	Replace Date	Rem Life	Adj Life	Quantity	Current Cost	Future Cost
910-000-0037		01/01/2024	01/01/2039	14:00	15:00	1	13,000.00	17,560.99
							13,000.00	17,560.99

### Comments

This component funds for the replacement of the door operator.

**FY2025 Update:** Metro Overhead Door replaced the door operator with a LiftMaster HCTDUL at a total cost of \$12,753.

## Roof - Ventilation System - Replacement

<b>Item Number</b>	47
<b>Type</b>	Common Area
<b>Category</b>	Equipment
<b>Measurement Basis</b>	Allow
<b>Estimated Useful Life</b>	25 Years
<b>Basis Cost</b>	\$ 80,224.69
<b>Tracking</b>	Logistical
<b>Method</b>	Adjusted



Code	Desc.	Service Date	Replace Date	Rem Life	Adj Life	Quantity	Current Cost	Future Cost
910-000-0047		01/01/2021	01/01/2046	21:00	25:00	1	80,224.69	125,955.33
							80,224.69	125,955.33

## Comments

This component funds for the replacement of the mechanical exhaust fan system. Recently replaced in 2022.

The cost and useful life estimates are based on information provided by the Association.

The Association should obtain a bid to confirm this cost.

### Security Camera System - Repairs

<b>Item Number</b>	48
<b>Type</b>	Common Area
<b>Category</b>	Fencing/Security
<b>Measurement Basis</b>	Total
<b>Estimated Useful Life</b>	8 Years
<b>Basis Cost</b>	\$ 11,575.28
<b>Tracking</b>	Logistical
<b>Method</b>	Adjusted



Code	Desc.	Service Date	Replace Date	Rem Life	Adj Life	Quantity	Current Cost	Future Cost
910-000-0048		01/01/2021	01/01/2029	4:00	8:00	1	11,575.28	12,613.84
							11,575.28	12,613.84

### Comments

This component funds for an allowance for any work required on the security system.

According to the prior reserve study, 4 new cameras were being added in 2012.

According to the Association, \$9,592 was spent on security camera installations in 2018. This was completed by Metro Overhead Door.

According to the Association, 3 new cameras have been installed in 2021 as part of a security upgrade by Metro Access Control at a cost \$4,462.00.

The cost and useful life estimates are based on information provided by the Association.

The Association should obtain a bid to confirm this cost.

### Security System - Call Box - Replacement

<b>Item Number</b>	49
<b>Type</b>	Common Area
<b>Category</b>	Fencing/Security
<b>Measurement Basis</b>	Total
<b>Estimated Useful Life</b>	15 Years
<b>Basis Cost</b>	\$ 13,269.17
<b>Tracking</b>	Logistical
<b>Method</b>	Adjusted



Code	Desc.	Service Date	Replace Date	Rem Life	Adj Life	Quantity	Current Cost	Future Cost
910-000-0049		01/01/2021	01/01/2036	11:00	15:00	1	13,269.17	16,805.93
							13,269.17	16,805.93

### Comments

This component funds for the replacement of the security call box system.

According to the Association, the call box and existing card readers were upgraded and card readers were added to the lobby/stairwell door, elevator, and SW garage pedestrian door in 2021 as part of a security upgrade. The work was performed by Metro Access Control.

The cost and useful life estimates are based on information provided by the Association.

### Fire Alarm - Annunciation Panel - Replacement

<b>Item Number</b>	19
<b>Type</b>	Common Area
<b>Category</b>	Fire Suppression Systems
<b>Measurement Basis</b>	Total
<b>Estimated Useful Life</b>	20 Years
<b>Basis Cost</b>	\$ 1,913.16
<b>Tracking</b>	Logistical
<b>Method</b>	Adjusted



Code	Desc.	Service Date	Replace Date	Rem Life	Adj Life	Quantity	Current Cost	Future Cost
910-000-0019		01/01/2022	01/01/2042	17:00	20:00	1	1,913.16	2,756.41
							1,913.16	2,756.41

### Comments

This component funds for the replacement of the fire alarm annunciation panel.

The cost and useful life estimates are per Steve Barry with Action Technology.

This item has been delayed per the Association.

The Association should obtain a bid to confirm this cost.

### Fire Detection System - Replacement

<b>Item Number</b>	20
<b>Type</b>	Common Area
<b>Category</b>	Fire Suppression Systems
<b>Measurement Basis</b>	Total
<b>Estimated Useful Life</b>	20 Years
<b>Basis Cost</b>	\$ 12,754.52
<b>Tracking</b>	Logistical
<b>Method</b>	Adjusted



Code	Desc.	Service Date	Replace Date	Rem Life	Adj Life	Quantity	Current Cost	Future Cost
910-000-0020		01/01/1999	01/01/2025	0:00	26:00	1	12,754.52	12,754.52
							12,754.52	12,754.52

### Comments

This component funds for the replacement of the fire detection system.

The cost and useful life estimates are per Steve Barry with Action Technology.

The Association should obtain a bid to confirm this cost.

**FY2025 Update:** Deferred from 2024 to 2025.



### Fire Suppression / Wet Sprinkler: Repairs

<b>Item Number</b>	55
<b>Type</b>	Common Area
<b>Category</b>	Fire Suppression Systems
<b>Measurement Basis</b>	Allow
<b>Estimated Useful Life</b>	10 Years
<b>Basis Cost</b>	\$ 15,000.00
<b>Tracking</b>	Logistical
<b>Method</b>	Adjusted

Code	Desc.	Service Date	Replace Date	Rem Life	Adj Life	Quantity	Current Cost	Future Cost
910-000-0055		01/01/2015	01/01/2025	0:00	10:00	1	15,000.00	15,000.00
							15,000.00	15,000.00

### Comments

Funding for periodic major repairs to the existing wet sprinkler fire suppression systems.

The Association reported \$15,000 repairs in 2025. This report assumes similar expenses every 10 years.

### Gutters & Downspouts - Replacement

<b>Item Number</b>	22
<b>Type</b>	Common Area
<b>Category</b>	Gutters and Downspouts
<b>Measurement Basis</b>	Total
<b>Estimated Useful Life</b>	25 Years
<b>Basis Cost</b>	\$ 2,745.42
<b>Tracking</b>	Logistical
<b>Method</b>	Adjusted



Code	Desc.	Service Date	Replace Date	Rem Life	Adj Life	Quantity	Current Cost	Future Cost
910-000-0022		01/01/2023	01/01/2048	23:00	25:00	1	2,745.42	4,499.61
							2,745.42	4,499.61

### Comments

This component funds for the replacement of the gutters and downspouts on the penthouse portion of the building and decks. Replaced in 2023 as part of the roof membrane installation.

The cost and useful life estimates are based on information provided by the Association.

This item has been delayed per the Association.

The Association should obtain a bid to confirm this cost.

### Building Envelope Inspection

<b>Item Number</b>	3
<b>Type</b>	Common Area
<b>Category</b>	Inspections
<b>Measurement Basis</b>	Total
<b>Estimated Useful Life</b>	5 Years
<b>Basis Cost</b>	\$ 3,208.99
<b>Tracking</b>	Logistical
<b>Method</b>	Adjusted



Code	Desc.	Service Date	Replace Date	Rem Life	Adj Life	Quantity	Current Cost	Future Cost
910-000-0003		01/01/2012	01/01/2025	0:00	13:00	1	3,208.99	3,208.99
							3,208.99	3,208.99

### Comments

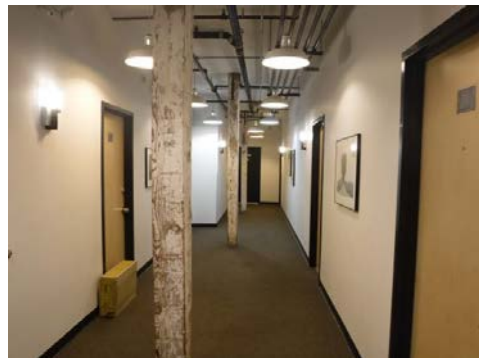
This provision is for a building envelope inspection. Generally, the life of the building envelope is greater than 30 years. We recommend the Association perform an inspection to determine the current condition of the system. Once the condition is known the reserve study should be updated.

Industry specialists recommend a building envelope inspection every 3-5 years.

**FY2025 Update:** Deferred from 2024 to 2025.

## Flooring - Replacement

<b>Item Number</b>	21
<b>Type</b>	Common Area
<b>Category</b>	Interior Furnishings
<b>Measurement Basis</b>	SF
<b>Estimated Useful Life</b>	10 Years
<b>Basis Cost</b>	\$ 4.75
<b>Tracking</b>	Logistical
<b>Method</b>	Adjusted



Code	Desc.	Service Date	Replace Date	Rem Life	Adj Life	Quantity	Current Cost	Future Cost
910-000-0021		01/01/2023	01/01/2033	8:00	10:00	2,550	12,112.50	14,383.53
							12,112.50	14,383.53

## Comments

This component funds for the replacement of the carpet flooring on the second and third floors. Replaced in 2023.

Previous reserve study estimated 2,550 square feet of carpeting.

The cost and useful life estimates are based on information provided by the Association.

This item has been delayed per the Association.

The Association should obtain a bid to confirm this cost.

### Lights - Stairwell LED

<b>Item Number</b>	25
<b>Type</b>	Common Area
<b>Category</b>	Lighting
<b>Measurement Basis</b>	Ea
<b>Estimated Useful Life</b>	30 Years
<b>Basis Cost</b>	\$ 160.45
<b>Tracking</b>	Logistical
<b>Method</b>	One Time

Code	Desc.	Service Date	Replace Date	Rem Life	Adj Life	Quantity	Current Cost	Future Cost
910-000-0025			01/01/2028	3:00	30:00	8	1,283.60	1,369.04
							1,283.60	1,369.04

### Comments

Funding for replacement of the center stairwell fluorescent light fixtures with 8' LED lighting.

The cost and useful life estimates are based on information provided by the Association.

The Association should obtain a bid to confirm this cost.

### Mailboxes - Replacement

<b>Item Number</b>	35
<b>Type</b>	Common Area
<b>Category</b>	Mailboxes
<b>Measurement Basis</b>	Total
<b>Estimated Useful Life</b>	30 Years
<b>Basis Cost</b>	\$ 1,631.57
<b>Tracking</b>	Logistical
<b>Method</b>	Adjusted



Code	Desc.	Service Date	Replace Date	Rem Life	Adj Life	Quantity	Current Cost	Future Cost
910-000-0035		01/01/1999	01/01/2054	29:00	55:00	1	1,631.57	3,041.91
							1,631.57	3,041.91

### Comments

This component funds for the replacement of the wall mount style mailboxes in the lobby area.

According to the prior reserve study, the boxes have been mounted on steel posts rather than in-wall.

The cost and useful life estimates are based on information provided by the Association.

The Association should obtain a bid to confirm this cost.

## Exterior - Painting

<b>Item Number</b>	18
<b>Type</b>	Common Area
<b>Category</b>	Painting
<b>Measurement Basis</b>	SF
<b>Estimated Useful Life</b>	6 Years
<b>Basis Cost</b>	\$ 5.21
<b>Tracking</b>	Logistical
<b>Method</b>	Adjusted



Code	Desc.	Service Date	Replace Date	Rem Life	Adj Life	Quantity	Current Cost	Future Cost
910-000-0018		01/01/2005	01/01/2025	0:00	20:00	6,000	31,260.00	31,260.00
							31,260.00	31,260.00

## Comments

Painting includes all siding, railings, stairways, decks, flashings and exposed areas, including but not limited to stucco surfaces.

According to the prior reserve study, the cost is based on an allocation of total interior and exterior painting costs of \$34,000.

In 2018, the Association spent \$1,123.50 on building exterior painting. This was done by O'Merrick, LLC.

The useful life estimates are based on information provided by the Association.

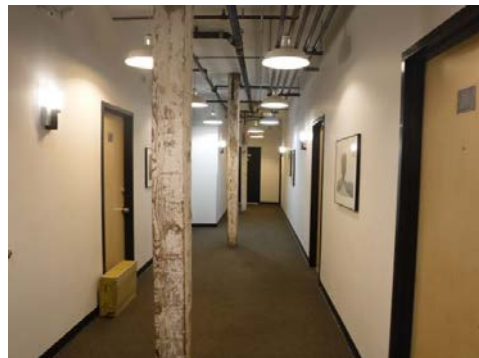
The cost is based on a per square foot estimate from a local vendor.

The Association should obtain a bid to confirm this cost.

**FY2025 Update:** Deferred from 2024 to 2025.

## Interior - Painting

<b>Item Number</b>	24
<b>Type</b>	Common Area
<b>Category</b>	Painting
<b>Measurement Basis</b>	Total
<b>Estimated Useful Life</b>	10 Years
<b>Basis Cost</b>	\$ 13,073.38
<b>Tracking</b>	Logistical
<b>Method</b>	Adjusted



Code	Desc.	Service Date	Replace Date	Rem Life	Adj Life	Quantity	Current Cost	Future Cost
910-000-0024		01/01/2023	01/01/2033	8:00	10:00	1	13,073.38	15,524.57
							13,073.38	15,524.57

## Comments

This component funds for the painting of the common area rooms, hall, lobby, and stairwell.

Painted in 2023.

The cost and useful life estimates are based on information provided by the Association.

This item has been delayed per the Association.

The Association should obtain a bid to confirm this cost.



### Parking Garage - Painting

<b>Item Number</b>	38
<b>Type</b>	Common Area
<b>Category</b>	Painting
<b>Measurement Basis</b>	Total
<b>Estimated Useful Life</b>	14 Years
<b>Basis Cost</b>	\$ 6,863.52
<b>Tracking</b>	Logistical
<b>Method</b>	Adjusted



Code	Desc.	Service Date	Replace Date	Rem Life	Adj Life	Quantity	Current Cost	Future Cost
910-000-0038		01/01/2009	01/01/2026	1:00	17:00	1	6,863.52	7,012.55
							6,863.52	7,012.55

### Comments

This component funds for the painting of the garage interior, including the janitorial room.

The cost and useful life estimates are based on information provided by the Association.

This item has been delayed per the Association.

The Association should obtain a bid to confirm this cost.

### Parking Garage - Restripe

<b>Item Number</b>	39
<b>Type</b>	Common Area
<b>Category</b>	Painting
<b>Measurement Basis</b>	Total
<b>Estimated Useful Life</b>	5 Years
<b>Basis Cost</b>	\$ 1,634.17
<b>Tracking</b>	Logistical
<b>Method</b>	Adjusted



Code	Desc.	Service Date	Replace Date	Rem Life	Adj Life	Quantity	Current Cost	Future Cost
910-000-0039		01/01/2005	01/01/2026	1:00	21:00	1	1,634.17	1,669.65
							1,634.17	1,669.65

### Comments

This component funds of the maintenance and restriping of the garage area.

The cost and useful life estimates are based on information provided by the Association.

This item has been delayed per the Association.

The Association should obtain a bid to confirm this cost.

### Roof - 3 Tab Composition - Replacement

<b>Item Number</b>	42
<b>Type</b>	Common Area
<b>Category</b>	Roofing
<b>Measurement Basis</b>	SF
<b>Estimated Useful Life</b>	50 Years
<b>Basis Cost</b>	\$ 6.95
<b>Tracking</b>	Logistical
<b>Method</b>	Adjusted



Code	Desc.	Service Date	Replace Date	Rem Life	Adj Life	Quantity	Current Cost	Future Cost
910-000-0042		01/01/2023	01/01/2073	48:00	50:00	1,200	8,340.00	23,386.05
							8,340.00	23,386.05

### Comments

This component funds for the replacement of the 3 tab asphalt composition roofing. Replaced in 2023.

According to the prior reserve study, there is 1,200 square feet of 3 tab roofing.

Replaced in FY2023 with Owens Corning 50 Year Shingles for \$7,800

The cost and useful life estimates are based on information provided by the Association.

This item has been delayed per the Association.

The Association should obtain a bid to confirm this cost.

### Roof - Built-up With Mineral Cap - Replacement

<b>Item Number</b>	43
<b>Type</b>	Common Area
<b>Category</b>	Roofing
<b>Measurement Basis</b>	Square
<b>Estimated Useful Life</b>	20 Years
<b>Basis Cost</b>	\$ 2,010.45
<b>Tracking</b>	Logistical
<b>Method</b>	Adjusted



Code	Desc.	Service Date	Replace Date	Rem Life	Adj Life	Quantity	Current Cost	Future Cost
910-000-0043		01/01/2023	01/01/2043	18:00	20:00	75	150,783.75	221,960.72
							150,783.75	221,960.72

### Comments

This component funds for the replacement of the existing roofing to the decking, repairs to decking and correction of pooling as needed, and installation of three ply built-up with mineral cap, together with perimeter and penetration flashing.

A silicone liquid applied membrane was installed in 2023 at the cost of \$61,200 to extend the life of the existing roofing.

It was noted in the prior study that the roof was damaged at HVAC pads when new equipment was installed (with possible water penetration issues). Also noted was that the roof was repaired by Snyder Roofing, including selected field repair, perimeter flashing, and gutters and downspouts.

Forensic BECA in 2021 noted this item is failing at penetrations and transitions.

The cost and useful life estimates are based on information provided by the Association.

The Association should obtain a bid to confirm this cost.

### Siding - Composite Panels - Replacement

<b>Item Number</b>	50
<b>Type</b>	Common Area
<b>Category</b>	Siding
<b>Measurement Basis</b>	SF
<b>Estimated Useful Life</b>	50 Years
<b>Basis Cost</b>	\$ 18.73
<b>Tracking</b>	Logistical
<b>Method</b>	Adjusted



Code	Desc.	Service Date	Replace Date	Rem Life	Adj Life	Quantity	Current Cost	Future Cost
910-000-0050		01/01/2004	01/01/2054	29:00	50:00	18,000	337,140.00	628,565.59
							337,140.00	628,565.59

### Comments

This component funds for the replacement of the composite siding of the penthouse portion of the building and includes hauling away of debris.

This item was observed by Forensic to be in good condition overall, with minor damage noted in the BECA report.

According to the prior reserve study, there is 18,000 square feet of siding panels.

The cost and useful life estimates are based on information provided by the Association.

The Association should obtain a bid to confirm this cost.

### Siding - Metal Standing-Seam - Replacement

<b>Item Number</b>	51
<b>Type</b>	Common Area
<b>Category</b>	Siding
<b>Measurement Basis</b>	SF
<b>Estimated Useful Life</b>	50 Years
<b>Basis Cost</b>	\$ 12.03
<b>Tracking</b>	Logistical
<b>Method</b>	Adjusted



Code	Desc.	Service Date	Replace Date	Rem Life	Adj Life	Quantity	Current Cost	Future Cost
910-000-0051		01/01/2004	01/01/2054	29:00	50:00	974	11,717.22	21,845.65
							11,717.22	21,845.65

### Comments

This component funds for the replacement of the metal standing-seam siding at the penthouse portion of the building.

This item was observed to be in good condition by Forensic.

According to the prior reserve study, there is 974 square feet of metal standing seam.

The cost and useful life estimates are based on information provided by the Association.

The Association should obtain a bid to confirm this cost.

### Siding - Stucco/EIFS - Replacement

<b>Item Number</b>	52
<b>Type</b>	Common Area
<b>Category</b>	Siding
<b>Measurement Basis</b>	SF
<b>Estimated Useful Life</b>	30 Years
<b>Basis Cost</b>	\$ 12.03
<b>Tracking</b>	Logistical
<b>Method</b>	Adjusted



Code	Desc.	Service Date	Replace Date	Rem Life	Adj Life	Quantity	Current Cost	Future Cost
910-000-0052		01/01/2004	01/01/2034	9:00	30:00	6,000	72,180.00	87,574.50
							72,180.00	87,574.50

### Comments

This component funds for the replacement of the stucco siding at the 4th floor (breezeway) and under the windows on the ground level of the building and includes hauling away of debris.

This item was observed to be in good condition by Forensic.

According to the prior reserve study, there is 6,000 square feet of stucco siding.

The cost and useful life estimates are based on information provided by the Association.

The Association should obtain a bid to confirm this cost.

# APPENDIX A

## MAINTENANCE SCHEDULE



## MAINTENANCE SCHEDULE

The following recommendations are intended to provide easy-to-follow guidelines for the Association to follow regarding the maintenance and preservation of the Association's common elements. They are based on industry standard best practices, refined by Forensic experience.

Each component is unique, and is subject to unique conditions, which may require an accelerated maintenance, renewal, or replacement schedule. The Association should inspect and replace these components as needed.

The Association should contact their community manager and/or maintenance manager if they discover or believe there to be water leakage or premature deterioration of a component or assembly.

COMPONENT	MAINTENANCE ACTION(S) REQUIRED	FREQUENCY
<b>BUILDING APPURTENANCES</b>		
<b>Decks and Railings</b>	Inspect for debris build-up and organic growth. Debris retains moisture, which accelerates decay and water damage, and buildup hides repair needs. Clean deck and railing surfaces appropriate	Semi-annually (spring and fall)
<b>Deck Surfaces</b>	Deck surfaces should be inspected after cleaning. On waterproof deck coatings, look for peeling or worn areas. Deck coatings often require maintenance every few years to maintain their effectiveness. On wood surfaces, look for deteriorated finish coat and decay. On concrete, look for cracks and erosion.	Annually (spring)
<b>Deck Framing</b>	Deck framing should be inspected for decay, particularly under treads, at bases in contact with the ground, and other areas where moisture can accumulate. Older buildings often have framing that would not meet modern standards, so maintaining existing components can save expensive replacements which must meet modern building codes.	Bi-Annually (spring)
<b>Decks and Railings</b>	Inspect for loose, missing, or cracked components, decay, and trip hazards. Note that older railings are unlikely to meet modern standards for safe height and infill spacing, so maintenance is even more important.	Annually (spring)
<b>Metal Railings</b>	Inspect metal components for rust or paint failure. Clean rust and loose material from metal using wire brush, dust cloth, and vacuum. Refinishing is generally needed periodically to prevent corrosion, particularly in wetter climates. A qualified contractor should be retained to refinish railings properly for anything more than minor repairs and touchups.	Annually (spring)

COMPONENT	MAINTENANCE ACTION(S) REQUIRED	FREQUENCY
<b>EXTERIOR SEALANTS AND FINISHES</b>		
<b>Exterior Finish Paint</b>	<p>Inspect for cracking, peeling, blistering, or other evidence of paint failure. Prep and clean loose material from wall surface using a dust cloth and vacuum. Apply compatible touch-up paint to entire wall surface in between architectural breaks (corner to corner or joint to joint). Spray and back-roll paint using a low-pressure sprayer (30-50 psi) with a 50° fan-shaped tip. Brush trims, edges, and protruding surfaces.</p> <p>Always test an inconspicuous surface first to confirm color matching of new finishes to existing finishes. Protect adjacent building components and landscaping that may be damaged by paint overspray.</p>	Annually (fall)
<b>Exterior Sealant Joints</b>	<p>At all windows, doors, garage doors, decks, balconies, railings, scuppers, wall penetrations, siding to trim junctions, and other building exterior dynamic and static sealant joints:</p> <p>Inspect for sealant failure (open voids) or degradation (“chalking” or cracking). Re-seal “pinhole” sealant failure areas with compatible sealant materials.</p>	Semi-annually (spring and fall)
<b>Exterior Sealant Joints</b>	<p>At more extensive areas of sealant failure or degradation, remove existing sealant and clean debris and loose material from joint using a wire brush, dust cloth, and vacuum. Install new sealant that is compatible with adjacent materials (Sonolastic 750 VLM by Sonneborn is recommended). Sealant joints should be dimensioned, installed, and tooled per ASTM C1193 specifications. Dynamic sealant joints featuring a closed-cell backer rod should be installed between dissimilar materials per ASTM E2112 specifications.</p> <p>Despite industry standards and manufacturer instructions, contractors frequently fail to properly dimension and construct dynamic sealant joints, which often leads to premature adhesion failure which can allow water infiltration.</p> <p>Regularly monitor sealant repair areas for recurrence of failure, degradation, or staining.</p>	
<b>Exterior Sealant Joints (temporary)</b>	Remove and replace temporary sealant joint applications (installed during winter) as necessary.	Annually (spring)

COMPONENT	MAINTENANCE ACTION(S) REQUIRED	FREQUENCY
<b>Fluid-Applied Traffic Coatings</b>	Inspect for cracking, peeling, blistering, or other evidence of failure. Consult and follow manufacturer instructions for inspection and maintenance schedules. Warranties often depend on adhering to the reapplication schedule.	Annually (fall)
<b>EXTERIOR WALLS</b>		
<b>Electrical Outlets</b>	Inspect for damaged covers and loose receptacles.. Test ground fault circuit interrupters and reset.	Semi-annually (spring and fall)
<b>Exterior Lighting Fixtures</b>	Inspect for operability and electrical shorts. Replace lamps as necessary.	Semi-annually (summer and winter)
<b>Wall Penetrations</b>	Inspect wall penetration seals and gaskets for cracks or damage and repair or replace as needed. For any repair involving electrical connections, a licensed electrician should be used.	Semi-annually (spring and fall)
<b>Exterior Walls (General)</b>	<p>Inspect exterior wall surfaces for organic growth or graffiti. Clean wall surfaces as necessary with a compatible granulated soap/mild detergent applied using a low-pressure sprayer (30-50 psi) with a 50° fan-shaped tip. Never use muriatic acid or petroleum-based cleaners or solvents.</p> <p>Scrub problematic wall surfaces vigorously with a stiff bristle brush (do not use a wire brush) and rinse thoroughly using a garden hose or low-pressure sprayer (200-300 psi) with a 25° - 50° fan-shaped tip. Do not allow cleaning solution to dry on building components.</p> <p>Always test an inconspicuous surface first to confirm the effect that scrubbing and application of cleaning solution will have on various building components. Protect adjacent building components and landscaping that may be damaged by cleaning solution.</p>	Semi-annually (spring and fall)
<b>Exterior Wall Surfaces</b>	Inspect exterior wall surfaces for damaged, loose, or missing components, decay, storm damage, or other weather-resistance deficiencies.	Semi-annually (spring and fall)
<b>Finish coats</b>	Finish coat maintenance is important to preserving the weather – resistance and value of exterior surfaces. Repainting of exterior walls should be scheduled to occur after exterior cleaning and repairs and after maintenance of sealants.	

COMPONENT	MAINTENANCE ACTION(S) REQUIRED	FREQUENCY
<b>Interior Surfaces</b>	Inspect accessible interior surfaces for microbial growth, moisture staining, or evidence of water leakage to the interior. Regularly monitor locations that exhibit wetness/dampness, color differences, swelling/warping, blistering/cracking, abnormal odors, or failure of previous repairs.	Semi-annually (spring and fall)
<b>Building Enclosure Condition Assessment</b>	Have a building enclosure condition assessment conducted to identify problems and develop solutions.	Bi-annually
<b>Animals</b>	Inspect exterior wall surfaces for presence of bird or insect nests.	Semi-annually (spring and fall)
<b>Foundations</b>	Inspect for cracking, spalling, settlement, or damage caused by salt/de-icing chemicals. Patch or repair as necessary, following American Concrete Institute (ACI) concrete repair protocol. Regularly monitor concrete repair areas for recurrence of cracking or spalling. Ensure all crawlspace vents are kept open all year-round.	Annually (spring)
<b>Hose Bibs</b>	Inspect all vent screens for openings that could allow rodent access and repair as needed. Disconnect hoses and drain hose bibs when not in use and prior to winter weather. Winterize hose bibs as necessary in advance of freezing temperatures.	Annually (fall)

COMPONENT	MAINTENANCE ACTION(S) REQUIRED	FREQUENCY
<b>FENESTRATION UNITS</b>		
<b>Windows and Doors (General)</b>	Inspect weather stripping for continuity and air leakage. Replace if worn.	Annually (fall)
<b>Glazing</b>	Inspect for missing, cracked, or broken glazing components, or other damage to window or door unit, including evidence of forced entry. Have repairs done by qualified contractor.	Annually (fall)
<b>Hardware</b>	Inspect window and door hardware for operability and closer adjustment. Lubricate operable window and door hinges.	Annually (spring)
<b>Interior Surfaces</b>	Inspect interior surfaces for microbial growth, moisture staining, or evidence of water leakage to the interior.	Semi-annually (spring and fall)
<b>Exterior Surfaces</b>	Clean exterior surfaces with compatible cleaning solution.	Semi-annually (spring and fall)
<b>Window Screens</b>	Repair holes in window screens and wash screens with compatible cleaning solution.	Annually (spring)

COMPONENT	MAINTENANCE ACTION(S) REQUIRED	FREQUENCY
<b>ROOFS</b>		
<b>Exhaust Vents</b>	Inspect for proper operation of dampers or louvers, blockage by debris, or evidence of birds/rodents. Clean exhaust vents and screens as necessary.	Monthly
<b>Gutters and Downspouts</b>	Inspect for debris build-up and organic growth. Clean gutters and downspouts as necessary.	Semi-annually (spring and fall)
<b>Gutters and Downspouts</b>	Identify and regularly monitor locations affected by recurring debris-build up or standing water.	Semi-annually (spring and fall)
<b>Gutters and Downspouts</b>	Inspect for damaged, loose, or missing components, as well as leaking joints.	Semi-annually (spring and fall)
<b>Roof Surfaces (General)</b>	<p>Inspect roof surfaces for organic growth or debris build-up.</p> <p>Clean roof surfaces as necessary per roofing manufacturer recommendations. Be careful to avoid water infiltration to roof and wall assemblies while cleaning. Never use muriatic acid or petroleum-based cleaners or solvents.</p> <p>Rinse thoroughly using a garden hose or low-pressure sprayer (200-300 psi) with a 25° - 50° fan-shaped tip from above. Do not allow cleaning solution to dry on building components.</p> <p>Always test an inconspicuous surface first to confirm the effect that scrubbing and application of cleaning solution will have on various building components.</p> <p>Protect adjacent building components and landscaping that may be damaged by cleaning solution.</p>	Semi-annually (spring and fall)
<b>Roof Surfaces</b>	Inspect roof surfaces for damaged, loose, or missing components, storm damage, or other weather-resistance deficiencies.	Semi-annually (spring and fall)
<b>Roof Surfaces</b>	Inspect roof surfaces for presence of bird or insect nests.	Semi-annually (spring and fall)
<b>SITEWORK</b>		
<b>Asphalt Paving</b>	Patch all cracks in asphalt greater than 1/4" in width with hot-applied crack sealer.	Annually (spring)
<b>Asphalt Paving</b>	Monitor oil leaks that will disintegrate asphalt. Repair source of leak.	Annually (spring)
<b>Catch Basins and Trench Drains</b>	Inspect for debris build-up and organic growth. Clean catch basins or trench drains regularly. Inspect for positive drainage.	Semi-annually (spring and fall)

COMPONENT	MAINTENANCE ACTION(S) REQUIRED	FREQUENCY
<b>Concrete Flatwork</b>	Inspect for debris build-up and organic growth. Clean concrete flatwork surfaces as necessary.	Semi-annually (spring and fall)
<b>Concrete Flatwork</b>	Inspect for cracking, spalling, settlement, trip hazards, or damage caused by salt/de-icing chemicals. Patch or repair as necessary.	Annually (spring)
<b>Fencing and Railings</b>	Inspect metal components for rust or paint failure. Clean rust and loose material from metal using wire brush, dust cloth, and vacuum. Prep and repaint with two coats of compatible rust-inhibiting primer.  Following application of primer and finish, apply compatible clear coat waterproof sealer to areas of work to help prevent additional corrosion.	Annually (spring)
<b>Fencing and Railings</b>	Inspect base of wood fence pickets for debris build-up and clearance to soil. Remove debris and modify soil as necessary to maintain adequate clearance.	Semi-annually (spring and fall)
<b>Gates</b>	Inspect metal components for rust or paint failure. Clean rust and loose material from metal using wire brush, dust cloth, and vacuum. Prep and repaint with two coats of compatible rust-inhibiting primer.  Following application of primer and finish, apply compatible clear coat waterproof sealer to areas of work to help prevent additional corrosion.	Annually (spring)
<b>Irrigation Systems</b>	Blow out sprinkler lines and inspect backflow devices for operability.	Annually (fall)
<b>Irrigation Systems</b>	Inspect electronic timers for operability and electric shorts.	Annually (spring)
<b>Irrigation Systems</b>	Redirect sprinkler heads away from building surfaces.	Annually (spring)
<b>Landscaping</b>	Inspect soil finish grade for proper drainage away from structure. Fill in low areas as necessary to allow for 5% minimum positive slope away from structure.	Semi-annually (spring and fall)
<b>Landscaping</b>	Inspect soil finish grade for blockage of masonry veneer weep provisions at base of wall locations.	Semi-annually (spring and fall)
<b>Landscaping</b>	Inspect for plants growing on or too close to structure. Trim or remove plants as necessary to maintain minimum 6" clearance to structure.	Semi-annually (spring and fall)
<b>Light Poles</b>	Inspect light poles for operability. Replace lamps as necessary.	Semi-annually (summer and winter)

COMPONENT	MAINTENANCE ACTION(S) REQUIRED	FREQUENCY
<b>Exterior Metal</b>	Inspect metal components for rust or paint failure. Clean rust and loose material from metal using wire brush, dust cloth, and vacuum. Prep and repaint with two coats of compatible rust-inhibiting primer. Following application of primer and finish, apply compatible clear coat waterproof sealer to areas of work to help prevent additional corrosion.	Annually (spring)
<b>Mailboxes</b>	Inspect for loose, missing or cracked components, rot, sharp edges, and other damage. Repair or replace as necessary.	Annually (spring)
<b>Retaining Walls (Masonry)</b>	Inspect wall surfaces for loose or missing masonry units.	Annually (spring)
<b>Retaining Walls</b>	If visual evidence indicates the wall has shifted over time, consult a structural engineer or qualified contractor.	
<b>Masonry</b>	Inspect masonry joints for failed mortar and cracking. Consult a qualified masonry contractor for an estimate of means and costs.	Annually (spring)
<b>Masonry</b>	Inspect masonry surfaces for presence of efflorescent staining. Clean efflorescence from wall surfaces as necessary with solution consisting of 1 part white household vinegar to 5 parts water, applied using a low-pressure sprayer (30-50 psi) with a 50° fan-shaped tip. Never use muriatic acid or petroleum-based cleaners or solvents.  Scrub problematic wall surfaces vigorously with a stiff bristle brush (do not use a wire brush) and rinse thoroughly with clean water using a garden hose or low-pressure sprayer (200-300 psi) with a 25° - 50° fan-shaped tip. Do not allow cleaning solution to dry on building components.  Always test an inconspicuous surface first to confirm the effect that scrubbing and application of cleaning solution will have on various building components. Protect adjacent building components and landscaping that may be damaged by cleaning solution.	Annually (spring)
<b>Masonry</b>	Avoid use of de-icing chemicals on surfaces immediately adjacent to masonry veneer.	Throughout winter



COMPONENT	MAINTENANCE ACTION(S) REQUIRED	FREQUENCY
<b>COMMON AREAS</b>		
<b>Deck Furnishings</b>	Inspect for loose, missing, or cracked components, rot, sharp edges, and other damage.	Annually (spring)
<b>Metal</b>	<p>Inspect metal components for rust or paint failure. Clean rust and loose material from metal using wire brush, dust cloth, and vacuum.</p> <p>Prep and repaint with two coats of compatible rust-inhibiting primer.</p> <p>Following application of primer and finish, apply compatible clear coat waterproof sealer to areas of work to help prevent additional corrosion.</p>	Annually (spring)
<b>HVAC Units</b>	Inspect exhaust vent fans for operability, electrical shorts, and debris-build up. Follow all manufacturer instructions for Clean or replace HVAC system filters.	Semi-annually (prior to summer and winter)
<b>Interior Walls and Ceilings</b>	<p>Inspect for microbial growth, moisture-staining, holes, cracking, graffiti, or other damage.</p> <p>Regularly monitor locations that exhibit wetness/dampness, color differences, swelling/warping, blistering/cracking, abnormal odors, or failure of previous repairs.</p> <p>Have a building enclosure condition assessment conducted by a consultant to identify problems and develop solutions.</p>	Annually (summer)
<b>Interior Furnishings</b>	Inspect for loose, missing, or cracked components, sharp edges, and other damage. Repair or replace as needed.	Annually (summer)
<b>Interior Lighting Fixtures</b>	Inspect for operability and electrical shorts. Replace lamps as necessary.	
<b>Water Heaters</b>	<p>Consult manufacturer service guide for the unit for required maintenance schedules.</p> <p>Gas: Monitor for any signs of restricted exhaust venting, particularly when other appliances are operating. Ensure CO monitors are in place and operational by testing as indicated by manufacturer.</p> <p>Heat-Pump: Air filters generally must be cleaned every two weeks for maximum efficiency. Condensate must be properly routed to a secondary drain.</p>	Year-round
<b>Water Heaters</b>	Ensure Temperature-Pressure Relief Valve is not releasing liquid (sign of failure) and outflow is plumbed to a safe secondary drain location.	Annually
<b>Water Heaters</b>	Drip pans and drains should be monitored for moisture regularly.	Year-round



# APPENDIX B

## IMPORTANT INFORMATION

## PURPOSE OF REPORT

### A MULTI-PURPOSE TOOL

This reserve study report is an important part of the Association's budgetary process. Following the recommendations contained within this report should ensure the Association's smooth budgetary transitions from one fiscal year to the next, and either decrease or eliminate the need for "special assessments".

In addition, this reserve study serves a variety of useful purposes:

- Following the recommendations of a reserve study performed by a professional consultant can protect the Board of Directors in a community from personal liability concerning reserve components and reserve funding
- A reserve study is required by your accountant during the preparation of the Association's annual audit.
- A reserve study is often requested by lending institutions during the process of loan applications, both for the community and, in many cases, the individual owners
- The reserve study report is also a detailed inventory of the Association's major assets and serves as a management tool for scheduling, coordinating and planning future repairs and replacements
- The reserve study report is a tool that can assist the Board in fulfilling its legal and fiduciary obligations for maintaining the community in a state of good repair. If a community is operating on a special assessment basis, it cannot guarantee that an assessment, when needed, will be passed. Therefore, it cannot guarantee its ability to perform the required repairs or replacements to those major components for which the association is obligated.
- Since the reserve study includes measurements and cost estimates of the Association's assets, the detail reports may be used to evaluate the accuracy and price of contractor bids when assets are due to be repaired or replaced.
- The reserve study is an annual disclosure to the membership concerning the financial condition of the Association, and may be used as a "consumers' guide" by prospective purchasers
- The reserve study report provides a record of the time, cost, and quantities of past reserve replacements. At times, the Association's management company and Boards of Directors are transitory, which may result in the loss of these important records.

## STANDARD TERMS AND DEFINITIONS

**Adjustment to Useful Life** – Once the Estimated Useful Life (EUL) is determined, it may be adjusted, up or down, by this separate figure for the current cycle of replacement. This will allow for a current period adjustment without affecting the estimated replacement cycles for future replacements.

**Annual Assessment Increase** – This represents the percentage rate at which the Association will increase its assessment to reserves at the end of each year. For example, in order to accumulate \$10,000 in 10 years, you could set aside \$1,000 per year. As an alternative, you could set aside \$795 the first year and increase that amount by 5% each year until the year of replacement. In either case you arrive at the same amount. The idea is that you start setting aside a lower amount and increase that number each year in accordance with the planned percentage. Ideally this figure should be equal to the rate of inflation. It can, however, be used to aid those Associations that have not set aside appropriate reserves in the past, by making the initial year's allocation less formidable.

**Annual Fixed Reserves** – An optional figure, which if used, will override the normal process of allocating reserves to each asset.

**Budget Year Beginning/Ending** – The budgetary year for which the report is prepared. For Associations with fiscal years ending December 31st, the monthly contribution figures indicated are for the 12-month period beginning 1/1/20xx and ending 12/31/20xx.

**Component** – The individual line items in the reserve study, developed or updated in the Physical Analysis. These elements form the building blocks for the reserve study. Components typically are: 1) Association responsibility, 2) with limited useful life expectancies, 3) predictable Remaining Useful Life expectancies, 4) above a minimum threshold cost, and 5) as required by local codes.

**Component Inventory** – The task of selecting and qualifying reserve components. This task can be accomplished through on-site visual, review of Property design and organizational documents, a review of established Property precedents, and discussion with appropriate Association representative(s).

**Condition Assessment** – The task of evaluating the current condition of the component based on observed or reported characteristics.

**Current Replacement Cost** – The estimated Replacement Cost effective at the beginning of the fiscal year for which the report is being prepared.

**Estimated Useful Life (EUL)** – The estimated useful life of a component based upon industry standards, manufacturer specifications, visual inspection, location, usage, association standards and prior history. All of these factors are taken into consideration when tailoring the estimated useful life to the particular component. For example, the carpeting in a hallway or elevator (a heavy traffic area) will not have the same life as the identical carpeting in a seldom-used meeting room or office.

**Financial Analysis** – The portion of a Reserve Study where current status of the Reserves (measured as cash or Percent Funded) and a recommended Reserve contribution rate (Reserve Funding Plan) are derived, and the projected Reserve income and expense over time is presented. The Financial Analysis is one of the two parts of a Reserve Study.

**Funding Plan** – An Association's plan to provide income to a Reserve Fund to offset anticipated expenditures from that fund.

**Funding Principles** –

- Sufficient Funds When Required
- Stable Contribution Rate over the Years
- Evenly Distributed Contributions over the Years
- Fiscally Responsible

**Future Replacement Cost** – The estimated cost to repair or replace the component at the end of its estimated useful life based upon the current replacement cost and inflation.

**Inflation** – This figure is used to approximate the future cost to repair or replace each component in the report. The current cost for each component is compounded on an annual basis by the number of remaining years to replacement, and the total is used in calculating the monthly reserve contribution that will be necessary to accumulate the required funds in time for replacement.

- Interest Contribution (After Taxes)** – The interest that should be earned on the reserves, net of taxes, based upon their beginning reserve balance and monthly contributions for one year. This figure is averaged for budgeting purposes.
- Investment Yield Before Taxes** – The average interest rate anticipated by the Association based upon its current investment practices.
- Life and Valuation Estimates** – The task of estimating Useful Life, Remaining Useful Life, and Repair or Replacement Costs for the Reserve components.
- Number of Units and/or Phases** – As applicable, the number of units and/or phases included in this version of the report.
- Physical Analysis** – The portion of the Reserve Study where the Component Inventory, Condition Assessment, and Life and Valuation Estimate tasks are performed. This represents one of the two parts of the Reserve Study.
- Placed-In-Service Date** – The month and year that the component was placed-in-service. This may be the construction date, the first escrow closure date in a given phase, or the date of the last servicing or replacement.
- Projected Reserve Balance** – The anticipated reserve balance on the first day of the fiscal year for which this report has been prepared. This is based upon information provided and not audited.
- Remaining Useful Life (RUL)** – The estimated time, in years, that a reserve component can be expected to continue to serve its intended function. Projects anticipated to occur in the initial year have “zero” Remaining Useful Life.
- Replacement Cost** – The cost of replacing, repairing, or restoring a Reserve Component to its original functional condition. The Current Replacement Cost would be the cost to replace, repair, or restore the component during that particular year.
- Replacement Year** – The year that the component is scheduled to be replaced. The appropriate funds will be available by the first day of the fiscal year for which replacement is anticipated.
- Reserve Balance** – Actual or projected funds as of a particular point in time that the Association has identified for use to defray the future repair or replacement of those major components which the Association is obligated to maintain. Also known as Reserves, Reserve Accounts, Cash Reserves. Based upon information provided and not audited.
- Reserve Provider** – An individual who prepares Reserve Studies.
- Reserve Study** – A budget planning tool which identifies the current status of the Reserve Fund and a stable and equitable Funding Plan to offset the anticipated future major common area expenditures. The Reserve Study consists of two parts: the Physical Analysis and the Financial Analysis.

## OVERVIEW OF CAPITAL PLANNING TOOLS

### INTRODUCTION

Preparing the annual budget and overseeing the Association's finances are perhaps the most important responsibilities of board members. The annual operating and reserve budgets reflect the planning and goals of the association and set the level and quality of service for all of the Association's activities.

### FUNDING OPTIONS

When a major repair or replacement is required in a community, an Association has essentially four options available to address the expenditure:

- **Option 1** – The first, and only logical means that the Board of Directors has to ensure its ability to maintain the components for which it is obligated, is by assessing an adequate level of reserves as part of the regular membership assessment, thereby distributing the cost of the replacements uniformly over the entire membership. The community is not only comprised of present members, but also future members. Any decision by the Board of Directors to adopt a calculation method or funding plan which would disproportionately burden future members in order to make up for past reserve deficits, would be a breach of its fiduciary responsibility to those future members. Unlike individuals determining their own course of action, the board is responsible to the “community” as a whole.

Whereas, if the association was setting aside reserves for this purpose, using the vehicle of the regularly assessed membership dues, it would have had the full term of the life of the roof, for example, to accumulate the necessary moneys. Additionally, those contributions would have been evenly distributed over the entire membership and would have earned interest as part of that contribution

- **Option 2** – The second option is for the association to acquire a loan from a lending institution in order to affect the required repairs. In many cases, banks will lend to an association using “future homeowner assessments” as collateral for the loan. With this method, the current board is pledging the future assets of an association. They are also incurring the additional expense of interest fees along with the original principal amount. In the case of a \$150,000 roofing replacement, the association may be required to pay back the loan over a three to five year period, with interest.
- **Option 3** – The third option, too often used, is simply to defer the required repair or replacement. This option, which is not recommended, can create an environment of declining property values due to expanding lists of deferred maintenance items and the association's financial inability to keep pace with the normal aging process of the common area components. This, in turn, can have a seriously negative impact on sellers in the association by making it difficult, or even impossible, for potential buyers to obtain financing from lenders. Increasingly, lending institutions are requesting copies of the association's most recent reserve study before granting loans, either for the association itself, a prospective purchaser, or for an individual within such an association.
- **Option 4** – The fourth option is to pass a “special assessment” to the membership in an amount required to cover the expenditure. When a special assessment is passed, the association has the authority and responsibility to collect the assessments, even by means of foreclosure, if necessary. However, an association considering a special assessment cannot guarantee that an assessment, when needed, will be passed. Consequently, the association cannot guarantee its ability to perform the required repairs or replacements to those major components for which it is obligated when the need arises. Additionally, while relatively new communities require very little in the way of major “reserve” expenditures, associations reaching 12 to 15 years of age and older, find many components reaching the end of their effective useful lives. These required expenditures, all accruing at the same time, could be devastating to an association's overall budget.

## TYPES OF RESERVE STUDIES

Most reserve studies fit into one of three categories:

- **Full Reserve Study (Level I)** – The reserve provider reviews community bylaws and original construction documents (when available) to produce a component inventory, a condition assessment (based upon on-site visual observations), and life and value estimates to determine both a “fund status” and “funding plan.”
- **Update with Site Inspection (Level II)** – The reserve provider conducts a component inventory (verification only, not quantification unless new components have been added to the inventory), a condition assessment (based upon on-site visual observations), and life and valuation estimates to determine both the “fund status” and “funding plan.”
- **Update without Site Inspection (Level III)** – The reserve provider conducts life and valuation estimates to determine the “fund status” and “funding plan.”

## THE RESERVE STUDY: A PHYSICAL AND FINANCIAL ANALYSIS

There are two components of a reserve study – a physical analysis and a financial analysis:

- **Physical Analysis** – During the physical analysis, a reserve study provider evaluates information regarding the physical status and repair/replacement cost of the association’s major common area components. To do so, the provider conducts a component inventory, a condition assessment, and life and valuation estimates.
- **Financial Analysis** – The financial analysis assesses the association’s reserve balance or “fund status” (measured in cash or as percent fully funded) to determine a recommendation for the appropriate reserve contribution rate in the future, known as the “funding plan”.

## DEVELOPING A COMPONENT LIST

The budget process begins with full inventory of all the major components for which the association is responsible. The determination of whether an expense should be labeled as operational, reserve, or excluded altogether is sometimes subjective. Since this labeling may have a major impact on the financial plans of the association, subjective determinations should be minimized. We suggest the following considerations when labeling an expense.

## OPERATIONAL EXPENSES

Occur at least annually, no matter how large the expense, and can be budgeted for effectively each year. They are characterized as being reasonably predictable, both in terms of frequency and cost. Operational expenses include all minor expenses, which would not otherwise adversely affect an operational budget from one year to the next. Examples of operational expenses include:

- **Utilities** – Electricity, gas, water, telephone, cable TV
- **Administrative** – Supplies, bank service charges, dues & publications, licenses/permits/fees, insurance(s)
- **Services** – Landscaping, pool maintenance, street sweeping, accounting, reserve study
- **Repair Expenses** – Tile roof repairs, equipment repairs, minor concrete repairs, operating contingency

## RESERVE EXPENSES

These are major expenses that occur other than annually, and which must be budgeted for in advance to ensure the availability of the necessary funds in time for their use. Reserve expenses are reasonably predictable both in terms of frequency and cost. However, they may include significant components that have an indeterminable but potential liability that may be demonstrated as a likely occurrence. They are expenses that, when incurred, would have a significant effect on the smooth operation of the budgetary process from one year to the next if they were not reserved for in advance.

Examples of reserve expenses include:

- Roof Replacements
- Park/Play Equipment
- Painting
- Pool/Spa Re-plastering
- Deck Resurfacing
- Pool Equipment Replacement
- Fencing Replacement
- Pool Furniture Replacement
- Asphalt Seal Coating
- Tennis Court Resurfacing
- Asphalt Repairs
- Lighting Replacement
- Asphalt Overlays
- Insurance(s)
- Equipment Replacement
- Reserve Study
- Interior Furnishings

## BUDGETING NORMALLY EXCLUDED

Repairs or replacements of components which are deemed to have an estimated useful life equal to or exceeding the estimated useful life of the facility or community itself or exceeding the legal life of the community as defined in an association's governing documents. Examples include the complete replacement of elevators, tile roofs, wiring and plumbing. Also excluded are insignificant expenses that may be covered either by an operating or reserve contingency, or otherwise in a general maintenance fund. Expenses that are necessitated by acts of nature, accidents or other occurrences that are more properly insured for, rather than reserved for, are also excluded. Construction defects and other conditions which result in major performance deficiencies cannot be modeled or accurately budgeted for as part of a standard reserve fund analysis.

## PREPARING THE RESERVE STUDY

Once the reserve components have been identified and quantified, their respective replacement costs, useful lives, and remaining lives must be assigned so that a funding schedule can be constructed. Replacement costs and useful lives can be found in published manuals such as construction estimators, appraisal handbooks, and valuation guides. Remaining lives are calculated from the useful lives and ages of assets and adjusted according to conditions such as design, manufactured quality, usage, exposure to the elements and maintenance history.

By following the recommendations of an effective reserve study, the association should avoid any major shortfalls. However, to remain accurate, the report should be updated on an annual basis to reflect such changes as shifts in economic parameters, additions of phases or components, or expenditures of reserve funds. The association can assist in simplifying the reserve study update process by keeping accurate records of these changes throughout the year.

## FUNDING METHODS

From the simplest to the most complex, reserve study providers use many different computational processes to calculate reserve requirements. However, there are two basic processes identified as industry standards – the cash flow method and the component method:

- **Cash Flow Method** – Develops a reserve-funding plan where contributions to the reserve fund are designed to offset the variable annual expenditures from the reserve fund. Different reserve funding plans are tested against the actual anticipated schedule of reserve expenses until the desired funding goal is achieved. This method sets up a “window” in which all future anticipated replacement costs are computed, based upon the individual lives of the components under consideration.
- **Component Method** – Develops a reserve-funding plan where the total contribution is based upon the sum of contributions for individual components. The component method is the more conservative of the two funding options. This assures that the association will achieve and maintain an ideal level of reserve over time. This method also allows for computations on individual components in the analysis. The Component Funding Model Projection is based upon the component methodology.

## FUNDING STRATEGIES

**Current Assessment Funding Model** – This method is also based upon the cash flow funding concept. The initial reserve assessment is set at the association’s current fiscal year funding level and a 30-year projection is calculated to illustrate the adequacy of the current funding over time



## RESERVE STUDY METHODOLOGY

### PHYSICAL ANALYSIS METHODOLOGY

Throughout the course of Forensic's physical analysis of the Property, the following methods were employed:

- **Review of Background Information** – The following background information was reviewed by Forensic as part of the Reserve Study preparation for the Property:
  - Previous reserve study report
  - Declarations and governing documents provided by HOA board
- **Component Inventory Generation** – The component inventory was developed to include commonly-owned building components or systems, all or part of which will normally require major maintenance, repair, or replacement in more than 1 and less than 30 years, as well as the finish paint application for those included components.

Please note that the inventory specifically did not include the components or systems listed in the "Reserve Study Exclusions" section of this report, as well as the following

- Items that can be funded from the general budget
  - Common elements whose responsibility does not include all of the unit owners
  - Items with an expected useful life (EUL) and/or remaining useful life (RUL) greater than 30 years
  - Items that lack a predictable EUL and/or RUL
  - Items with a replacement cost less than the minimum threshold of \$1,000
- **Visual Site Inspection** – In order to evaluate and document the current physical condition of the Property, Forensic performed a visual review of the unconcealed and accessible surfaces of the components listed in the "Component Inventory" section of this report. For multiple components, Forensic reviewed a sufficient representative sample of that component (as determined by our professional judgment) in order to make quantity or useful life determinations.

At no time during Forensic's time on site at the Property were destructive or invasive testing methods employed in order to observe the condition of concealed building components or systems. As such, the concealed conditions associated with the components listed in the "Component Inventory" section of this report are not included as part of this Reserve Study.
  - **Component Quantity Determinations** – Forensic utilized multiple methods to determine component quantities (depending on the component), including field take-off estimates, partial take-offs from construction drawings, and evaluation of the component quantities provided in previous reserve studies.
  - **Component Useful Life Determinations** – Forensic utilized multiple methods to determine component EUL values (depending on the component), including typical useful life tables provided by Fannie Mae, databases provided by Reserve Analyst software, product manufacturer literature, modification of the component quantities provided in previous reserve studies, and Forensic's professional judgment. RUL values were determined by subtracting the current age of each component (based on the in-service date provided by the Association or previous reserve study) from the EUL.

## FINANCIAL ANALYSIS METHODOLOGY

Throughout the course of Forensic's financial analysis of the Property, the following methods were employed:

- **Financial Parameter Determinations** – In order to perform the financial analysis component of this Reserve Study, Forensic relied upon the values provided by the Association for the fiscal year start/end dates, reserve fund starting balance, reserve fund contribution rate, interest rate, and tax rate. Forensic determined an appropriate inflation rate based upon the 12-month moving average inflation rate, as provided by the U.S. Bureau of Labor Statistics. The 30-year planning horizon incorporated in this Reserve Study is based upon State of Oregon requirements.
- **Component Replacement Cost Determinations** – Forensic utilized multiple methods to determine component current replacement cost values (depending on the component), including current RS Means data for Facility Repair and Maintenance and Commercial Renovation, product manufacturer and vendor literature, adjustment of costing information provided in previous reserve studies, and Forensic's professional judgment. Future replacement cost values were determined by projecting the current replacement cost values out to their RUL replacement year(s), as modified by the inflation rate determined by Forensic.

**Funding Model Projections and Computations** – Forensic utilized the mathematical modeling capabilities of F7 software to generate the Annual Expenditure Summary, Current Assessment Funding Model Projection, and the Suggested Funding Model Projection via the "Cash Flow Method."

## DISCLOSURES AND LIMITATIONS

### GENERAL INFORMATION

Forensic's Reserve Study of the Property has been prepared in general conformance with the following industry association standards:

- ASTM E 2188-08 "Standard Guide for Property Condition Assessments: Baseline Property Condition Assessment Process," (2008).
- Community Associations Institute (CAI) Research Foundation, "Best Practices: Report #1 Reserve Studies/Management"
- Community Associations Institute (CAI), "National Reserve Study Standards," (2009)
- Fannie Mae "Expected Useful Life Tables," developed by On-Sight Insight of Needham, MA
- "Fannie Mae Physical Needs Assessment Guidance to the Property Evaluator"

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### COMPLIANCE WITH STATE REGULATIONS

This Reserve Study was prepared in general compliance with all applicable state requirements. Please refer to the appropriate appendix to this report for detailed information regarding specific state requirements. Note that this Reserve Study was prepared by a building envelope consultant, suitably qualified by knowledge, skill, and experience to act as a Reserve Study Professional. Please refer to the appropriate appendix to this report for detailed information regarding provider qualifications.

### CONFLICTS OF INTEREST

Forensic has no financial interest in the Association. Forensic is unaware of any potential conflict of interest that may negatively impact the veracity or accuracy of this report.

### BASIC ASSUMPTIONS

This reserve study and the parameters under which it has been completed are based upon information provided to us in part by representatives of the Association, its contractors, assorted vendors, specialist and independent contractors, the Community Association Institute (CAI), and various construction pricing and scheduling manuals including, but not limited to: Marshall & Swift Valuation Service, RS Means Facilities Maintenance & Repair Cost Data, RS Means Commercial Renovation Cost Data, National Construction Estimator, National Repair & Remodel Estimator, Dodge Cost Manual and McGraw-Hill Professional. Additionally, costs are obtained from numerous vendor catalogues, actual quotations or historical costs, and our own experience as a building envelope consultant.

It has been assumed, unless otherwise noted in this report, that components will not be subjected to extraordinary usage or be exposed to any problematic operational environments, that all components have been designed and constructed properly, and that each estimated useful life (EUL) will approximate that of the norm per industry standards and/or manufacturer's specifications. In some cases, estimates may have been used on components, which have an indeterminable but potential liability to the Association. The decision for the inclusion of these as well as all components considered is left to the Association.

It has also been assumed that the Association will employ a high standard of ongoing maintenance to facilitate EUL expectations for individual components, and that those components have been constructed and placed in service in such a manner as to facilitate reasonable access for ongoing maintenance and inspection purposes.

## RESERVE STUDY UPDATES

We recommend that your reserve study be updated on an annual basis due to fluctuating interest rates, inflationary changes, and the unpredictable nature of the lives of many of the components under consideration. All of the information collected during our inspection of the Property and computations made subsequently in preparing this Reserve Study are retained in our computer files. Therefore, annual updates may be completed quickly and inexpensively each year. A visual site inspection is recommended every three (3) years in order to more accurately update your Reserve Study.

In addition, any of the parameters and estimates used in this Reserve Study may be changed at your request, after which we will provide a revised Study as an additional service billed on an hourly basis.

This Reserve Study is provided as an aid for planning purposes and not as an accounting tool. Since it deals with events yet to take place, there is no assurance that the results enumerated within it will, in fact, occur as describe.

## DOCUMENT REVISIONS

Forensic reserves the rights to amend, modify, and/or re-issue this document as more information is reviewed or as additional Property site visits proceed. This document is intended solely for use by our client and should, in any event, be reproduced only in its entirety, with the "Disclaimers and Limitations" section included.

We appreciate your confidence in Forensic and we look forward to addressing any questions or concerns that you may have regarding the contents of this reserve study. Please do not hesitate to contact Forensic at (503) 772-1114 or [info@forensicbuilding.com](mailto:info@forensicbuilding.com) if we can be of further assistance. Thank you.

Respectfully submitted,

## FORENSIC BUILDING CONSULTANTS



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