St. Johns Court

DRAFT

FY 2025 RESERVE STUDY AND MAINTENANCE SCHEDULE

PREPARED FOR:

Association of Unit Owners of St. Johns Court Condominiums

c/o Invest West Management

PROJECT NUMBER:

21-184

REPORT DATE:

December 4, 2024

Draft Rev2

PREPARED BY:

FORENSIC BUILDING CONSULTANTS

WWW.FORENSICBUILDING.COM

12901 SE 97TH AVE. SUITE 310

CLACKAMAS, OR 97015

(P) 503.772.1114

(F) 503.772.4039

This Page Left Intentionally Blank

TABLE OF CONTENTS

EXECUTIVE SUMMARY

Client Name:	Association of Unit Owners of St. Johns Court Condominiums c/o Invest West Management	**Property Name:**	St. Johns Court (Property)
Client Address:	12503 SE Mill Plain Blvd Suite 260 Vancouver, WA 98684	**Property Address:**	9333 N Lombard St. Portland, OR 97203
Report Type:	Level 3 Reserve Study Update & Maintenance Plan	**Report Date:**	December 4, 2024

Dear Association of Unit Owners of St. Johns Court Condominiums:

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.

RESERVE STUDY SCOPE

This Reserve Study (RS) update was limited to information provided by the Association and previous reserve study updates. 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

CURRENT RESERVE FUND BALANCE

The current reserve fund balance of $12,501 places the reserve fund at an approximately 11% 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 high 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, maintain a positive threshold, and build towards approximately 57% funding by the end of the 30 years projected in this report.

A contribution of $17,700 in fiscal year 2025, followed by annual increases detailed below, is recommended to meet the above criteria, and is projected to an ending balance of approximately $104,795 in fiscal year 2054.

Costs provided in this report are estimates based on currently information available. Forensic strongly recommends the Association obtain bids from multiple qualified contractors to ensure an adequate funding plan.

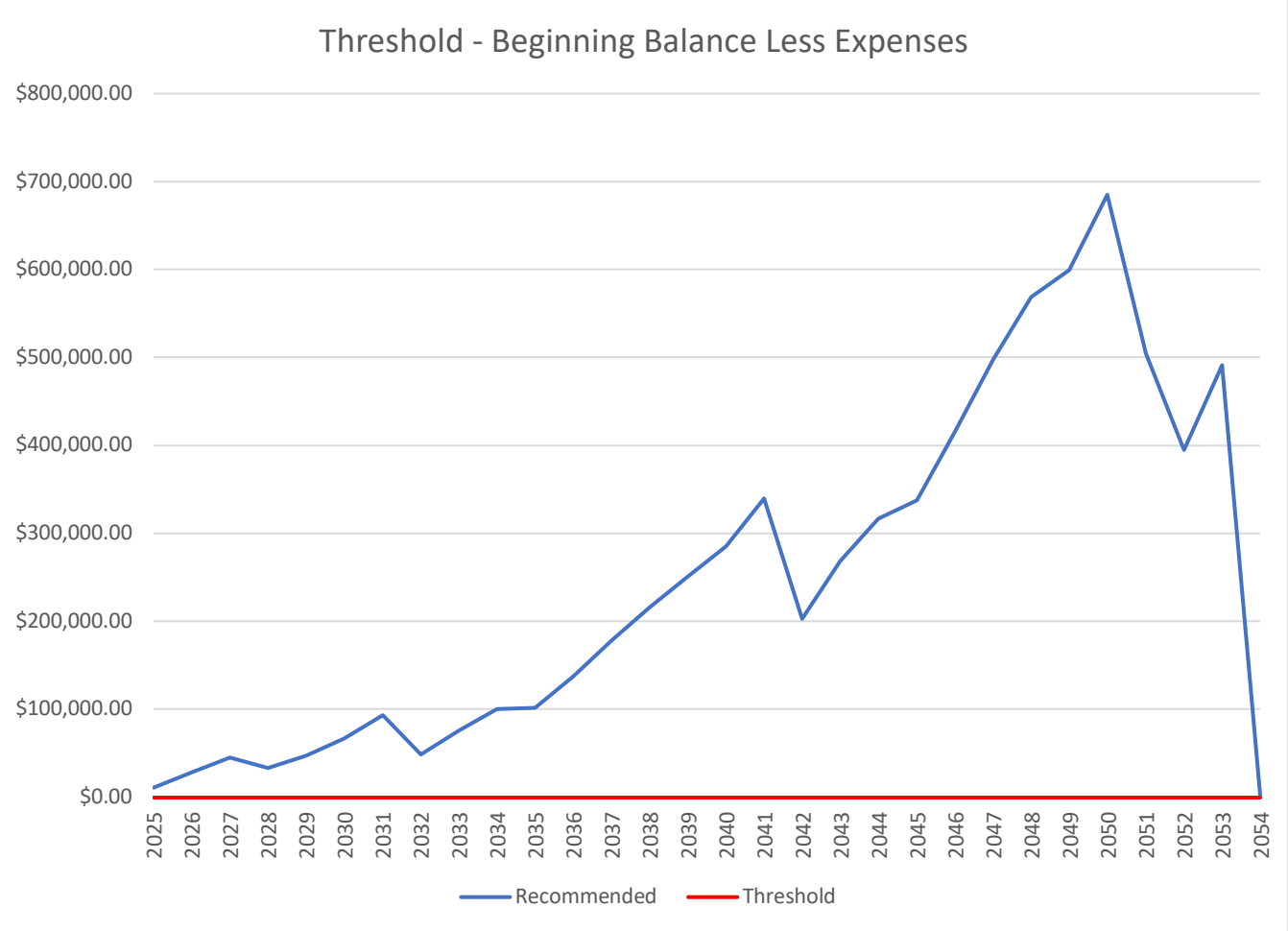
Recommended Annual Reserve Fund Contributions	
FY 2025	**$ 17,700**
FY 2025 - FY 2044	8% annual increases
FY 2045 - FY 2054	3% annual increases

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

RESERVE FUND CONTRIBUTION CHARTS

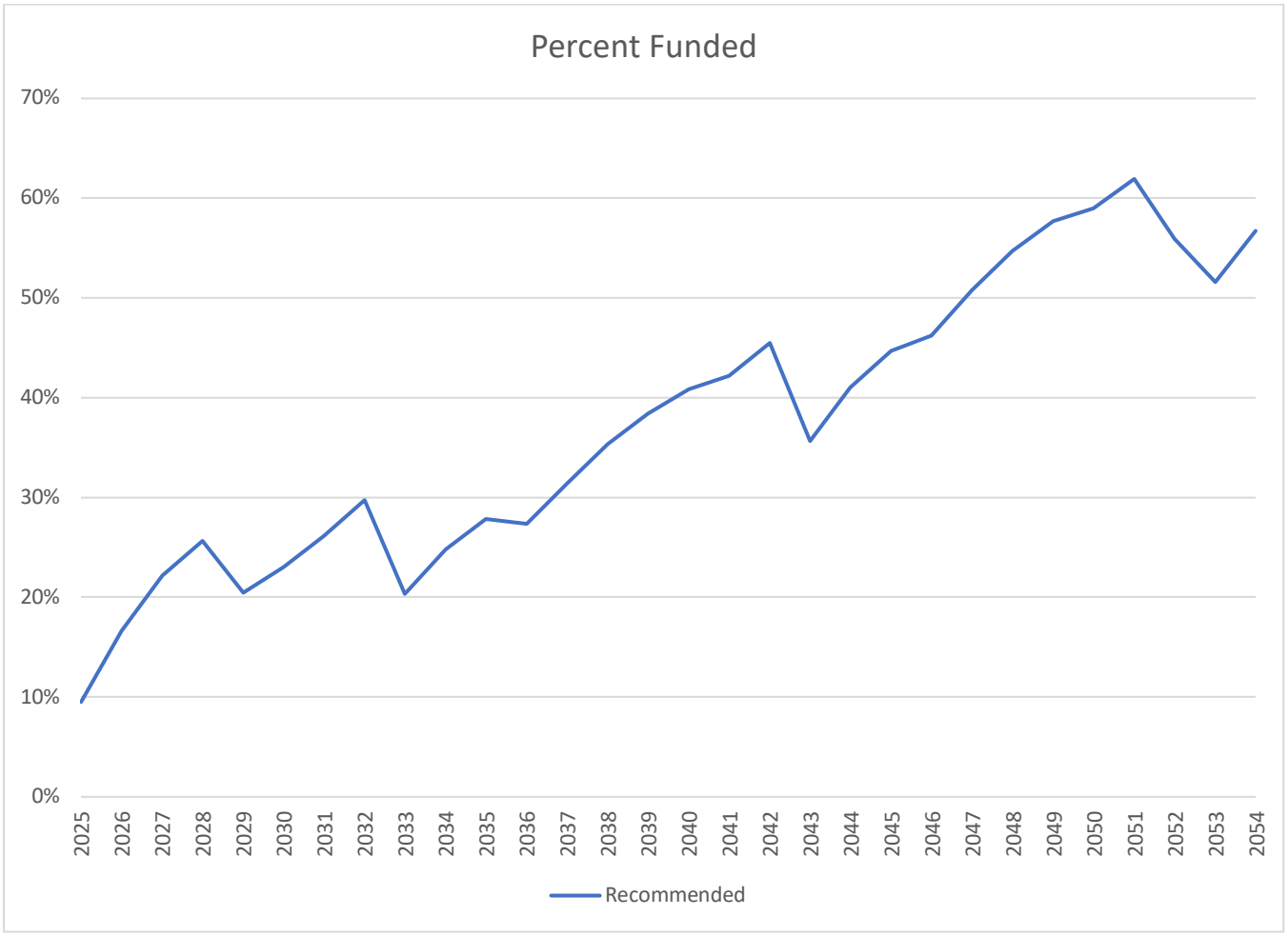
THRESHOLD CHART

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 80% 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 have 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	12,501	28,494	47,613	66,030	55,346	71,408	93,137	121,236	78,713	108,942
Contribution	17,700	19,116	20,645	22,296	24,080	26,007	28,087	30,334	32,761	35,382
Average Per Unit	590	637	688	743	802	866	936	1,011	1,092	1,179
Percent Change	0.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%
Interest	1	3	5	4	5	8	10	6	9	11
Less Expenditures	1,709	0	2,233	32,986	8,024	4,286	0	72,864	2,541	8,933
Ending Balance	28,494	47,613	66,030	55,346	71,408	93,137	121,236	78,713	108,942	135,402

	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
Begin Balance	135,402	139,716	178,291	222,883	264,063	303,241	341,326	400,266	268,254	339,014
Contribution	38,212	41,270	44,571	48,137	51,988	56,147	60,639	65,490	70,729	76,387
Average Per Unit	1,273	1,375	1,485	1,604	1,732	1,871	2,021	2,183	2,357	2,546
Percent Change	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%
Interest	12	15	20	24	27	31	37	24	30	35
Less Expenditures	33,911	2,710	0	6,981	12,837	18,093	1,735	197,527	0	22,505
Ending Balance	139,716	178,291	222,883	264,063	303,241	341,326	400,266	268,254	339,014	392,932

	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054
Begin Balance	392,932	416,161	497,247	580,772	654,646	687,988	776,347	598,284	491,517	591,240
Contribution	78,679	81,039	83,471	85,975	88,554	91,211	93,947	96,765	99,668	102,658
Average Per Unit	2,622	2,701	2,782	2,865	2,951	3,040	3,131	3,225	3,322	3,421
Percent Change	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Interest	37	45	53	61	64	73	56	45	54	7
Less Expenditures	55,488	0	0	12,162	55,276	2,925	272,067	203,578	0	589,096
Ending Balance	416,161	497,247	580,772	654,646	687,988	776,347	598,284	491,517	591,240	104,810

RESERVE STUDY PARAMETERS

EXPLANATORY NOTES

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

Level of Service:	Level 3 (Reserve Study Update – No Site Visit)	**Description:**	Reserve Study includes Component Inventory, Life and Valuation Estimates, Fund Status & Funding Plan
Fiscal Year Start:	January 1, 2025	**Fiscal Year End:**	December 31, 2025
Model Interest Rate:	0.01 %	**Inflation Rate:**	2.15 %
Estimated FY2025 Reserve Fund Beginning Balance:	$ 12,501.38	**Previous Fiscal Year Contribution:**	$ 18,000
Funding Parameters:	Maintain positive thresholds and build toward 100% funding	**Number of Units:**	30
Property Occupancy Type:	Condominium Community	**Date of Original Construction:**	1963

General Description of Property:

- The Property consists of one 2-story multi-family residence, with asphalt parking accessible via and alleyway
- The residential building is of wood framed construction, with fiber cement plank lap and panel cladding over rainscreen cavity. Roofing is asphalt composition shingles over T&G car decking.
- Four exterior stair towers with steel risers and concrete steps leading to elevated pedestrian coated concrete walkways with pre-engineered metal railings installed.

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

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.

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

Interior Component (Aesthetic):	Maximum 100% extension of expected useful life (EUL)	**Exterior Component (Aesthetic):**	Maximum 50% extension of expected useful life (EUL)
Interior Component (Performance):	Maximum 50% extension of expected useful life (EUL)	**Exterior Component (Performance):**	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
Exterior							
Fiber Cement Cladding	01/01/2054	$ 256,466.92	1 Lump	$ 256,467	33:00	29:00	$ 478,158
Light Fixtures	01/01/2042	170.98	82 Each	14,020	20:00	17:00	20,200
Mailboxes	01/01/2042	6,600.00	1 Lump	6,600	20:00	17:00	9,509
Painting and Caulking	01/01/2032	62,691.91	1 Lump	62,692	10:00	7:00	72,864
Pedestrian Coating: Grind	01/01/2042	26,000.00	1 Lump	26,000	21:00	17:00	37,460
Pedestrian Coating: Topcoat	01/01/2028	25,646.69	1 Lump	25,647	7:00	3:00	27,354
Stairtowers - Concrete Landing	01/01/2045	10,753.33	3 Ea	32,260	24:00	20:00	49,573
Swing Doors	01/01/2040	3,800.00	3 Each	11,400	25:00	15:00	15,734
Walkway Railings	01/01/2052	51,293.38	1 Lump	51,293	30:00	27:00	91,610
				486,379			802,462
Roof							
Asphalt Shingle Roofing	01/01/2051	$ 142,481.62	1 Lump	$ 142,482	30:00	26:00	$ 249,065
Gutters and Downspouts	01/01/2051	11,018.96	1 Lump	11,019	30:00	26:00	19,262
				153,501			268,326
Site							
Arborist - Tree Trimming	01/01/2027	$ 2,140.00	1 Lump	$ 2,140	3:00	2:00	$ 2,234
Asphalt Sealcoat	01/01/2029	1,082.86	6.8 MSF	7,363	5:00	4:00	8,024
Concrete Repairs	01/01/2025	1,709.78	1 Allow	1,710	3:00	0:00	1,710
Fence - Wood	01/01/2041	102.58	12 LF	1,231	20:00	16:00	1,736
Fence - Wrought Iron - Painting	01/01/2028	13.97	378 Allow	5,281	10:00	3:00	5,632
Perimeter Masonry Maintenance	01/01/2044	7,600.00	1 Lsum	7,600	20:00	19:00	11,430
				25,325			30,766
Utilities							
Drain Pipes: Inspect & Repair	01/01/2054	$ 50,000.00	1 Allow	$ 50,000	30:00	29:00	$ 93,220
Water Supply Pipes: PEX: Replace	01/01/2081	275,000.00	1 Allow	275,000	60:00	56:00	915,705
				325,000			1,008,925
				990,205			2,110,480

EXPENDITURES – ANNUAL LIST

Date	Component	Code	Service Date	Estimated Life	Expenditure
Year : 2025					
01/01/2025	Concrete Repairs	910-000-0006	01/01/2022	3:00	$ 1,709.78
					1,709.78
Year : 2027					
01/01/2027	Arborist - Tree Trimming	910-000-0018	01/01/2024	3:00	$ 2,233.94
					2,233.94
Year : 2028					
01/01/2028	Fence - Wrought Iron - Painting	910-000-0011	01/01/2018	10:00	$ 5,632.16
01/01/2028	Pedestrian Coating: Topcoat	910-000-0004	01/01/2021	7:00	27,353.84
					32,986.00
Year : 2029					
01/01/2029	Asphalt Sealcoat	910-000-0013	01/01/2024	5:00	$ 8,024.12
					8,024.12
Year : 2030					
01/01/2030	Arborist - Tree Trimming	910-000-0018	01/01/2027	3:00	$ 2,382.64
01/01/2030	Concrete Repairs	910-000-0006	01/01/2025	5:00	1,903.64
					4,286.28
Year : 2032					
01/01/2032	Painting and Caulking	910-000-0012	01/01/2022	10:00	$ 72,864.22
					72,864.22
Year : 2033					
01/01/2033	Arborist - Tree Trimming	910-000-0018	01/01/2030	3:00	$ 2,541.24
					2,541.24
Year : 2034					
01/01/2034	Asphalt Sealcoat	910-000-0013	01/01/2029	5:00	$ 8,933.92
					8,933.92
Year : 2035					
01/01/2035	Concrete Repairs	910-000-0006	01/01/2030	5:00	$ 2,119.48
01/01/2035	Pedestrian Coating: Topcoat	910-000-0004	01/01/2028	7:00	31,792.24
					33,911.72

EXPENDITURES – ANNUAL LIST

Date	Component	Code	Service Date	Estimated Life	Expenditure
Year : 2036					
01/01/2036	Arborist - Tree Trimming	910-000-0018	01/01/2033	3:00	$ 2,710.39
					2,710.39
Year : 2038					
01/01/2038	Fence - Wrought Iron - Painting	910-000-0011	01/01/2028	10:00	$ 6,981.76
					6,981.76
Year : 2039					
01/01/2039	Arborist - Tree Trimming	910-000-0018	01/01/2036	3:00	$ 2,890.81
01/01/2039	Asphalt Sealcoat	910-000-0013	01/01/2034	5:00	9,946.88
					12,837.69
Year : 2040					
01/01/2040	Concrete Repairs	910-000-0006	01/01/2035	5:00	$ 2,359.80
01/01/2040	Swing Doors	910-000-0007		25:00	15,734.01
					18,093.81
Year : 2041					
01/01/2041	Fence - Wood	910-000-0014	01/01/2021	20:00	$ 1,735.83
					1,735.83
Year : 2042					
01/01/2042	Arborist - Tree Trimming	910-000-0018	01/01/2039	3:00	$ 3,083.23
01/01/2042	Light Fixtures	910-000-0008	01/01/2022	20:00	20,200.02
01/01/2042	Mailboxes	910-000-0017	01/01/2022	20:00	9,509.04
01/01/2042	Painting and Caulking	910-000-0012	01/01/2032	10:00	90,324.20
01/01/2042	Pedestrian Coating: Grind	910-000-0005	01/01/2021	21:00	37,459.84
01/01/2042	Pedestrian Coating: Topcoat	910-000-0004	01/01/2035	7:00	36,950.81
					197,527.14
Year : 2044					
01/01/2044	Asphalt Sealcoat	910-000-0013	01/01/2039	5:00	$ 11,074.70
01/01/2044	Perimeter Masonry Maintenance	910-000-0010	01/01/2024	20:00	11,430.47
					22,505.17
Year : 2045					
01/01/2045	Arborist - Tree Trimming	910-000-0018	01/01/2042	3:00	$ 3,288.47
01/01/2045	Concrete Repairs	910-000-0006	01/01/2040	5:00	2,627.36
01/01/2045	Stairtowers - Concrete Landing	910-000-0019	01/01/2021	24:00	49,572.84
					55,488.67

EXPENDITURES – ANNUAL LIST

Date	Component	Code	Service Date	Estimated Life	Expenditure
Year : 2048					
01/01/2048	Arborist - Tree Trimming	910-000-0018	01/01/2045	3:00	$ 3,507.36
01/01/2048	Fence - Wrought Iron - Painting	910-000-0011	01/01/2038	10:00	8,654.75
					12,162.11
Year : 2049					
01/01/2049	Asphalt Sealcoat	910-000-0013	01/01/2044	5:00	$ 12,330.39
01/01/2049	Pedestrian Coating: Topcoat	910-000-0004	01/01/2042	7:00	42,946.40
					55,276.79
Year : 2050					
01/01/2050	Concrete Repairs	910-000-0006	01/01/2045	5:00	$ 2,925.26
					2,925.26
Year : 2051					
01/01/2051	Arborist - Tree Trimming	910-000-0018	01/01/2048	3:00	$ 3,740.82
01/01/2051	Asphalt Shingle Roofing	910-000-0001	01/01/2021	30:00	249,064.73
01/01/2051	Gutters and Downspouts	910-000-0003	01/01/2021	30:00	19,261.67
					272,067.22
Year : 2052					
01/01/2052	Painting and Caulking	910-000-0012	01/01/2042	10:00	$ 111,967.99
01/01/2052	Walkway Railings	910-000-0016	01/01/2022	30:00	91,610.17
					203,578.16
Year : 2054					
01/01/2054	Arborist - Tree Trimming	910-000-0018	01/01/2051	3:00	$ 3,989.83
01/01/2054	Asphalt Sealcoat	910-000-0013	01/01/2049	5:00	13,728.46
01/01/2054	Drain Pipes: Inspect & Repair	910-000-0021	01/01/2024	30:00	93,220.26
01/01/2054	Fiber Cement Cladding	910-000-0002	01/01/2021	33:00	478,158.28
					589,096.83

FORENSIC
BUILDING CONSULTANTS
TRUSTED SOLUTIONS

EXPENDITURES MATRIX

Category	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Exterior										
Painting and Caulking								72,864		
Pedestrian Coating: Topcoat				27,354						
	0	0	0	27,354	0	0	0	72,864	0	0
Site										
Arborist - Tree Trimming			2,234			2,383			2,541	
Asphalt Sealcoat					8,024					8,934
Concrete Repairs	1,710					1,904				
Fence - Wrought Iron - Painting				5,632						
	1,710	0	2,234	5,632	8,024	4,286	0	0	2,541	8,934
	1,710	0	2,234	32,986	8,024	4,286	0	72,864	2,541	8,934

FORENSIC
BUILDING CONSULTANTS
TRUSTED SOLUTIONS

EXPENDITURES MATRIX

Category	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
Exterior										
Light Fixtures								20,200		
Mailboxes								9,509		
Painting and Caulking								90,324		
Pedestrian Coating: Grind								37,460		
Pedestrian Coating: Topcoat	31,792							36,951		
Swing Doors						15,734				
	31,792	0	0	0	0	15,734	0	194,444	0	0
Site										
Arborist - Tree Trimming		2,710			2,891			3,083		
Asphalt Sealcoat					9,947					11,075
Concrete Repairs	2,119					2,360				
Fence - Wood							1,736			
Fence - Wrought Iron - Painting				6,982						
Perimeter Masonry Maintenance										11,430
	2,119	2,710	0	6,982	12,838	2,360	1,736	3,083	0	22,505
	33,912	2,710	0	6,982	12,838	18,094	1,736	197,527	0	22,505

FORENSIC
BUILDING CONSULTANTS
TRUSTED SOLUTIONS

EXPENDITURES MATRIX

Category	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054
Exterior										
Fiber Cement Cladding										478,158
Painting and Caulking								111,968		
Pedestrian Coating: Topcoat					42,946					
Stairtowers - Concrete Landing	49,573									
Walkway Railings								91,610		
	49,573	0	0	0	42,946	0	0	203,578	0	478,158
Roof										
Asphalt Shingle Roofing							249,065			
Gutters and Downspouts							19,262			
	0	0	0	0	0	0	268,326	0	0	0
Site										
Arborist - Tree Trimming	3,288			3,507			3,741			3,990
Asphalt Sealcoat					12,330					13,728
Concrete Repairs	2,627					2,925				
Fence - Wrought Iron - Painting				8,655						
	5,916	0	0	12,162	12,330	2,925	3,741	0	0	17,718
Utilities										
Drain Pipes: Inspect & Repair										93,220
	0	0	0	0	0	0	0	0	0	93,220
	55,489	0	0	12,162	55,277	2,925	272,067	203,578	0	589,097

COMPONENT LIST – FULL DETAIL

Fiber Cement Cladding

Item Number	2
Type	Common Area
Category	Exterior
Measurement Basis	Lump
Estimated Useful Life	35 Years
Basis Cost	$ 256,466.92
Tracking	Logistical
Method	Adjusted

Code	Service Date	Replace Date	Rem Life	Adj Life	Quantity	Current Cost	Future Cost
910-000-0002	01/01/2021	01/01/2054	29:00	33:00	1	256,466.92	478,158.28
						256,466.92	478,158.28

Comments

Funding for replacement of fiber cement exterior wall cladding and associated components.

Replaced during recent 2020-21 rehabilitation project.

Cost basis obtained from I&E rehab contract.

Light Fixtures

Item Number	8
Type	Common Area
Category	Exterior
Measurement Basis	Each
Estimated Useful Life	20 Years
Basis Cost	$ 170.98
Tracking	Logistical
Method	Adjusted

Code	Service Date	Replace Date	Rem Life	Adj Life	Quantity	Current Cost	Future Cost
910-000-0008	01/01/2022	01/01/2042	17:00	20:00	82	14,020.36	20,200.02
						14,020.36	20,200.02

Comments

Funding for replacement of exterior light fixtures of various types and configurations. Does not include light fixtures located on brick columns surrounding the street sides of property.

Mailboxes

Item Number	17
Type	Common Area
Category	Exterior
Measurement Basis	Lump
Estimated Useful Life	20 Years
Basis Cost	$ 6,600.00
Tracking	Logistical
Method	Fixed

Code	Service Date	Replace Date	Rem Life	Adj Life	Quantity	Current Cost	Future Cost
910-000-0017	01/01/2022	01/01/2042	17:00	20:00	1	6,600.00	9,509.04
						6,600.00	9,509.04

Comments

Funding for replacement of exterior mailbox unit.

FY 2025 Update: Cost updated at the request of the Association.

Painting and Caulking

Item Number	12
Type	Common Area
Category	Exterior
Measurement Basis	Lump
Estimated Useful Life	10 Years
Basis Cost	$ 62,691.91
Tracking	Logistical
Method	Fixed

Code	Service Date	Replace Date	Rem Life	Adj Life	Quantity	Current Cost	Future Cost
910-000-0012	01/01/2022	01/01/2032	7:00	10:00	1	62,691.91	72,864.22
						62,691.91	72,864.22

Comments

Funding for caulking repairs and painting of exterior wall assemblies.

Forensic recommends caulking repairs and painting every 7 to 10 years or as needed.

Cost basis obtained from I&E rehab contract.

Pedestrian Coating: Grind

Item Number	5
Type	Common Area
Category	Exterior
Measurement Basis	Lump
Estimated Useful Life	21 Years
Basis Cost	$ 26,000.00
Tracking	Logistical
Method	Adjusted

Code	Service Date	Replace Date	Rem Life	Adj Life	Quantity	Current Cost	Future Cost
910-000-0005	01/01/2021	01/01/2042	17:00	21:00	1	26,000.00	37,459.84
						26,000.00	37,459.84

Comments

Funding for grinding to fresh substrate for new application of pedestrian coating. Separate funding for the topcoat is provided under the recurring 'Pedestrian Coating: Topcoat'

Forensic recommends grinding and recoating every 20 to 25 years depending on observed condition.
Cost basis obtained from I&E rehab contract.

Pedestrian Coating: Topcoat

Item Number	4
Type	Common Area
Category	Exterior
Measurement Basis	Lump
Estimated Useful Life	7 Years
Basis Cost	$ 25,646.69
Tracking	Logistical
Method	Adjusted

Code	Service Date	Replace Date	Rem Life	Adj Life	Quantity	Current Cost	Future Cost
910-000-0004	01/01/2021	01/01/2028	3:00	7:00	1	25,646.69	27,353.84
						25,646.69	27,353.84

Comments

Funding for application of a topcoat to existing pedestrian coating over concrete landings and walkways.

Forensic recommends inspection every 5 years to determine conditions and timeline for recoating.

Cost basis obtained from I&E rehab contract.

Stairtowers - Concrete Landing

Item Number	19
Type	Common Area
Category	Exterior
Measurement Basis	Ea
Estimated Useful Life	50 Years
Basis Cost	$ 10,753.33
Tracking	Logistical
Method	Adjusted

Code	Service Date	Replace Date	Rem Life	Adj Life	Quantity	Current Cost	Future Cost
910-000-0019	01/01/2021	01/01/2045	20:00	24:00	3	32,259.99	49,572.84
						32,259.99	49,572.84

Comments

Funding for replacement of the concrete landings located in the middle of the stair towers at the rear courtyard area.

Swing Doors

Item Number	7
Type	Common Area
Category	Exterior
Measurement Basis	Each
Estimated Useful Life	25 Years
Basis Cost	$ 3,800.00
Tracking	Logistical
Method	One Time

Code	Service Date	Replace Date	Rem Life	Adj Life	Quantity	Current Cost	Future Cost
910-000-0007		01/01/2040	15:00	25:00	3	11,400.00	15,734.01
						11,400.00	15,734.01

Comments

Funding for replacement of common area doors located at basement entrances and parking lot storage room.

FY 2025 Update: Cost updated at the request of the Association.

Walkway Railings

Item Number	16
Type	Common Area
Category	Exterior
Measurement Basis	Lump
Estimated Useful Life	30 Years
Basis Cost	$ 51,293.38
Tracking	Logistical
Method	Adjusted

Code	Service Date	Replace Date	Rem Life	Adj Life	Quantity	Current Cost	Future Cost
910-000-0016	01/01/2022	01/01/2052	27:00	30:00	1	51,293.38	91,610.17
						51,293.38	91,610.17

Comments

Funding for replacement of guardrails and railings located at stairtowers and elevated walkways.

Asphalt Shingle Roofing

Item Number	1
Type	Common Area
Category	Roof
Measurement Basis	Lump
Estimated Useful Life	30 Years
Basis Cost	$ 142,481.62
Tracking	Logistical
Method	Adjusted

Code	Service Date	Replace Date	Rem Life	Adj Life	Quantity	Current Cost	Future Cost
910-000-0001	01/01/2021	01/01/2051	26:00	30:00	1	142,481.62	249,064.73
						142,481.62	249,064.73

Comments

Funding for replacement of the asphalt shingle roof and associated components.

Roof was replaced during the recent 2020-21 rehabilitation.

Cost basis obtained from I&E rehab contract.

Gutters and Downspouts

Item Number	3
Type	Common Area
Category	Roof
Measurement Basis	Lump
Estimated Useful Life	30 Years
Basis Cost	$ 11,018.96
Tracking	Logistical
Method	Adjusted

Code	Service Date	Replace Date	Rem Life	Adj Life	Quantity	Current Cost	Future Cost
910-000-0003	01/01/2021	01/01/2051	26:00	30:00	1	11,018.96	19,261.67
						11,018.96	19,261.67

Comments

Funding for replacement of Gutters and Downspouts on the same schedule as the asphalt composition shingles.

Gutters and downspouts replaced during recent 2020-21 rehabilitation.

Cost basis obtained from I&E rehab contract.

Arborist - Tree Trimming

Item Number	18
Type	Common Area
Category	Site
Measurement Basis	Lump
Estimated Useful Life	3 Years
Basis Cost	$ 2,140.00
Tracking	Logistical
Method	Adjusted

Code	Service Date	Replace Date	Rem Life	Adj Life	Quantity	Current Cost	Future Cost
910-000-0018	01/01/2024	01/01/2027	2:00	3:00	1	2,140.00	2,233.94
						2,140.00	2,233.94

Comments

Funding for periodic tree trimming to be performed by professional arborist approximately every 3 years.
Cost basis provided by Association based on work performed in 2024.

Asphalt Sealcoat

Item Number	13
Type	Common Area
Category	Site
Measurement Basis	MSF
Estimated Useful Life	5 Years
Basis Cost	$ 1,082.86
Tracking	Logistical
Method	Adjusted

Code	Service Date	Replace Date	Rem Life	Adj Life	Quantity	Current Cost	Future Cost
910-000-0013	01/01/2024	01/01/2029	4:00	5:00	6.8	7,363.45	8,024.12
						7,363.45	8,024.12

Comments

Funding for crack repair, sealcoat, and striping of asphalt parking area.

Forensic recommends sealcoating every 5 to 10 years depending on use and condition.

Concrete Repairs

Item Number	6
Type	Common Area
Category	Site
Measurement Basis	Allow
Estimated Useful Life	5 Years
Basis Cost	$ 1,709.78
Tracking	Logistical
Method	Adjusted

Code	Service Date	Replace Date	Rem Life	Adj Life	Quantity	Current Cost	Future Cost
910-000-0006	01/01/2022	01/01/2025	0:00	3:00	1	1,709.78	1,709.78
						1,709.78	1,709.78

Comments

Funding allowance for repairs to exterior concrete tripping hazards on an as needed basis.

Fence - Wood

Item Number	14
Type	Common Area
Category	Site
Measurement Basis	LF
Estimated Useful Life	20 Years
Basis Cost	$ 102.58
Tracking	Logistical
Method	Adjusted

Code	Service Date	Replace Date	Rem Life	Adj Life	Quantity	Current Cost	Future Cost
910-000-0014	01/01/2021	01/01/2041	16:00	20:00	12	1,230.96	1,735.83
						1,230.96	1,735.83

Comments

Funding for replacement of wood fencing located at South East side of building.

Fence - Wrought Iron - Painting

Item Number	11
Type	Common Area
Category	Site
Measurement Basis	Allow
Estimated Useful Life	10 Years
Basis Cost	$ 13.97
Tracking	Logistical
Method	Adjusted

Code	Service Date	Replace Date	Rem Life	Adj Life	Quantity	Current Cost	Future Cost
910-000-0011	01/01/2018	01/01/2028	3:00	10:00	378	5,280.66	5,632.16
						5,280.66	5,632.16

Comments

Funding for repair and painting of wrought iron perimeter fencing.

Cost basis taken from invoice for work performed in 2019.

Forensic recommends rust removal and paint every 7 to 10 years or as needed.

Perimeter Masonry Maintenance

Item Number	10
Type	Common Area
Category	Site
Measurement Basis	Lsum
Estimated Useful Life	20 Years
Basis Cost	$ 7,600.00
Tracking	Logistical
Method	Adjusted

Code	Service Date	Replace Date	Rem Life	Adj Life	Quantity	Current Cost	Future Cost
910-000-0010	01/01/2024	01/01/2044	19:00	20:00	1	7,600.00	11,430.47
						7,600.00	11,430.47

Comments

Funding for repairs to brick pillars located at the perimeter on an as needed basis.

Cost based on a bid for work to be performed in 2024 by Sawtooth.

Drain Pipes: Inspect & Repair

Item Number	21
Type	Common Area
Category	Utilities
Measurement Basis	Allow
Estimated Useful Life	30 Years
Basis Cost	$ 50,000.00
Tracking	Logistical
Method	Adjusted

Code	Service Date	Replace Date	Rem Life	Adj Life	Quantity	Current Cost	Future Cost
910-000-0021	01/01/2024	01/01/2054	29:00	30:00	1	50,000.00	93,220.26
						50,000.00	93,220.26

Comments

The existing cast iron and pvc drain pipes may need inspection and repairs periodically.

Water Supply Pipes: PEX: Replace

Item Number	20
Type	Common Area
Category	Utilities
Measurement Basis	Allow
Estimated Useful Life	60 Years
Basis Cost	$ 275,000.00
Tracking	Logistical
Method	Fixed

Code	Service Date	Replace Date	Rem Life	Adj Life	Quantity	Current Cost	Future Cost
910-000-0020	01/01/2021	01/01/2081	56:00	60:00	1	275,000.00	915,704.58
						275,000.00	915,704.58

Comments

Replacement of PEX piping installed as part of a major exterior rehabilitation in 2021 with an expected useful life of approximately 50 years. While this is beyond the scope of the 30 years included in this report, it is included here for informational purposes.

Cost estimate based on re-pipe work performed in 2021.

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
BUILDING APPURTENANCES		
Decks and Railings	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)
Deck Surfaces	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)
Deck Framing	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)
Decks and Railings	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)
Metal Railings	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
EXTERIOR SEALANTS AND FINISHES		
Exterior Finish Paint	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. 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.	Annually (fall)
Exterior Sealant Joints	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: Inspect for sealant failure (open voids) or degradation ("chalking" or cracking). Re-seal "pinhole" sealant failure areas with compatible sealant materials.	Semi-annually (spring and fall)
Exterior Sealant Joints	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. 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. Regularly monitor sealant repair areas for recurrence of failure, degradation, or staining.	
Exterior Sealant Joints (temporary)	Remove and replace temporary sealant joint applications (installed during winter) as necessary.	Annually (spring)

COMPONENT	MAINTENANCE ACTION(S) REQUIRED	FREQUENCY
Fluid-Applied Traffic Coatings	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)
EXTERIOR WALLS		
Electrical Outlets	Inspect for damaged covers and loose receptacles.. Test ground fault circuit interrupters and reset.	Semi-annually (spring and fall)
Exterior Lighting Fixtures	Inspect for operability and electrical shorts. Replace lamps as necessary.	Semi-annually (summer and winter)
Wall Penetrations	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)
Exterior Walls (General)	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. 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. 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.	Semi-annually (spring and fall)
Exterior Wall Surfaces	Inspect exterior wall surfaces for damaged, loose, or missing components, decay, storm damage, or other weather-resistance deficiencies.	Semi-annually (spring and fall)
Finish coats	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
Interior Surfaces	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)
Building Enclosure Condition Assessment	Have a building enclosure condition assessment conducted to identify problems and develop solutions.	Bi-annually
Animals	Inspect exterior wall surfaces for presence of bird or insect nests.	Semi-annually (spring and fall)
Foundations	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. Inspect all vent screens for openings that could allow rodent access and repair as needed.	Annually (spring)
Hose Bibs	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
FENESTRATION UNITS		
Windows and Doors (General)	Inspect weather stripping for continuity and air leakage. Replace if worn.	Annually (fall)
Glazing	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)
Hardware	Inspect window and door hardware for operability and closer adjustment. Lubricate operable window and door hinges.	Annually (spring)
Interior Surfaces	Inspect interior surfaces for microbial growth, moisture staining, or evidence of water leakage to the interior.	Semi-annually (spring and fall)
Exterior Surfaces	Clean exterior surfaces with compatible cleaning solution.	Semi-annually (spring and fall)
Window Screens	Repair holes in window screens and wash screens with compatible cleaning solution.	Annually (spring)

COMPONENT	MAINTENANCE ACTION(S) REQUIRED	FREQUENCY
ROOFS		
Exhaust Vents	Inspect for proper operation of dampers or louvers, blockage by debris, or evidence of birds/rodents. Clean exhaust vents and screens as necessary.	Monthly
Gutters and Downspouts	Inspect for debris build-up and organic growth. Clean gutters and downspouts as necessary.	Semi-annually (spring and fall)
Gutters and Downspouts	Identify and regularly monitor locations affected by recurring debris-build up or standing water.	Semi-annually (spring and fall)
Gutters and Downspouts	Inspect for damaged, loose, or missing components, as well as leaking joints.	Semi-annually (spring and fall)
Roof Surfaces (General)	Inspect roof surfaces for organic growth or debris build-up. 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. 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. 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.	Semi-annually (spring and fall)
Roof Surfaces	Inspect roof surfaces for damaged, loose, or missing components, storm damage, or other weather-resistance deficiencies.	Semi-annually (spring and fall)
Roof Surfaces	Inspect roof surfaces for presence of bird or insect nests.	Semi-annually (spring and fall)
SITEWORK		
Asphalt Paving	Patch all cracks in asphalt greater than 1/4” in width with hot-applied crack sealer.	Annually (spring)
Asphalt Paving	Monitor oil leaks that will disintegrate asphalt. Repair source of leak.	Annually (spring)
Catch Basins and Trench Drains	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
Concrete Flatwork	Inspect for debris build-up and organic growth. Clean concrete flatwork surfaces as necessary.	Semi-annually (spring and fall)
Concrete Flatwork	Inspect for cracking, spalling, settlement, trip hazards, or damage caused by salt/de-icing chemicals. Patch or repair as necessary.	Annually (spring)
Fencing and Railings	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)
Fencing and Railings	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)
Gates	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)
Irrigation Systems	Blow out sprinkler lines and inspect backflow devices for operability.	Annually (fall)
Irrigation Systems	Inspect electronic timers for operability and electric shorts.	Annually (spring)
Irrigation Systems	Redirect sprinkler heads away from building surfaces.	Annually (spring)
Landscaping	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)
Landscaping	Inspect soil finish grade for blockage of masonry veneer weep provisions at base of wall locations.	Semi-annually (spring and fall)
Landscaping	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)
Light Poles	Inspect light poles for operability. Replace lamps as necessary.	Semi-annually (summer and winter)

COMPONENT	MAINTENANCE ACTION(S) REQUIRED	FREQUENCY
Exterior Metal	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)
Mailboxes	Inspect for loose, missing or cracked components, rot, sharp edges, and other damage. Repair or replace as necessary.	Annually (spring)
Retaining Walls (Masonry)	Inspect wall surfaces for loose or missing masonry units.	Annually (spring)
Retaining Walls	If visual evidence indicates the wall has shifted over time, consult a structural engineer or qualified contractor.	
Masonry	Inspect masonry joints for failed mortar and cracking. Consult a qualified masonry contractor for an estimate of means and costs.	Annually (spring)
Masonry	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)
Masonry	Avoid use of de-icing chemicals on surfaces immediately adjacent to masonry veneer.	Throughout winter

COMPONENT	MAINTENANCE ACTION(S) REQUIRED	FREQUENCY
COMMON AREAS		
Deck Furnishings	Inspect for loose, missing, or cracked components, rot, sharp edges, and other damage.	Annually (spring)
Metal	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)
HVAC Units	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)
Interior Walls and Ceilings	Inspect for microbial growth, moisture-staining, holes, cracking, graffiti, or other damage. Regularly monitor locations that exhibit wetness/dampness, color differences, swelling/warping, blistering/cracking, abnormal odors, or failure of previous repairs. Have a building enclosure condition assessment conducted by a consultant to identify problems and develop solutions.	Annually (summer)
Interior Furnishings	Inspect for loose, missing, or cracked components, sharp edges, and other damage. Repair or replace as needed.	Annually (summer)
Interior Lighting Fixtures	Inspect for operability and electrical shorts. Replace lamps as necessary.	
Water Heaters	Consult manufacturer service guide for the unit for required maintenance schedules. 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. Heat-Pump: Air filters generally must be cleaned every two weeks for maximum efficiency. Condensate must be properly routed to a secondary drain.	Year-round
Water Heaters	Ensure Temperature-Pressure Relief Valve is not releasing liquid (sign of failure) and outflow is plumbed to a safe secondary drain location.	Annually
Water Heaters	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 2018-08 "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"

This document has been provided pursuant to an agreement containing restrictions on its use. No part of this document may be copied or distributed, in any form or by any means, nor disclosed to third parties without the expressed written permission of Forensic. The Association shall have the right to reproduce and distribute copies of this report, or the information contained within, as may be required for compliance with all applicable regulations.

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 if we can be of further assistance. Thank you.

Respectfully submitted,

FORENSIC BUILDING CONSULTANTS

Toby C. White
Vice President and Director of Technical Services

James Erdahl
Building Science Technician, Reserve Analyst

End Of Document