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Update "With-Site-Visit" Reserve Study

Richmond Manor COA
Shoreline, WA

Report #: 17195-2
For Period Beginning: January 1, 2018
Expires: December 31, 2018

Date Prepared: June 12, 2017

JIM TALAGA
CAI-RS
00066
DESIGNATION
RESERVE SPECIALIST

Hello, and welcome to your Reserve Study!

This Report is a valuable budget planning tool, for with it you control the future of your association. It contains all the fundamental information needed to understand your current and future Reserve obligations, the most significant expenditures your association will face.

With respect to Reserves, this Report will tell you "where you are," and "where to go from here."

In this Report, you will find...

1) A List of What you're Reserving For

2) An Evaluation of your Reserve Fund Size and Strength

3) A Recommended Multi-Year Reserve Funding Plan

More Questions?

Visit our website at www.ReserveStudy.com or call us at:

253-661-5437

ASSOCIATION RESERVES
Est. 1986

Table of Contents

3- Minute Executive Summary

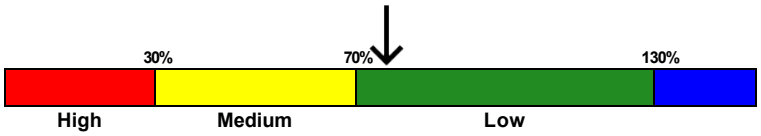
Association:	**Richmond Manor COA**	**Assoc. #: 17195-2**
Location:	**Shoreline, WA**	**# of Units:27**
Report Period:	**January 1, 2018 through December 31, 2018**	

Findings/Recommendations as-of: January 1, 2018

Starting Reserve Balance	**$272,060**
Current Fully Funded Reserve Balance	**$353,340**
Percent Funded	**77.0 %**
Average Reserve Deficit or (Surplus) Per Unit	**$3,010**
Recommended 2018 100% Monthly "Full Funding" Contributions	**$3,465**
2018 70% Monthly "Threshold Funding" Contributions	**$3,180**
2018 "Baseline Funding" minimum contributions to keep Reserves above $0	**$2,800**
Most Recent Budgeted Contribution Rate	**$2,947**

Reserves % Funded: 77.0%

Special Assessment Risk:



Economic Assumptions:

Net Annual "After Tax" Interest Earnings Accruing to Reserves	**1.00 %**
Annual Inflation Rate	**3.00 %**

• This is a Update "With-Site-Visit" Reserve Study, meeting or exceeding all requirements of the RCW. This study was prepared by, or under the supervision of a credentialed Reserve Specialist (RS™).

• Your Reserve Fund is currently 77.0 % Funded. This means the association's special assessment & deferred maintenance risk is currently Low. The objective of your multi-year Funding Plan is to fund your Reserves to a level where you will enjoy a low risk of such Reserve cash flow problems.

• Based on this starting point and your anticipated future expenses, our recommendation is to budget Reserve Contributions to within the 70% to 100% range as noted above. The 100% "Full" and 70% contribution rates are designed to gradually achieve these funding objectives by the end of our 30-year report scope.

• No assets appropriate for Reserve designation known to be excluded. See appendix for component information and the basis of our assumptions.

Executive Summary 17195-2

#	Component	Useful Life (yrs)	Rem. Useful Life (yrs)	Current Average Cost
	Site / Grounds			
120	Asphalt - Resurface	30	15	$10,950
121	Asphalt - Seal/Repair	5	1	$3,100
142	Wood Arbors - Repair/Replace	25	10	$7,650
160	Pole Lights - Replace	30	15	$5,750
170	Landscape - Refurbish	4	4	$4,500
	Building Exterior			
500	Steep Slope Roofing - Recover	25	10	$28,800
505	Low Slope Roof - Recover	15	5	$90,250
508	Skylights (a) - Replace	25	25	$18,900
508	Skylights (b) - Replace	25	5	$2,600
510	Gutters/Downspouts - Repair/Replace	40	25	$9,700
525	Siding: Hardieplank - Paint/Caulk	10	5	$19,550
526	Exterior Wood Trim - Paint/Caulk	5	0	$20,000
530	Siding: Stucco - Clean/Inspect	15	0	$3,350
535	Windows - Replace	40	25	$131,000
540	Decks - Clean/Repair/Re-coat	8	2	$15,300
550	Deck Rail - Repair/Replace	40	25	$29,500
580	Deck Doors - Repaint	15	0	$3,850
605	Garage Doors - Repair/Replace	30	15	$15,300
610	Garage Door Operators - Replace	15	0	$3,300
	Building Interior			
700	Carpet - Replace	15	0	$40,100
710	Interior Walls/Trim - Paint	8	0	$30,600
712	Stairwells - Paint	10	9	$6,600
760	Furniture - Replace	20	5	$2,750
	Systems / Equipment / Other			
950	Entry Access System - Replace	15	3	$2,750
955	Security Equipment - Replace	20	5	$1,650
960	Elevator - Modernize	30	15	$90,000
961	Elevator Cab - Remodel	20	5	$7,650
965	Fire Alarm Panel - Replace	20	5	$2,750
967	Fire System Pumps/Valves - Replace	20	5	$6,500
999	Reserve Study - Update	3	2	$1,900
30	**Total Funded Components**			

Note 1: Yellow highlighted line items are expected to require attention in this intial year.

Introduction

A Reserve Study is the art and science of anticipating, and preparing for, an association's major common area repair and replacement expenses. Partially art, because in this field we are making projections about the future. Partially science, because our work is a combination of research and well-defined computations, following consistent National Reserve Study Standard principles.

The foundation of this and every Reserve Study is your Reserve Component List (what you are reserving for). This is because the Reserve Component List defines the *scope and schedule* of all your anticipated upcoming Reserve projects. Based on that List and your starting balance, we calculate the association's Reserve Fund Strength (reported in terms of "Percent Funded"). Then we compute a Reserve Funding Plan to provide for the Reserve needs of the association. These form the three results of your Reserve Study.

RESERVE STUDY RESULTS

Reserve contributions are not “for the future”. Reserve contributions are designed to offset the ongoing, daily deterioration of your Reserve assets. Done well, a stable, budgeted Reserve Funding Plan will collect sufficient funds from the owners who enjoyed the use of those assets, so the association is financially prepared for the irregular expenditures scattered through future years when those projects eventually require replacement.

Methodology

For this Update With-Site-Visit Reserve Study, we started with a review of your prior Reserve Study, then looked into recent Reserve expenditures, evaluated how expenditures are handled (ongoing maintenance vs Reserves), and researched any well-established association precedents. We performed an on-site inspection to evaluate your common areas, updating and adjusting your Reserve Component List as appropriate.

Which Physical Assets are Funded by Reserves?

RESERVE COMPONENT "FOUR-PART TEST"

There is a national-standard four-part test to determine which expenses should appear in your Reserve Component List. First, it must be a common area maintenance responsibility. Second, the component must have a limited life. Third, the remaining life must be predictable (or it by definition is a *surprise* which cannot be accurately anticipated). Fourth, the component must be above a minimum threshold cost (often between .5% and 1% of an association's total budget). This limits Reserve Components to major, predictable expenses. Within this framework, it is inappropriate to include *lifetime* components, unpredictable expenses (such as damage due to fire, flood, or earthquake), and expenses more appropriately handled from the Operational Budget or as an insured loss.

How do we establish Useful Life and Remaining Useful Life estimates?

1) Visual Inspection (observed wear and age)
2) Association Reserves database of experience
3) Client History (install dates & previous life cycle information)
4) Vendor Evaluation and Recommendation

How do we establish Current Repair/Replacement Cost Estimates?

In this order...

1) Actual client cost history, or current proposals
2) Comparison to Association Reserves database of work done at similar associations
3) Vendor Recommendations
4) Reliable National Industry cost estimating guidebooks

How much Reserves are enough?

Reserve adequacy is not measured in cash terms. Reserve adequacy is found when the *amount* of current Reserve cash is compared to Reserve component deterioration (the *needs of the association*). Having *enough* means the association can execute its projects in a timely manner with existing Reserve funds. Not having *enough* typically creates deferred maintenance or special assessments.

Adequacy is measured in a two-step process:

1) Calculate the *value of deterioration* at the association (called Fully Funded Balance, or FFB).
2) Compare that to the Reserve Fund Balance, and express as a percentage.

Each year, the *value of deterioration* at the association changes. When there is more deterioration (as components approach the time they need to be replaced), there should be more cash to offset that deterioration and prepare for the expenditure. Conversely, the *value of deterioration* shrinks after projects are accomplished. The *value of deterioration* (the FFB) changes each year, and is a moving but predictable target.

There is a high risk of special assessments and deferred maintenance when the Percent Funded is *weak*, below 30%. Approximately 30% of all associations are in this high risk range. While the 100% point is Ideal (indicating Reserve cash is equal to the *value of deterioration*), a Reserve Fund in the 70% - 130% range is considered strong (low risk of special assessment).

Measuring your Reserves by Percent Funded tells how well prepared your association is for upcoming Reserve expenses. New buyers should be very aware of this important disclosure!

How much should we contribute?

RESERVE FUNDING PRINCIPLES

According to National Reserve Study Standards, there are four Funding Principles to balance in developing your Reserve Funding Plan. Our first objective is to design a plan that provides you with sufficient cash to perform your Reserve projects on time. Second, a stable contribution is desirable because it keeps these naturally irregular expenses from unsettling the budget.

Reserve contributions that are evenly distributed over current and future owners enable each owner to pay their fair share of the association's Reserve expenses over the years. And finally, we develop a plan that is fiscally responsible and safe for Boardmembers to recommend to their association. Remember, it is the Board's job to provide for the ongoing care of the common areas. Boardmembers invite liability exposure when Reserve contributions are inadequate to offset ongoing common area deterioration.

What is our Recommended Funding Goal?

FUNDING OBJECTIVES

Maintaining the Reserve Fund at a level equal to the *value* of deterioration is called "Full Funding" (100% Funded). As each asset ages and becomes "used up," the Reserve Fund grows proportionally. **This is simple, responsible, and our recommendation.** Evidence shows that associations in the 70 - 130% range *enjoy a low risk of special assessments or deferred maintenance.*

Allowing the Reserves to fall close to zero, but not below zero, is called Baseline Funding. Doing so allows the Reserve Fund to drop into the 0 - 30% range, where there is a high risk of special assessments & deferred maintenance. Since Baseline Funding still provides for the timely execution of all Reserve projects, and only the "margin of safety" is different, Baseline Funding contributions average only 10% - 15% less than Full Funding contributions. Threshold Funding is the title of all other Cash or Percent Funded objectives *between* Baseline Funding and Full Funding.

Site Inspection Notes

During our site visit on 5/23/2017, we began with a brief meeting with Association Manager Sid Horvath and Board member Bob Terry. We then started the site inspection beginning with the site and grounds. We visually inspected all visible common area while compiling a photographic inventory, noting: current condition, make & model information where appropriate, apparent levels of care and maintenance, exposure to weather elements and other factors that may affect the components useful life.

Projected Expenses

While this Reserve Study looks forward 30 years, we have no expectation that all these expenses will all take place as anticipated. This Reserve Study needs to be updated annually because we expect the timing of these expenses to shift and the size of these expenses to change. We do feel more certain of the timing and cost of near-term expenses than expenses many years away.

The figure below summarizes the projected future expenses at your association as defined by your Reserve Component List. A summary of these expenses are shown in the 30-yr Summary Table, while details of the projects that make up these expenses are shown in the Cash Flow Detail Table.

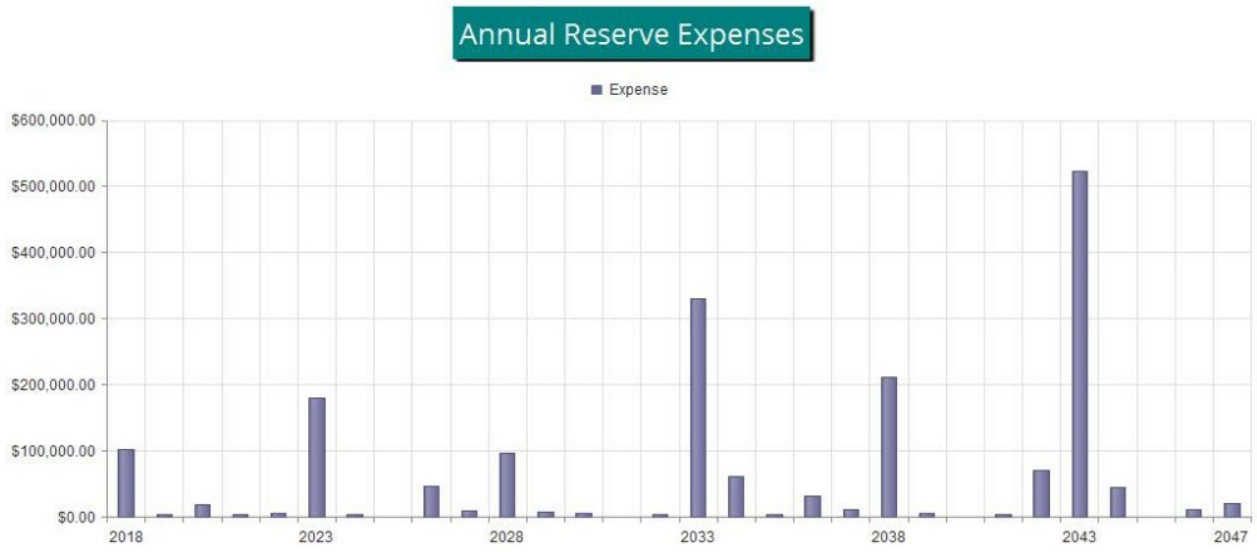


Figure 1

Reserve Fund Status

The starting point for our financial analysis is your Reserve Fund balance, projected to be $272,060 as-of the start of your Fiscal Year on 1/1/2018. As of that date , your Fully Funded Balance is computed to be $353,340 (see Fully Funded Balance Table). This figure represents the deteriorated value of your common area components.

Recommended Funding Plan

Based on your current Percent Funded and your near-term and long-term Reserve needs, we are recommending budgeted contributions of $3,465 per month this Fiscal Year. The overall 30-yr plan, in perspective, is shown below. This same information is shown numerically in both the 30-yr Summary Table and the Cash Flow Detail Table.

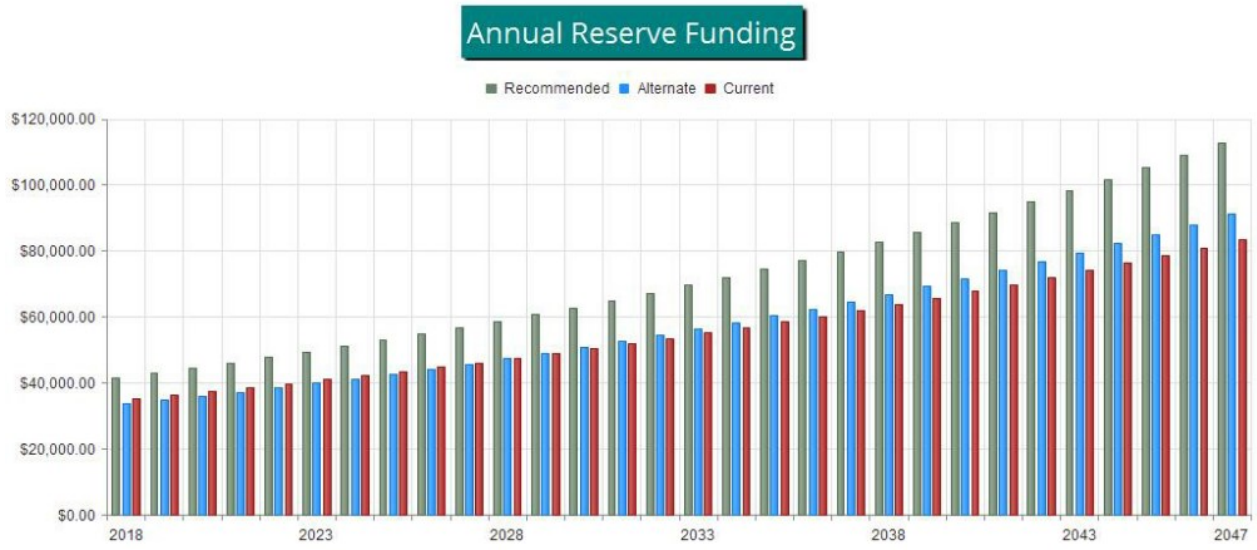


Figure 2

The following chart shows your Reserve balance under our recommended Full Funding Plan, an alternate Baseline Funding Plan, and at your current budgeted contribution rate (assumes future increases), compared to your always-changing Fully Funded Balance target.

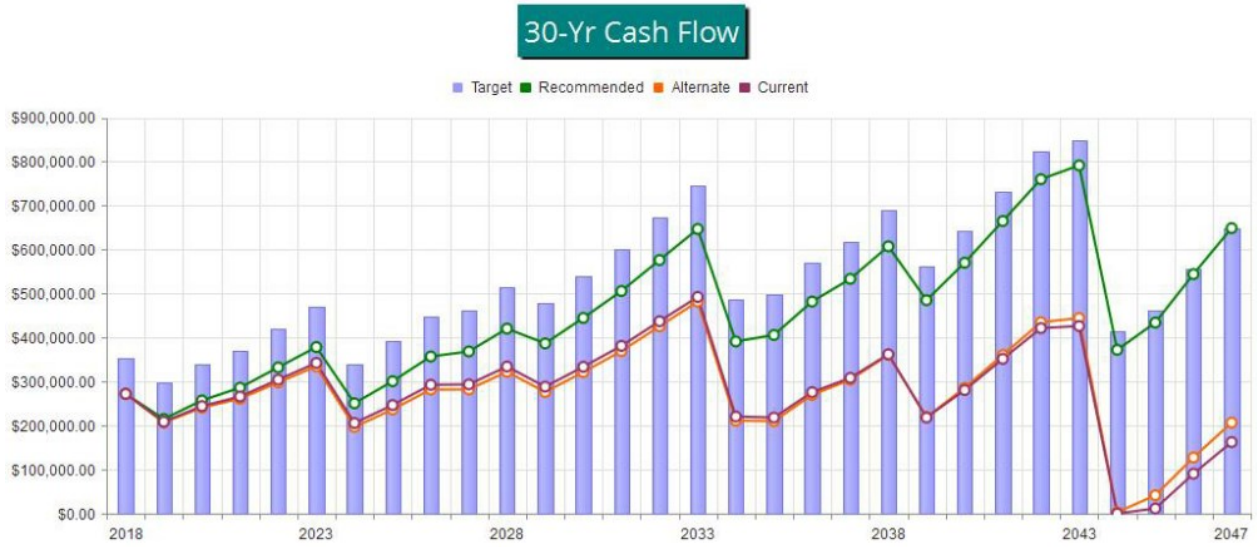


Figure 3

This figure shows the same information plotted on a Percent Funded scale. It is clear here to see how your Reserve Fund strength approaches the 100% Funded level under our recommended multi-yr Funding Plan.

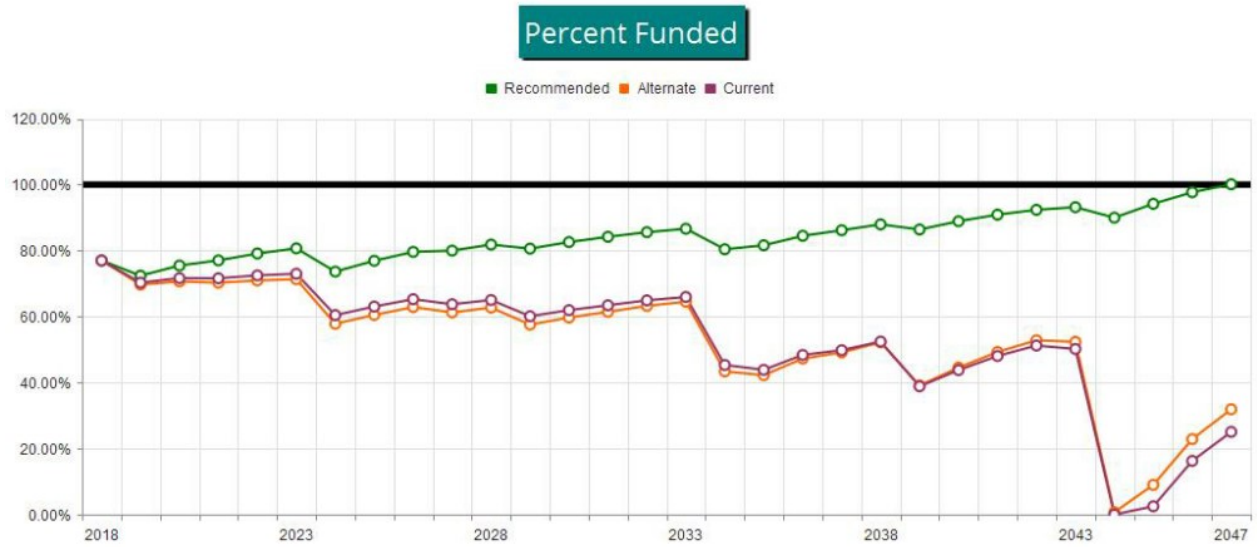


Figure 4

Table Descriptions

The tabular information in this Report is broken down into nine tables, not all which may have been chosen by your Project Manager to appear in your report. Tables are listed in the order in which they appear in your Report.

Executive Summary is a summary of your Reserve Components

Budget Summary is a management and accounting tool, summarizing groupings of your Reserve Components.

Analysis Summary provides a summary of the starting financial information and your Project Manager's Financial Analysis decision points.

Component List Detail discloses key Component information, providing the foundation upon which the financial analysis is performed.

Fully Funded Balance shows the calculation of the Fully Funded Balance for each of your components, and their contributions to the association total. For each component, the Fully Funded Balance is the fraction of life used up multiplied by its estimated Current Replacement Cost.

Component Significance shows the relative significance of each component to Reserve funding needs of the association, helping you see which components have more (or less) influence than others on your total Reserve contribution rate. The deterioration cost/yr of each component is calculated by dividing the estimated Current Replacement Cost by its Useful Life, then that component's percentage of the total is displayed.

Acct/Tax Summary provides information on each Component's proportionate portion of key totals, valuable to accounting professionals primarily during tax preparation time of year.

30-Yr Summary provides a one-page 30-year summary of the cash flowing into and out of the Reserve Fund, with a display of the Fully Funded Balance, Percent Funded, and special assessment risk at the beginning of each year.

Cash Flow Detail shows the detailed income and expenses for each of the next 30 years. This table makes it possible to see which components are projected to require repair or replacement in a particular year, and the size of those individual expenses.

Starting Information:			
# Units:	27		
Base Year:	2018		
Period Start:	01/01/2018		
Period End:	12/31/2018		
Site Inspection Date:	05/23/2017		
Total Asessments:	$11,501	Per Unit	$425.95
Budgeted Res Contrib:	$2,947	Per Unit	$109.14
Starting Reserve Bal:	$272,060		
Interest:	1.00 %		
Inflation:	3.00 %		
Status:			
Proportional FFB:	$353,340		
Percent Funded:	77.0 %		
Swain Factor:	1.872 %		
Recommendation:			
Recommended Contribution Rate:	$3,465	Per Unit	$128.33
Alternate Contribution Rate:	$2,800	Per Unit	$103.70
Annual Increase:	3.50 %		
# of Years:	30		
Secondary Annual Increase:	0.00 %		
# of Years:	0		
1st Yr S.A.:	$0	Per Unit	$0.00
2nd Yr S.A.:	$0	Per Unit	$0.00
3rd Yr S.A.:	$0	Per Unit	$0.00
4th Yr S.A.:	$0	Per Unit	$0.00
5th Yr S.A.:	$0	Per Unit	$0.00
Minimum Balance (Full):	$214,873.77		
Min Margin (Full):	71.11 %		
Minimum Balance (Alt):	$2,803.94		
Min Margin (Alt):	0.54 %		
System Defaults:			
Current Annual Increase:	3.00 %		
Budget Cycles Per Year:	12		

#	Component	Quantity	Useful Life	Rem. Useful Life	Current Cost Estimate Best Case	Current Cost Estimate Worst Case
	Site / Grounds					
120	Asphalt - Resurface	~ 5,000 Sq Ft	30	15	$10,400	$11,500
121	Asphalt - Seal/Repair	~ 5,000 Sq Ft	5	1	$3,000	$3,200
142	Wood Arbors - Repair/Replace	(4) wood arbors	25	10	$6,600	$8,700
160	Pole Lights - Replace	(3) metal assemblies	30	15	$4,900	$6,600
170	Landscape - Refurbish	Common area landscaping	4	4	$3,000	$6,000
	Building Exterior					
500	Steep Slope Roofing - Recover	~ 8,100 Sq Ft	25	10	$26,600	$31,000
505	Low Slope Roof - Recover	~ 20,600 Sq Ft	15	5	$67,500	$113,000
508	Skylights (a) - Replace	~ (29) skylights	25	25	$16,000	$21,800
508	Skylights (b) - Replace	~ (4) skylights	25	5	$2,200	$3,000
510	Gutters/Downspouts - Repair/Replace	~ 1,470 Lin Ft	40	25	$8,100	$11,300
525	Siding: Hardieplank - Paint/Caulk	~ 8,680 GSF	10	5	$17,400	$21,700
526	Exterior Wood Trim - Paint/Caulk	Wood surfaces	5	0	$17,500	$22,500
530	Siding: Stucco - Clean/Inspect	~ 6,840 GSF	15	0	$3,000	$3,700
535	Windows - Replace	~ (167) windows	40	25	$101,000	$161,000
540	Decks - Clean/Repair/Re-coat	~ 2,250 Sq Ft	8	2	$13,100	$17,500
550	Deck Rail - Repair/Replace	~ 540 Lin Ft	40	25	$23,600	$35,400
580	Deck Doors - Repaint	~ (54) wood/glass doors	15	0	$3,300	$4,400
605	Garage Doors - Repair/Replace	(2) metal doors 7' x 17'	30	15	$13,100	$17,500
610	Garage Door Operators - Replace	(2) 1/2 HP Liftmaster	15	0	$2,200	$4,400
	Building Interior					
700	Carpet - Replace	~ 734 Sq Yds	15	0	$32,100	$48,100
710	Interior Walls/Trim - Paint	~ 15,000 Sq Ft	8	0	$28,400	$32,800
712	Stairwells - Paint	~ 3,000 Sq Ft	10	9	$5,500	$7,700
760	Furniture - Replace	Assorted pieces	20	5	$2,200	$3,300
	Systems / Equipment / Other					
950	Entry Access System - Replace	(1) Aegis 7000 panel	15	3	$2,200	$3,300
955	Security Equipment - Replace	(4) cameras, equipment	20	5	$1,100	$2,200
960	Elevator - Modernize	(1) 3-stop elevator	30	15	$70,000	$110,000
961	Elevator Cab - Remodel	(1) elevator cab	20	5	$6,600	$8,700
965	Fire Alarm Panel - Replace	(1) Silent Knight panel	20	5	$2,200	$3,300
967	Fire System Pumps/Valves - Replace	Assorted pumps, valves	20	5	$5,500	$7,500
999	Reserve Study - Update	Every three years	3	2	$1,800	$2,000
30	Total Funded Components					

#	Component	Current Cost Estimate	X	Effective Age	/	Useful Life	=	Fully Funded Balance
	Site / Grounds							
120	Asphalt - Resurface	$10,950	X	15	/	30	=	$5,475
121	Asphalt - Seal/Repair	$3,100	X	4	/	5	=	$2,480
142	Wood Arbors - Repair/Replace	$7,650	X	15	/	25	=	$4,590
160	Pole Lights - Replace	$5,750	X	15	/	30	=	$2,875
170	Landscape - Refurbish	$4,500	X	0	/	4	=	$0
	Building Exterior							
500	Steep Slope Roofing - Recover	$28,800	X	15	/	25	=	$17,280
505	Low Slope Roof - Recover	$90,250	X	10	/	15	=	$60,167
508	Skylights (a) - Replace	$18,900	X	0	/	25	=	$0
508	Skylights (b) - Replace	$2,600	X	20	/	25	=	$2,080
510	Gutters/Downspouts - Repair/Replace	$9,700	X	15	/	40	=	$3,638
525	Siding: Hardieplank - Paint/Caulk	$19,550	X	5	/	10	=	$9,775
526	Exterior Wood Trim - Paint/Caulk	$20,000	X	5	/	5	=	$20,000
530	Siding: Stucco - Clean/Inspect	$3,350	X	15	/	15	=	$3,350
535	Windows - Replace	$131,000	X	15	/	40	=	$49,125
540	Decks - Clean/Repair/Re-coat	$15,300	X	6	/	8	=	$11,475
550	Deck Rail - Repair/Replace	$29,500	X	15	/	40	=	$11,063
580	Deck Doors - Repaint	$3,850	X	15	/	15	=	$3,850
605	Garage Doors - Repair/Replace	$15,300	X	15	/	30	=	$7,650
610	Garage Door Operators - Replace	$3,300	X	15	/	15	=	$3,300
	Building Interior							
700	Carpet - Replace	$40,100	X	15	/	15	=	$40,100
710	Interior Walls/Trim - Paint	$30,600	X	8	/	8	=	$30,600
712	Stairwells - Paint	$6,600	X	1	/	10	=	$660
760	Furniture - Replace	$2,750	X	15	/	20	=	$2,063
	Systems / Equipment / Other							
950	Entry Access System - Replace	$2,750	X	12	/	15	=	$2,200
955	Security Equipment - Replace	$1,650	X	15	/	20	=	$1,238
960	Elevator - Modernize	$90,000	X	15	/	30	=	$45,000
961	Elevator Cab - Remodel	$7,650	X	15	/	20	=	$5,738
965	Fire Alarm Panel - Replace	$2,750	X	15	/	20	=	$2,063
967	Fire System Pumps/Valves - Replace	$6,500	X	15	/	20	=	$4,875
999	Reserve Study - Update	$1,900	X	1	/	3	=	$633
								$353,340

Component Significance

17195-2
WSV

#	Component	Useful Life (yrs)	Current Cost Estimate	Deterioration Cost/Yr	Deterioration Significance
	Site / Grounds				
120	Asphalt - Resurface	30	$10,950	$365	1.01 %
121	Asphalt - Seal/Repair	5	$3,100	$620	1.72 %
142	Wood Arbors - Repair/Replace	25	$7,650	$306	0.85 %
160	Pole Lights - Replace	30	$5,750	$192	0.53 %
170	Landscape - Refurbish	4	$4,500	$1,125	3.12 %
	Building Exterior				
500	Steep Slope Roofing - Recover	25	$28,800	$1,152	3.20 %
505	Low Slope Roof - Recover	15	$90,250	$6,017	16.71 %
508	Skylights (a) - Replace	25	$18,900	$756	2.10 %
508	Skylights (b) - Replace	25	$2,600	$104	0.29 %
510	Gutters/Downspouts - Repair/Replace	40	$9,700	$243	0.67 %
525	Siding: Hardieplank - Paint/Caulk	10	$19,550	$1,955	5.43 %
526	Exterior Wood Trim - Paint/Caulk	5	$20,000	$4,000	11.11 %
530	Siding: Stucco - Clean/Inspect	15	$3,350	$223	0.62 %
535	Windows - Replace	40	$131,000	$3,275	9.09 %
540	Decks - Clean/Repair/Re-coat	8	$15,300	$1,913	5.31 %
550	Deck Rail - Repair/Replace	40	$29,500	$738	2.05 %
580	Deck Doors - Repaint	15	$3,850	$257	0.71 %
605	Garage Doors - Repair/Replace	30	$15,300	$510	1.42 %
610	Garage Door Operators - Replace	15	$3,300	$220	0.61 %
	Building Interior				
700	Carpet - Replace	15	$40,100	$2,673	7.42 %
710	Interior Walls/Trim - Paint	8	$30,600	$3,825	10.62 %
712	Stairwells - Paint	10	$6,600	$660	1.83 %
760	Furniture - Replace	20	$2,750	$138	0.38 %
	Systems / Equipment / Other				
950	Entry Access System - Replace	15	$2,750	$183	0.51 %
955	Security Equipment - Replace	20	$1,650	$83	0.23 %
960	Elevator - Modernize	30	$90,000	$3,000	8.33 %
961	Elevator Cab - Remodel	20	$7,650	$383	1.06 %
965	Fire Alarm Panel - Replace	20	$2,750	$138	0.38 %
967	Fire System Pumps/Valves - Replace	20	$6,500	$325	0.90 %
999	Reserve Study - Update	3	$1,900	$633	1.76 %
30	Total Funded Components			$36,009	100.00 %

30-Year Reserve Plan Summary

17195-2
WSV

Fiscal Year Start: 2018	Interest: 1.00 %	Inflation: 3.00 %
Reserve Fund Strength Calculations: (All values of Fiscal Year Start Date)	Projected Reserve Balance Changes	

Year	Starting Reserve Balance	Fully Funded Balance	Percent Funded	Special Assmt Risk	% Increase In Annual Reserve Contribs.	Reserve Contribs.	Loan or Special Assmts	Interest Income	Reserve Expenses
2018	$272,060	$353,340	77.0 %	Low	17.59 %	$41,580	$0	$2,434	$101,200
2019	$214,874	$296,793	72.4 %	Low	3.50 %	$43,035	$0	$2,359	$3,193
2020	$257,075	$340,610	75.5 %	Low	3.50 %	$44,542	$0	$2,715	$18,247
2021	$286,083	$371,381	77.0 %	Low	3.50 %	$46,100	$0	$3,090	$3,005
2022	$332,269	$419,956	79.1 %	Low	3.50 %	$47,714	$0	$3,552	$5,065
2023	$378,471	$469,082	80.7 %	Low	3.50 %	$49,384	$0	$3,144	$180,383
2024	$250,616	$340,356	73.6 %	Low	3.50 %	$51,112	$0	$2,756	$3,702
2025	$300,783	$391,041	76.9 %	Low	3.50 %	$52,901	$0	$3,287	$0
2026	$356,971	$448,387	79.6 %	Low	3.50 %	$54,753	$0	$3,626	$46,870
2027	$368,479	$460,545	80.0 %	Low	3.50 %	$56,669	$0	$3,943	$8,612
2028	$420,480	$513,885	81.8 %	Low	3.50 %	$58,653	$0	$4,034	$96,426
2029	$386,741	$479,827	80.6 %	Low	3.50 %	$60,706	$0	$4,155	$6,921
2030	$444,681	$538,433	82.6 %	Low	3.50 %	$62,830	$0	$4,751	$6,416
2031	$505,846	$600,858	84.2 %	Low	3.50 %	$65,029	$0	$5,408	$0
2032	$576,284	$673,350	85.6 %	Low	3.50 %	$67,305	$0	$6,113	$2,874
2033	$646,828	$746,691	86.6 %	Low	3.50 %	$69,661	$0	$5,188	$330,523
2034	$391,154	$486,437	80.4 %	Low	3.50 %	$72,099	$0	$3,984	$61,300
2035	$405,937	$497,408	81.6 %	Low	3.50 %	$74,623	$0	$4,437	$3,140
2036	$481,856	$570,398	84.5 %	Low	3.50 %	$77,234	$0	$5,074	$30,729
2037	$533,436	$619,001	86.2 %	Low	3.50 %	$79,938	$0	$5,702	$11,573
2038	$607,503	$690,687	88.0 %	Low	3.50 %	$82,735	$0	$5,460	$210,683
2039	$485,016	$561,391	86.4 %	Low	3.50 %	$85,631	$0	$5,274	$5,767
2040	$570,154	$641,290	88.9 %	Low	3.50 %	$88,628	$0	$6,173	$0
2041	$664,955	$731,595	90.9 %	Low	3.50 %	$91,730	$0	$7,122	$3,750
2042	$760,057	$822,879	92.4 %	Low	3.50 %	$94,941	$0	$7,754	$71,351
2043	$791,401	$849,468	93.2 %	Low	3.50 %	$98,264	$0	$5,815	$523,340
2044	$372,140	$413,569	90.0 %	Low	3.50 %	$101,703	$0	$4,029	$43,779
2045	$434,094	$460,870	94.2 %	Low	3.50 %	$105,263	$0	$4,890	$0
2046	$544,246	$557,081	97.7 %	Low	3.50 %	$108,947	$0	$5,963	$10,296
2047	$648,860	$648,046	100.1 %	Low	3.50 %	$112,760	$0	$6,984	$20,031

	Fiscal Year	2018	2019	2020	2021	2022
	Starting Reserve Balance	$272,060	$214,874	$257,075	$286,083	$332,269
	Annual Reserve Contribution	$41,580	$43,035	$44,542	$46,100	$47,714
	Recommended Special Assessments	$0	$0	$0	$0	$0
	Interest Earnings	$2,434	$2,359	$2,715	$3,090	$3,552
	Total Income	$316,074	$260,268	$304,331	$335,274	$383,536
#	Component					
	Site / Grounds					
120	Asphalt - Resurface	$0	$0	$0	$0	$0
121	Asphalt - Seal/Repair	$0	$3,193	$0	$0	$0
142	Wood Arbors - Repair/Replace	$0	$0	$0	$0	$0
160	Pole Lights - Replace	$0	$0	$0	$0	$0
170	Landscape - Refurbish	$0	$0	$0	$0	$5,065
	Building Exterior					
500	Steep Slope Roofing - Recover	$0	$0	$0	$0	$0
505	Low Slope Roof - Recover	$0	$0	$0	$0	$0
508	Skylights (a) - Replace	$0	$0	$0	$0	$0
508	Skylights (b) - Replace	$0	$0	$0	$0	$0
510	Gutters/Downspouts - Repair/Replace	$0	$0	$0	$0	$0
525	Siding: Hardieplank - Paint/Caulk	$0	$0	$0	$0	$0
526	Exterior Wood Trim - Paint/Caulk	$20,000	$0	$0	$0	$0
530	Siding: Stucco - Clean/Inspect	$3,350	$0	$0	$0	$0
535	Windows - Replace	$0	$0	$0	$0	$0
540	Decks - Clean/Repair/Re-coat	$0	$0	$16,232	$0	$0
550	Deck Rail - Repair/Replace	$0	$0	$0	$0	$0
580	Deck Doors - Repaint	$3,850	$0	$0	$0	$0
605	Garage Doors - Repair/Replace	$0	$0	$0	$0	$0
610	Garage Door Operators - Replace	$3,300	$0	$0	$0	$0
	Building Interior					
700	Carpet - Replace	$40,100	$0	$0	$0	$0
710	Interior Walls/Trim - Paint	$30,600	$0	$0	$0	$0
712	Stairwells - Paint	$0	$0	$0	$0	$0
760	Furniture - Replace	$0	$0	$0	$0	$0
	Systems / Equipment / Other					
950	Entry Access System - Replace	$0	$0	$0	$3,005	$0
955	Security Equipment - Replace	$0	$0	$0	$0	$0
960	Elevator - Modernize	$0	$0	$0	$0	$0
961	Elevator Cab - Remodel	$0	$0	$0	$0	$0
965	Fire Alarm Panel - Replace	$0	$0	$0	$0	$0
967	Fire System Pumps/Valves - Replace	$0	$0	$0	$0	$0
999	Reserve Study - Update	$0	$0	$2,016	$0	$0
	Total Expenses	$101,200	$3,193	$18,247	$3,005	$5,065
	Ending Reserve Balance	$214,874	$257,075	$286,083	$332,269	$378,471

	Fiscal Year	2023	2024	2025	2026	2027
	Starting Reserve Balance	$378,471	$250,616	$300,783	$356,971	$368,479
	Annual Reserve Contribution	$49,384	$51,112	$52,901	$54,753	$56,669
	Recommended Special Assessments	$0	$0	$0	$0	$0
	Interest Earnings	$3,144	$2,756	$3,287	$3,626	$3,943
	Total Income	$430,999	$304,484	$356,971	$415,350	$429,092
#	Component					
	Site / Grounds					
120	Asphalt - Resurface	$0	$0	$0	$0	$0
121	Asphalt - Seal/Repair	$0	$3,702	$0	$0	$0
142	Wood Arbors - Repair/Replace	$0	$0	$0	$0	$0
160	Pole Lights - Replace	$0	$0	$0	$0	$0
170	Landscape - Refurbish	$0	$0	$0	$5,700	$0
	Building Exterior					
500	Steep Slope Roofing - Recover	$0	$0	$0	$0	$0
505	Low Slope Roof - Recover	$104,624	$0	$0	$0	$0
508	Skylights (a) - Replace	$0	$0	$0	$0	$0
508	Skylights (b) - Replace	$3,014	$0	$0	$0	$0
510	Gutters/Downspouts - Repair/Replace	$0	$0	$0	$0	$0
525	Siding: Hardieplank - Paint/Caulk	$22,664	$0	$0	$0	$0
526	Exterior Wood Trim - Paint/Caulk	$23,185	$0	$0	$0	$0
530	Siding: Stucco - Clean/Inspect	$0	$0	$0	$0	$0
535	Windows - Replace	$0	$0	$0	$0	$0
540	Decks - Clean/Repair/Re-coat	$0	$0	$0	$0	$0
550	Deck Rail - Repair/Replace	$0	$0	$0	$0	$0
580	Deck Doors - Repaint	$0	$0	$0	$0	$0
605	Garage Doors - Repair/Replace	$0	$0	$0	$0	$0
610	Garage Door Operators - Replace	$0	$0	$0	$0	$0
	Building Interior					
700	Carpet - Replace	$0	$0	$0	$0	$0
710	Interior Walls/Trim - Paint	$0	$0	$0	$38,763	$0
712	Stairwells - Paint	$0	$0	$0	$0	$8,612
760	Furniture - Replace	$3,188	$0	$0	$0	$0
	Systems / Equipment / Other					
950	Entry Access System - Replace	$0	$0	$0	$0	$0
955	Security Equipment - Replace	$1,913	$0	$0	$0	$0
960	Elevator - Modernize	$0	$0	$0	$0	$0
961	Elevator Cab - Remodel	$8,868	$0	$0	$0	$0
965	Fire Alarm Panel - Replace	$3,188	$0	$0	$0	$0
967	Fire System Pumps/Valves - Replace	$7,535	$0	$0	$0	$0
999	Reserve Study - Update	$2,203	$0	$0	$2,407	$0
	Total Expenses	$180,383	$3,702	$0	$46,870	$8,612
	Ending Reserve Balance	$250,616	$300,783	$356,971	$368,479	$420,480

	Fiscal Year	2028	2029	2030	2031	2032
	Starting Reserve Balance	$420,480	$386,741	$444,681	$505,846	$576,284
	Annual Reserve Contribution	$58,653	$60,706	$62,830	$65,029	$67,305
	Recommended Special Assessments	$0	$0	$0	$0	$0
	Interest Earnings	$4,034	$4,155	$4,751	$5,408	$6,113
	Total Income	$483,167	$451,602	$512,262	$576,284	$649,702
#	Component					
	Site / Grounds					
120	Asphalt - Resurface	$0	$0	$0	$0	$0
121	Asphalt - Seal/Repair	$0	$4,291	$0	$0	$0
142	Wood Arbors - Repair/Replace	$10,281	$0	$0	$0	$0
160	Pole Lights - Replace	$0	$0	$0	$0	$0
170	Landscape - Refurbish	$0	$0	$6,416	$0	$0
	Building Exterior					
500	Steep Slope Roofing - Recover	$38,705	$0	$0	$0	$0
505	Low Slope Roof - Recover	$0	$0	$0	$0	$0
508	Skylights (a) - Replace	$0	$0	$0	$0	$0
508	Skylights (b) - Replace	$0	$0	$0	$0	$0
510	Gutters/Downspouts - Repair/Replace	$0	$0	$0	$0	$0
525	Siding: Hardieplank - Paint/Caulk	$0	$0	$0	$0	$0
526	Exterior Wood Trim - Paint/Caulk	$26,878	$0	$0	$0	$0
530	Siding: Stucco - Clean/Inspect	$0	$0	$0	$0	$0
535	Windows - Replace	$0	$0	$0	$0	$0
540	Decks - Clean/Repair/Re-coat	$20,562	$0	$0	$0	$0
550	Deck Rail - Repair/Replace	$0	$0	$0	$0	$0
580	Deck Doors - Repaint	$0	$0	$0	$0	$0
605	Garage Doors - Repair/Replace	$0	$0	$0	$0	$0
610	Garage Door Operators - Replace	$0	$0	$0	$0	$0
	Building Interior					
700	Carpet - Replace	$0	$0	$0	$0	$0
710	Interior Walls/Trim - Paint	$0	$0	$0	$0	$0
712	Stairwells - Paint	$0	$0	$0	$0	$0
760	Furniture - Replace	$0	$0	$0	$0	$0
	Systems / Equipment / Other					
950	Entry Access System - Replace	$0	$0	$0	$0	$0
955	Security Equipment - Replace	$0	$0	$0	$0	$0
960	Elevator - Modernize	$0	$0	$0	$0	$0
961	Elevator Cab - Remodel	$0	$0	$0	$0	$0
965	Fire Alarm Panel - Replace	$0	$0	$0	$0	$0
967	Fire System Pumps/Valves - Replace	$0	$0	$0	$0	$0
999	Reserve Study - Update	$0	$2,630	$0	$0	$2,874
	Total Expenses	$96,426	$6,921	$6,416	$0	$2,874
	Ending Reserve Balance	$386,741	$444,681	$505,846	$576,284	$646,828

	Fiscal Year	2033	2034	2035	2036	2037
	Starting Reserve Balance	$646,828	$391,154	$405,937	$481,856	$533,436
	Annual Reserve Contribution	$69,661	$72,099	$74,623	$77,234	$79,938
	Recommended Special Assessments	$0	$0	$0	$0	$0
	Interest Earnings	$5,188	$3,984	$4,437	$5,074	$5,702
	Total Income	$721,677	$467,237	$484,997	$564,165	$619,076
#	Component					
	Site / Grounds					
120	Asphalt - Resurface	$17,060	$0	$0	$0	$0
121	Asphalt - Seal/Repair	$0	$4,975	$0	$0	$0
142	Wood Arbors - Repair/Replace	$0	$0	$0	$0	$0
160	Pole Lights - Replace	$8,958	$0	$0	$0	$0
170	Landscape - Refurbish	$0	$7,221	$0	$0	$0
	Building Exterior					
500	Steep Slope Roofing - Recover	$0	$0	$0	$0	$0
505	Low Slope Roof - Recover	$0	$0	$0	$0	$0
508	Skylights (a) - Replace	$0	$0	$0	$0	$0
508	Skylights (b) - Replace	$0	$0	$0	$0	$0
510	Gutters/Downspouts - Repair/Replace	$0	$0	$0	$0	$0
525	Siding: Hardieplank - Paint/Caulk	$30,458	$0	$0	$0	$0
526	Exterior Wood Trim - Paint/Caulk	$31,159	$0	$0	$0	$0
530	Siding: Stucco - Clean/Inspect	$5,219	$0	$0	$0	$0
535	Windows - Replace	$0	$0	$0	$0	$0
540	Decks - Clean/Repair/Re-coat	$0	$0	$0	$26,047	$0
550	Deck Rail - Repair/Replace	$0	$0	$0	$0	$0
580	Deck Doors - Repaint	$5,998	$0	$0	$0	$0
605	Garage Doors - Repair/Replace	$23,837	$0	$0	$0	$0
610	Garage Door Operators - Replace	$5,141	$0	$0	$0	$0
	Building Interior					
700	Carpet - Replace	$62,474	$0	$0	$0	$0
710	Interior Walls/Trim - Paint	$0	$49,104	$0	$0	$0
712	Stairwells - Paint	$0	$0	$0	$0	$11,573
760	Furniture - Replace	$0	$0	$0	$0	$0
	Systems / Equipment / Other					
950	Entry Access System - Replace	$0	$0	$0	$4,682	$0
955	Security Equipment - Replace	$0	$0	$0	$0	$0
960	Elevator - Modernize	$140,217	$0	$0	$0	$0
961	Elevator Cab - Remodel	$0	$0	$0	$0	$0
965	Fire Alarm Panel - Replace	$0	$0	$0	$0	$0
967	Fire System Pumps/Valves - Replace	$0	$0	$0	$0	$0
999	Reserve Study - Update	$0	$0	$3,140	$0	$0
	Total Expenses	$330,523	$61,300	$3,140	$30,729	$11,573
	Ending Reserve Balance	$391,154	$405,937	$481,856	$533,436	$607,503

	Fiscal Year	2038	2039	2040	2041	2042
	Starting Reserve Balance	$607,503	$485,016	$570,154	$664,955	$760,057
	Annual Reserve Contribution	$82,735	$85,631	$88,628	$91,730	$94,941
	Recommended Special Assessments	$0	$0	$0	$0	$0
	Interest Earnings	$5,460	$5,274	$6,173	$7,122	$7,754
	Total Income	$695,699	$575,921	$664,955	$763,807	$862,752
#	Component					
	Site / Grounds					
120	Asphalt - Resurface	$0	$0	$0	$0	$0
121	Asphalt - Seal/Repair	$0	$5,767	$0	$0	$0
142	Wood Arbors - Repair/Replace	$0	$0	$0	$0	$0
160	Pole Lights - Replace	$0	$0	$0	$0	$0
170	Landscape - Refurbish	$8,128	$0	$0	$0	$9,148
	Building Exterior					
500	Steep Slope Roofing - Recover	$0	$0	$0	$0	$0
505	Low Slope Roof - Recover	$163,002	$0	$0	$0	$0
508	Skylights (a) - Replace	$0	$0	$0	$0	$0
508	Skylights (b) - Replace	$0	$0	$0	$0	$0
510	Gutters/Downspouts - Repair/Replace	$0	$0	$0	$0	$0
525	Siding: Hardieplank - Paint/Caulk	$0	$0	$0	$0	$0
526	Exterior Wood Trim - Paint/Caulk	$36,122	$0	$0	$0	$0
530	Siding: Stucco - Clean/Inspect	$0	$0	$0	$0	$0
535	Windows - Replace	$0	$0	$0	$0	$0
540	Decks - Clean/Repair/Re-coat	$0	$0	$0	$0	$0
550	Deck Rail - Repair/Replace	$0	$0	$0	$0	$0
580	Deck Doors - Repaint	$0	$0	$0	$0	$0
605	Garage Doors - Repair/Replace	$0	$0	$0	$0	$0
610	Garage Door Operators - Replace	$0	$0	$0	$0	$0
	Building Interior					
700	Carpet - Replace	$0	$0	$0	$0	$0
710	Interior Walls/Trim - Paint	$0	$0	$0	$0	$62,203
712	Stairwells - Paint	$0	$0	$0	$0	$0
760	Furniture - Replace	$0	$0	$0	$0	$0
	Systems / Equipment / Other					
950	Entry Access System - Replace	$0	$0	$0	$0	$0
955	Security Equipment - Replace	$0	$0	$0	$0	$0
960	Elevator - Modernize	$0	$0	$0	$0	$0
961	Elevator Cab - Remodel	$0	$0	$0	$0	$0
965	Fire Alarm Panel - Replace	$0	$0	$0	$0	$0
967	Fire System Pumps/Valves - Replace	$0	$0	$0	$0	$0
999	Reserve Study - Update	$3,432	$0	$0	$3,750	$0
	Total Expenses	$210,683	$5,767	$0	$3,750	$71,351
	Ending Reserve Balance	$485,016	$570,154	$664,955	$760,057	$791,401

	Fiscal Year	2043	2044	2045	2046	2047
	Starting Reserve Balance	$791,401	$372,140	$434,094	$544,246	$648,860
	Annual Reserve Contribution	$98,264	$101,703	$105,263	$108,947	$112,760
	Recommended Special Assessments	$0	$0	$0	$0	$0
	Interest Earnings	$5,815	$4,029	$4,890	$5,963	$6,984
	Total Income	$895,480	$477,873	$544,246	$659,156	$768,604
#	Component					
	Site / Grounds					
120	Asphalt - Resurface	$0	$0	$0	$0	$0
121	Asphalt - Seal/Repair	$0	$6,685	$0	$0	$0
142	Wood Arbors - Repair/Replace	$0	$0	$0	$0	$0
160	Pole Lights - Replace	$0	$0	$0	$0	$0
170	Landscape - Refurbish	$0	$0	$0	$10,296	$0
	Building Exterior					
500	Steep Slope Roofing - Recover	$0	$0	$0	$0	$0
505	Low Slope Roof - Recover	$0	$0	$0	$0	$0
508	Skylights (a) - Replace	$39,572	$0	$0	$0	$0
508	Skylights (b) - Replace	$0	$0	$0	$0	$0
510	Gutters/Downspouts - Repair/Replace	$20,310	$0	$0	$0	$0
525	Siding: Hardieplank - Paint/Caulk	$40,933	$0	$0	$0	$0
526	Exterior Wood Trim - Paint/Caulk	$41,876	$0	$0	$0	$0
530	Siding: Stucco - Clean/Inspect	$0	$0	$0	$0	$0
535	Windows - Replace	$274,285	$0	$0	$0	$0
540	Decks - Clean/Repair/Re-coat	$0	$32,996	$0	$0	$0
550	Deck Rail - Repair/Replace	$61,766	$0	$0	$0	$0
580	Deck Doors - Repaint	$0	$0	$0	$0	$0
605	Garage Doors - Repair/Replace	$0	$0	$0	$0	$0
610	Garage Door Operators - Replace	$0	$0	$0	$0	$0
	Building Interior					
700	Carpet - Replace	$0	$0	$0	$0	$0
710	Interior Walls/Trim - Paint	$0	$0	$0	$0	$0
712	Stairwells - Paint	$0	$0	$0	$0	$15,553
760	Furniture - Replace	$5,758	$0	$0	$0	$0
	Systems / Equipment / Other					
950	Entry Access System - Replace	$0	$0	$0	$0	$0
955	Security Equipment - Replace	$3,455	$0	$0	$0	$0
960	Elevator - Modernize	$0	$0	$0	$0	$0
961	Elevator Cab - Remodel	$16,017	$0	$0	$0	$0
965	Fire Alarm Panel - Replace	$5,758	$0	$0	$0	$0
967	Fire System Pumps/Valves - Replace	$13,610	$0	$0	$0	$0
999	Reserve Study - Update	$0	$4,098	$0	$0	$4,477
	Total Expenses	$523,340	$43,779	$0	$10,296	$20,031
	Ending Reserve Balance	$372,140	$434,094	$544,246	$648,860	$748,573

Accuracy, Limitations, and Disclosures

"The reserve study should be reviewed carefully. It may not include all common and limited common element components that will require major maintenance, repair or replacement in future years, and may not include regular contributions to a reserve account for the cost of such maintenance, repair, or replacement. The failure to include a component in a reserve study, or to provide contributions to a reserve account for a component, may, under some circumstances, require you to pay on demand as a special assessment your share of common expenses for the cost of major maintenance, repair or replacement of a reserve component."

Because we have no control over future events, we do not expect that all the events we anticipate will occur as planned. We expect that inflationary trends will continue, and we expect Reserve funds to continue to earn interest, so we believe that reasonable estimates for these figures are much more accurate than ignoring these economic realities. We can control measurements, which we attempt to establish within 5% accuracy through a combination of on-site measurements, drawings, and satellite imagery. The starting Reserve Balance and interest rate earned on deposited Reserve funds that you provided to us were considered reliable and were not confirmed independently. We have considered the association's representation of current and historical Reserve projects reliable, and we have considered the representations made by its vendors and suppliers to also be accurate and reliable. Component Useful Life, Remaining Useful Life, and Current Cost estimates assume a stable economic environment and lack of natural disasters.

Because the physical condition of your components, the association's Reserve balance, the economic environment, and legislative environment change each year, this Reserve Study is by nature a "one-year" document. Because a long-term perspective improves the accuracy of near-term planning, this Report projects expenses for the next 30 years. It is our recommendation and that of the Financial Accounting Standards Board (FASB) that your Reserve Study be updated each year as part of the annual budget process.

Association Reserves WA, LLC and its employees have no ownership, management, or other business relationships with the client other than this Reserve Study engagement. James D. Talaga R.S., company president, is a credentialed Reserve Specialist (#66). All work done by Association Reserves WA, LLC is performed under his Responsible Charge. There are no material issues to our knowledge that have not been disclosed to the client that would cause a distortion of the association's situation

Terms and Definitions

BTU	British Thermal Unit (a standard unit of energy)
DIA	Diameter
GSF	Gross Square Feet (area). Equivalent to Square Feet
GSY	Gross Square Yards (area). Equivalent to Square Yards
HP	Horsepower
LF	Linear Feet (length)
Effective Age	The difference between Useful Life and Remaining Useful Life. Note that this is not necessarily equivalent to the chronological age of the component.
Fully Funded Balance (FFB)	The value of the deterioration of the Reserve Components. This is the fraction of life "used up" of each component multiplied by its estimated Current Replacement. While calculated for each component, it is summed together for an association total.
Inflation	Cost factors are adjusted for inflation at the rate defined in the Executive Summary and compounded annually. These increasing costs can be seen as you follow the recurring cycles of a component on the "30-yr Income/Expense Detail" table.
Interest	Interest earnings on Reserve Funds are calculated using the average balance for the year (taking into account income and expenses through the year) and compounded monthly using the rate defined in the Executive Summary. Annual interest earning assumption appears in the Executive Summary.
Percent Funded	The ratio, at a particular point in time (the first day of the Fiscal Year), of the actual (or projected) Reserve Balance to the Fully Funded Balance, expressed as a percentage.
Remaining Useful Life (RUL)	The estimated time, in years, that a common area component can be expected to continue to serve its intended function.
Useful Life (UL)	The estimated time, in years, that a common area component can be expected to serve its intended function.

Component Details

The primary purpose of the Component Details appendix is to provide the reader with the basis of our funding assumptions resulting from our research and analysis. The information presented here represents a wide range of components that were observed and measured against National Reserve Study Standards to determine if they meet the criteria for reserve funding.

1) Common area repair & replacement responsibility
2) Component must have a limited useful life
3) Life limit must be predictable
4) Above a minimum threshold cost (board's discretion – typically ½ to 1% of Annual operating expenses).

Not all your components may have been found appropriate for reserve funding. In our judgment, the components meeting the above four criteria are shown with the Useful Life (how often the project is expected to occur), Remaining Useful Life (when the next instance of the expense will be) and representative market cost range termed "Best Cost" and "Worst Cost". There are many factors that can result in a wide variety of potential costs, and we have attempted to present the cost range in which your actual expense will occur.

Where no Useful Life, Remaining Useful Life, or pricing exists, the component was deemed inappropriate for Reserve Funding.

Site / Grounds

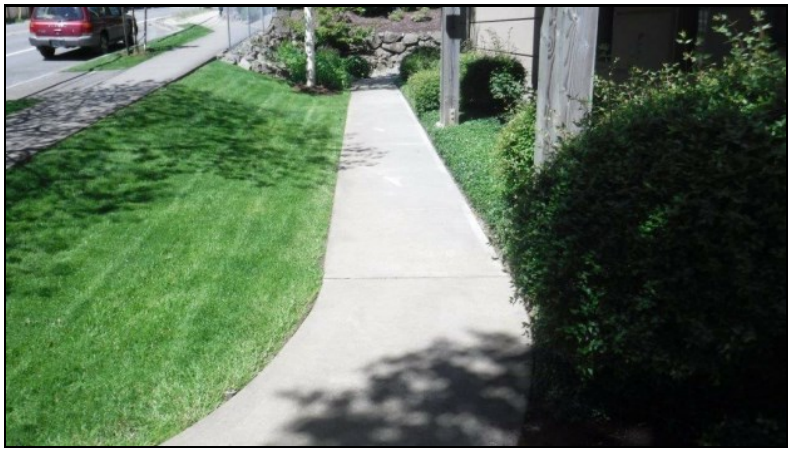
Comp #: 100 Concrete - Repair/Replace **Quantity: Walkways, curbing**
Location: Exterior walkways and curbing
Funded?: No. Useful life not predictable
History: No history reported
Evaluation: We noted concrete walkways and curbing to be in good, clean condition with no visible settling, damage or deterioration. No trip hazards were observed.

In our experience, patterns of deterioration begin to occur as the community continues to age, but it is difficult to predict timing, cost and scope at this time. Association has not yet reached the condition where we suggest a funding allowance to supplement the operating / maintenance budget. Incorporate funding as conditions, actual expense patterns dictate within future reserve study updates. Treat local needs currently as general maintenance and repair expense.

As routine maintenance, inspect regularly, pressure wash for appearance and repair promptly as needed to prevent water penetrating into the base and causing further damage. Monitor tree roots nearby; consult with arborist for best practice.

Useful Life:

Remaining Life:



Best Case: Worst Case:

Cost Source:

Comp #: 120 Asphalt - Resurface **Quantity: ~ 5,000 Sq Ft**

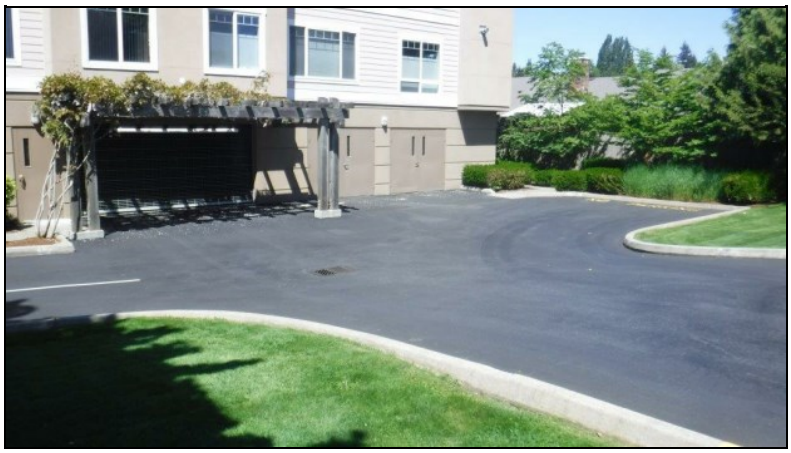
Location: Roadway, parking areas of association
Funded?: Yes.
History: No history reported
Evaluation: Overall air to good condition noted; no significant damage or deterioration observed. We recommend having surface sealed and repaired regularly as directed in component #121 for maximum design life.

Even with ordinary care and maintenance, plan for eventual large scale resurface (overlay) at roughly the time frame below. As timing draws nearer, consult with asphalt vendor/consultant for recommendations and complete scope.

As routine maintenance, keep roadway clean, free of debris and well drained; fill/seal cracks (hot rubberized crack fill) to prevent water from penetrating into the sub-base and accelerating damage.

Useful Life:
30 years

Remaining Life:
15 years



Best Case: $ 10,400 Worst Case: $ 11,500

Lower Allowance Higher Allowance

Cost Source: ARI Cost Database: Similar Project Cost History

Comp #: 121 Asphalt - Seal/Repair **Quantity: ~ 5,000 Sq Ft**

Location: Roadway, parking areas of association
Funded?: Yes.
History: Reported complete 2014 - $2,800; prior 2009 - $2,500
Evaluation: Generally, the surface condition of the asphalt coating appeared to be in good/fair condition during our visual review. No areas of significant deterioration or unusual wear were noted.

Regular cycles of seal coating, along with needed repairs is a best practice for the long term care of lower traffic asphalt areas to extend the useful life.

The State of Washington Department of Transportation (WSDOT) recommends regular cycles of seal coating for the long-term care of asphalt paving with low traffic and low speed. The primary reason to seal coat asphalt pavement is to protect the pavement from the deteriorating effects of sun and water. When asphalt pavement is exposed, the asphalt oxidizes or hardens and this causes the pavement to become increasingly brittle. As a result, the pavement will become more likely to crack, as it is unable to bend and flex when subjected to traffic (weight) and temperature changes (thermal expansion and contraction). A seal coat combats this situation by providing a waterproof membrane, which not only slows down the oxidation process, but also helps the pavement shed water. Seal coating also provides uniform appearance and conceals the inevitable patching and repairs which accumulate over time, ultimately extending the useful life of asphalt before more costly resurfacing is needed (see component #120).

Repairing asphalt before seal coating is imperative. Surface preparation and dry weather during and following application, is key to lasting performance.

For further resources:
Best Practices Handbook on Asphalt Pavement Maintenance
http://www.cee.mtu.edu/~balkire/CE5403/AsphaltPaveMaint.pdf

For a general overview of Asphalt Seal Coat Treatments review this publication:
http://www.wsdot.wa.gov/NR/rdonlyres/4A21ECE8-114B-434D-B967-0927541CE042/0/AsphaltSealCoats.pdf

Other references:
http://www.pavementinteractive.org/article/bituminous-surface-treatments/

Useful Life:
5 years

Remaining Life:
1 years

Best Case: $ 3,000 Worst Case: $ 3,200

Lower Allowance Higher Allowance

Cost Source: Inflated Estimate Provided by Client

Comp #: 142 Wood Arbors - Repair/Replace **Quantity: (4) wood arbors**

Location: Scattered locations adjacent to garage entrances, walkway and building
Funded?: Yes.
History: No history reported
Evaluation: Generally stable condition noted, no significant evidence of unusual damage or deterioration observed. Arbors are not stained and are being left to "grey" naturally.

Useful life of wood arbors is typically around the 15-25 year mark of life. Plan on regular cycles of significant repair/replacement at roughly the time frame indicated below.

Inspect regularly, perform any necessary repairs in between larger replacements using general operating funds.

Useful Life:
25 years

Remaining Life:
10 years

Best Case: $ 6,600 Worst Case: $ 8,700

Lower Allowance Higher Allowance

Cost Source: ARI Cost Database: Similar Project Cost History

Comp #: 155 Chain Link Fence - Replace **Quantity: ~ 30 Linear Feet**
Location: Northwest corner of property
Funded?: No. Cost projected to be too small for reserve funding
History: No history reported
Evaluation: No significant damage or instability observed.

Chain link fencing is a sturdy component that can last for extended period of time if not damaged or abused. Due to the small amount of chain link fencing, we recommend any necessary repair or replacement be funded from the operating/maintenance budget, no reserve funding suggested.

Inspect regularly; clean and repair, stretch locally as needed as part of general maintenance, operating funding.

Useful Life:

Remaining Life:

Best Case: Worst Case:

Cost Source:

Comp #: 156 Rockeries - Repair/Replace **Quantity: Extensive Lin Ft**

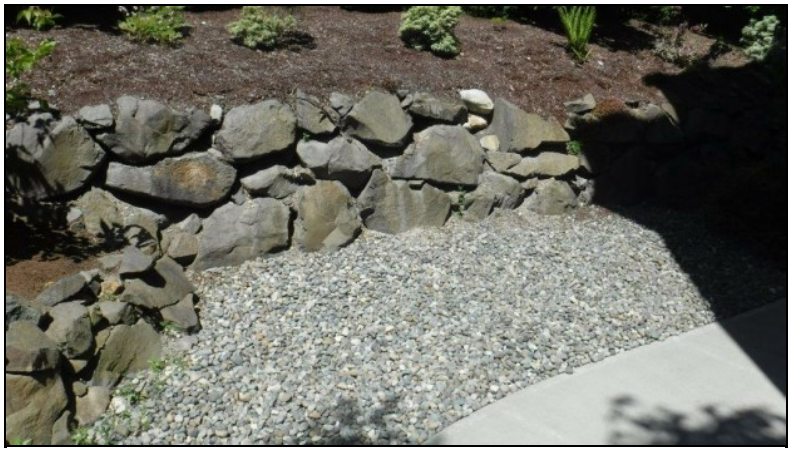
Location: Scattered common area locations
Funded?: No. Useful life not predictable
History: No history reported
Evaluation: No widespread deterioration was observed, and no signs of recent large scale movement or crumbling noted. Analysis of a rockery wall beyond visual observation is not within the scope of a reserve study. No information regarding its construction was available to us, which could include how it was installed, including if drainage (critical) was provided, and if the drainage is still fully functioning.

At this time, no large-scale repairs or replacements are predictable. Funding can be added to future reserve studies if conditions dictate.

Inspect regularly including drainage, and repair as needed. If movement or other problems are suspected, consult with an engineer (geo-technical) for evaluation and repair recommendations.

Useful Life:

Remaining Life:



Best Case: Worst Case:

Cost Source:

Comp #: 160 Pole Lights - Replace **Quantity: (3) metal assemblies**
Location: Scattered common area locations
Funded?: Yes.
History: No history reported
Evaluation: Generally fair condition noted at time of site visit with no significant damage/deterioration. Observed during daylight hours; assumed to be in functional operating condition.

Best to plan for large scale replacement at roughly the time frame indicated below.

As routine maintenance, inspect, repair/change bulbs as needed.

Useful Life:
30 years

Remaining Life:
15 years

Best Case: $ 4,900 Worst Case: $ 6,600

Lower Allowance Higher Allowance

Cost Source: ARI Cost Database: Similar Project Cost History

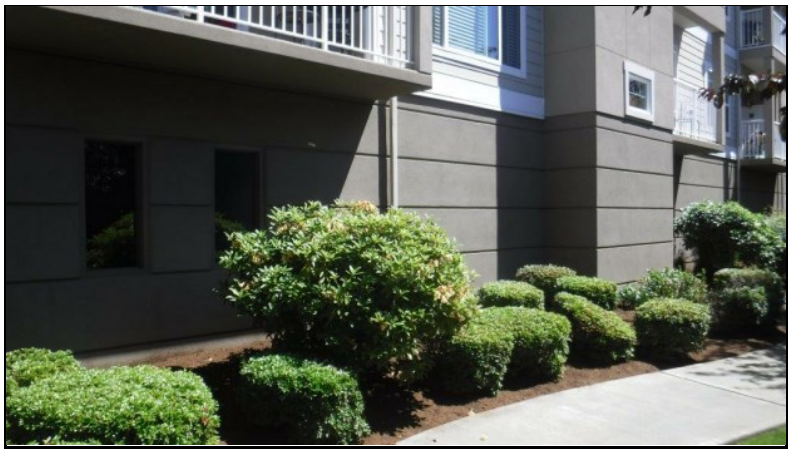
Comp #: 170 Landscape - Refurbish **Quantity: Common area landscaping**

Location: Common area open spaces throughout community
Funded?: Yes.
History: Regular maintenance reported
Evaluation: Overall good condition of common area landscaping noted. Problems reported by Association with existing trees (Birch, Japanese Maple, Redbud, Flowering Crab Apple) Request made for cyclical funding beginning with 2018 report.

Ongoing maintenance items typically handled in operating budget; this reserve component category may be utilized for setting aside funds for larger expenses that are not in maintenance contract and do not occur on an annual basis, such as: large scale plantings, resodding lawn areas, etc... Often these types of projects can be handled within the annual operating budget as a separate line item from the landscape maintenance contract. Monitor and adjust funding in reserve study updates if needed / desired.

Useful Life:
4 years

Remaining Life:
4 years



Best Case: $ 3,000 Worst Case: $ 6,000

Lower Allowance Higher Allowance

Cost Source: ARI Cost Database: Similar Project Cost History

Comp #: 175 Irrigation System - Repair/Replace **Quantity: Common irrigation**
Location: Throughout common area landscaping
Funded?: No. Annual costs, best handled in operational budget
History: No history reported
Evaluation: No problems observed or reported during our inspection.

If properly installed and bedded without defect, the elements within this component are generally low cost and have a failure rate that is difficult to predict and best suited to be handled thru the operating budget. No basis for reserve funding at this time. If at some point Association decides to upgrade current system, funding can be incorporated into future reserve study update.

As routine maintenance, inspect regularly, test system and repair as needed. Follow proper winterization and spring start up procedures.

Useful Life:

Remaining Life:

Best Case: Worst Case:

Cost Source:

Comp #: 176 Irrigation Timeclock - Replace **Quantity: (1) Hunter**
Location: Mechanical room
Funded?: No. Cost projected to be too small for reserve funding
History: Recently replaced
Evaluation: No problems observed at time of site visit or reported of irrigation clock.

Although eventual replacement will be needed due to parts obsolescence, technological upgrades, etc. best suited to be handled as needed within the operating budget and not anticipated as large scale reserve project.

Inspect regularly and repair/replace as needed.

Useful Life:

Remaining Life:

Best Case: Worst Case:

Cost Source:

Comp #: 182 Drainage/Stormwater Sys - Maintain **Quantity: Common drainage**

Location: Common areas, hidden

Funded?: No. Useful life not predictable

History: No history reported

Evaluation: Analysis of the drainage system is beyond the scope of a reserve study as the vast majority of the drainage systems are located below ground. Observations were very limited to catch basin areas. No problems were reported to us.

No predictable large-scale repairs/replacement at this time. Local repairs should be performed as part of general maintenance. If problems become known from professional evaluation, funding can be included in future reserve studies.

As routine maintenance, inspect regularly and keep drains/grates free of debris to ensure water drains as intended. Maintenance schedules on stormwater systems depend on the condition of the system itself and the amount of sediment and debris moving around on site. Stormwater inspections usually consist of inspecting the catch basins and manholes, ensuring vaults and control structures are properly functioning. Evaluation of drainage can include the visual review of interior drain lines by use of miniature remote camera. Clean out drain lines and basins as often as needed in order to prevent decreased drainage capacity. Repair as needed. The responsibility of keeping the stormwater system in good working order falls on the Association.

Useful Life:

Remaining Life:

Best Case: Worst Case:

Cost Source:

Comp #: 598 Association Annual Inspection **Quantity: Every year**

Location: Common elements of association

Funded?: No. Annual costs, best handled in operational budget

History: No history reported

Evaluation: Many Associations are required to have annual inspections by a qualified engineer or architect to assess the physical condition of the improvements. The inspection typically covers, at a minimum, the building envelope, including: roofs, siding, waterproofing / sealants, flashings, windows and doors. Forensic evaluation is beyond the scope of a typical reserve study.

Although your Associations governing documents do not appear to have such a requirement, we recommend the Board provide for periodic building envelope inspections, funded from the operating budget, to help ensure critical areas are functioning properly.

Useful Life:

Remaining Life:

Best Case: Worst Case:

Cost Source:

Comp #: 500 Steep Slope Roofing - Recover **Quantity: ~ 8,100 Sq Ft**

Location: Steep sloped rooftops of building
Funded?: Yes.
History: No history reported
Evaluation: Steep slope roofing consists of laminated shingles. Ventilation (the lack of which can greatly reduce useful life) consisted of perforated soffit venting under eaves and gable end louvers. Metal drip edge flashings were observed at the rake. Minimal moss or debris was observed on roof surfaces.

Board has previously informed us that they intend to recover instead of replace during the next roofing project. This option consists of a recover/overlay of the existing roof with a similar material where as a replacement consists of a full tear-off and replacement of the existing roof. Recovering the existing roof is not allowed more than once, due to the added weight it brings to the structure. Some believe this is a major cost savings as a typical estimate can run about $3.00 to $3.50 per square foot to recover as compared to approximately $4.00 to $4.50 per square foot for a complete tear-off and replacement, but keep in mind that new roofs life may be decreased by approximately 25% with a layover versus starting out fresh and there will be twice as much tear-off on the next roof project which will add to the future cost.

We are showing the cost to recover existing roof at roughly the time frame indicated below. Costs shown include recovering with a similar shingle to what is currently in place. However, we highly recommend a close examination of the roof and cost/benefit ratio prior to this project to see if replacement may be better option.

As routine maintenance, many manufacturers recommend inspections at least twice annually (once in the fall, before the rainy season, and again in the spring) and after large storm events. Promptly replace any damaged/missing sections or any other repair needed to ensure waterproof integrity of roof. Keep roof surface, gutters and downspouts clear and free of moss or debris. Moss growth can decrease the life of the roofing shingles and should be removed sooner than later. Liquid applied fungicide (moss killer) is recommended instead of power washing the living moss off the shingles. Do not use high pressure wash.

There is a wealth of information available through Roofing Organizations such as the Western States Roofing Contractors Association (WSRCA) http://www.wsrca.com/, Roof Consultant Institute http://www.rci-online.org/ and the National Roofing Contractors Association (NRCA) http://www.nrca.net/, NCRA has an entire section dedicated to "consumer" with valuable information for getting your monies worth out of your new roof http://www.nrca.net/consumer/fyi.aspx?homeowners, their page on maintenance is here: http://www.nrca.net/consumer/maintenance.aspx

At time of next roof project we recommend the Association hire a professional roof consultant such as Architect, Engineer, or building envelope consultant; to evaluate, design, specify, help bid the project, select best bidder, and observe construction to ensure proper installation.

Useful Life:
25 years

Remaining Life:
10 years

Best Case: $ 26,600 Worst Case: $ 31,000

Lower Allowance Higher Allowance

Cost Source: Inflated Estimate by Roofer from Previous Reserve Study

Comp #: 505 Low Slope Roof - Recover **Quantity: ~ 20,600 Sq Ft**

Location: Low sloped rooftop of building
Funded?: Yes.
History: Some patch and repair reported
Evaluation: Surface of the roof is mineral cap sheet. Slope of the roof appeared adequate. No significant organic debris was observed on roof surfaces.

Board has previously informed us that they will be recovering instead of re-roofing during the next roofing project. This option consists of a recover/overlay of the existing roof with a similar material where as a replacement consists of a full tear-off and replacement of the existing roof. Recovering the existing roof is not allowed more than once, due to the added weight it brings to the structure. Some believe this is a major cost savings as a typical estimate can run about $3.00 to $5.00 per square foot to recover as compared to approximately $8.00 to $12.00 per square for a complete tear-off and replacement, but keep in mind that there will be twice as much tear-off on the next roof project, which will add to the future cost. Although there are no known water intrusion issues at this time, the possibility of water damage still exists and recovering prohibits the chance to inspect the underlying structure for possible problems. If any issues exist and recovering takes place, the damage could be compounded 15 or 20 years down the road.

Typical useful life of low slope roof is 15-20 years depending on the quality of the roof system installed and the maintenance received throughout its life. The cost shown here is for recover as reported by client, however, we highly recommend a close examination of the roof and cost/benefit ratio prior to this project to see if replacement may be better option.

As routine maintenance, many manufacturers recommend professional inspections at least twice annually and after storms. Promptly repair any damaged sections or any other repairs needed to ensure waterproof integrity of roof. Keep gutters and downspouts clear and free of debris to allow proper drainage and prevent the ponding of water on the roof surface.

There is a wealth of information available through Roofing Organizations such as the Western States Roofing Contractors Association (WSRCA) http://www.wsrca.com/, Roof Consultant Institute http://www.rci-online.org/ and the National Roofing Contractors Association (NRCA) http://www.nrca.net/. The NRCA has some of the best information available including this article on selecting a roofing contractor to install a low slope roof: http://www.nrca.net/consumer/low.aspx. The "NCRA Roofing Manual: Membrane Roof Systems" is an industry standard that is full of easy to understand pictures and diagrams. While homeowners do not usually purchase the manual ($200), it, or an older version, should be available at public libraries. It has great information for anyone looking to learn about roofing. Older versions, are still fairly current, and were entitled "NRCA Roofing and Waterproofing Manual".

At time of re-roof we recommend that you hire a professional roof consultant such as Architect, Engineer, or building envelope consultant; to evaluate, design, specify, help bid the project, select best bidder, and observe construction to ensure proper installation.

Useful Life:
15 years

Remaining Life:
5 years

Best Case: $ 67,500 Worst Case: $ 113,000

Lower Allowance Higher Allowance

Cost Source: Inflated Estimate by Roofer from Previous Reserve Study

Comp #: 508 Skylights (a) - Replace **Quantity: ~ (29) skylights**

Location: Rooftop of building

Funded?: Yes.

History: (29) Skylights replace via Milgard Warranty

Evaluation: Majority appeared in good condition. We were informed that Milgard has replaced (29) of the (33) skylights over the years. The current Milgard warranty reportedly covers the “original” owner with lifetime replacement. Board has informed us that Milgard will not be replacing remaining (4) skylights because they are not original owners. See component #508 "(b)" below for the remaining skylights.

As routine maintenance, inspect regularly, repair/replace individually as needed to maintain waterproof integrity of building envelope.

Useful Life:
25 years

Remaining Life:
25 years

Best Case: $ 16,000 Worst Case: $ 21,800

Lower Allowance Higher Allowance

Cost Source: Estimate Provided by Client -

Comp #: 508 Skylights (b) - Replace **Quantity: ~ (4) skylights**

Location: Rooftop of building
Funded?: Yes.
History: Not replaced under warranty
Evaluation: Although the majority (29) skylights were replaced under warranty, these four were not because not "original owners." We have aligned replacement with future low-slope roof replacement. Although small expense falls below reserve threshold, funding added per Board request.

As routine maintenance, inspect regularly, repair/replace individually as needed to maintain waterproof integrity of building envelope.

Useful Life:
25 years

Remaining Life:
5 years

Best Case: $ 2,200 Worst Case: $ 3,000

Lower Allowance Higher Allowance

Cost Source: Estimate Provided by Client

Comp #: 510 Gutters/Downspouts - Repair/Replace **Quantity: ~ 1,470 Lin Ft**
Location: Perimeter of building
Funded?: Yes.
History: No history reported
Evaluation: Generally the metal gutters and downspouts appeared in fair, functional condition; no problems reported.

We suggest planning for total replacement of gutter and downspouts every other low slope roof replacement (component #505) for cost efficiency. National Roofing Contractor Association (NRCA) roofing standard includes installing eave flashings at the gutters.

As routine maintenance, inspect regularly, keep gutters and downspouts free of debris.

Useful Life:
40 years

Remaining Life:
25 years

Best Case: $ 8,100 Worst Case: $ 11,300

Lower Allowance Higher Allowance

Cost Source: ARI Cost Database: Similar Project Cost History

Comp #: 522 Siding: Hardieplank - Replace **Quantity: ~ 8,680 GSF**
Location: Partial exterior building surfaces: Hardieplank siding
Funded?: No. Funding to be added when RUL is within 30-year scope of report
History: Installed 2003
Evaluation: Horizontal clapboard style siding is reportedly Hardieplank; surface is painted, see component #525 for exterior painting.

Hardieplank siding is a fiber-cement configuration. James Hardie is currently the leading manufacturer of fiber-cement siding and typically carries either a 30-year non-prorated or 50-year prorated limited warranty on their products. Although fiber-cement siding is a long lasting material, the underlying waterproofing will eventually degrade over time and will require replacement - local James Hardie representative suggests planning for 50-year total service life of siding.

A 50-year service life puts estimated replacement beyond the 30-year scope of this report. Association should plan to add in funding in future reserve study update for replacement of fiber-cement siding when Remaining Useful Life (RUL) is estimated to be within the 30-year scope of the report.

Inspect regularly and repair as needed using operation and maintenance funds.

Useful Life:

Remaining Life:

Best Case: Worst Case:

Cost Source:

Comp #: 525 Siding: Hardieplank - Paint/Caulk **Quantity: ~ 8,680 GSF**
Location: Partial exterior building surfaces: Hardieplank siding
Funded?: Yes.
History: Painting was completed in 2013 by Greenlake Painting
Evaluation: The painted surfaces of the Hardieplank siding appeared in good condition with no damage or deterioration observed

Useful life below is included for financial planning purposes at 10-year cycles. Evaluate and adjust remaining useful life as it approaches zero years.

As routine maintenance, inspect regularly (including sealants) repair locally and touch-up paint as needed. Typical Northwest paint cycles vary greatly depending upon many factors including; type of material painted, surface preparations, quality of primer/paint/stain, application methods, weather conditions during application, moisture beneath paint, and exposure to weather conditions.

Proper sealant/caulking is critical to keeping water out of the walls, and preventing water damage. Two common types of sealants/caulking are urethane and silicone. If properly installed, urethane has a life of approximately 6-8 years and silicone's life can be 16-20 years. Incorrect installations of sealant are common, and can greatly decrease its useful life. Inspect sealant, more frequently as it ages, to determine if it is failing. Typical sealant problems include failure of sealant to adhere to adjacent materials and tearing/splitting of the sealant itself. As sealants age and are exposed to ultra-violet sunlight, they will dry out, harden, and lose their elasticity. Remove and replace sealant as signs of failure begin to appear. Proper cleaning, prep work, and proper installation are critical for a long lasting sealant/caulking. Do not install sealant in locations that would block water drainage from behind the siding. Repair areas as needed prior to painting/caulking.

Additional information on painting is available through American Coatings Association at http://www.paint.org/

Useful Life:
10 years

Remaining Life:
5 years

Best Case: $ 17,400 Worst Case: $ 21,700

Lower Allowance Higher Allowance

Cost Source: ARI Cost Database: Similar Project Cost History

Comp #: 526 Exterior Wood Trim - Paint/Caulk **Quantity: Wood surfaces**
Location: Exterior building surfaces: eaves, gables, bellybands, trim, etc…
Funded?: Yes.
History: Reported planned for 2018; last completed 2013 - Greenlake Painting
Evaluation: Wood trim paint appeared in fair condition with no visible peeling or blistering noted.

This component represents the painting of the exterior wood surfaces at the eaves, gables, bellybands, trim, etc…

Useful life shown below is set at 5-year cycles for painting of the wood surfaces as these areas tend to deteriorate faster than the fiber-cement siding. These cycles are set to align every other paint cycle with component #525. See previous component for detailed maintenance recommendations.

Useful Life:
5 years

Remaining Life:
0 years

Best Case: $ 17,500 Worst Case: $ 22,500

Lower Allowance Higher Allowance

Cost Source: ARI Cost Database: Similar Project Cost History

Comp #: 528 Siding: Stucco - Maintain/Repair **Quantity: ~ 6,840 GSF**

Location: Exterior building surfaces: Stucco
Funded?: No. No reported plans to refinish exterior stucco
History: No history reported
Evaluation: Stucco has vertical and horizontal control joints. No compression of control joints was observed during our limited visual review. Minor hairline cracks in the stucco were previously noted. Minor cracking is expected in stucco. No large scale cracking of stucco was observed. Viewed from ground level; no direct visual access of sealant joints at window jambs and sills. The sealant material is unknown.

Appearance will typically suffer over time with grime buildup, exposure to weather elements and typical fading of surface coating. See next component #530 for recommended cleaning cycles. Care of the exterior building envelope should be viewed as the top priority and should entail periodic professional inspections, removal and replacement of sealants (caulking), painting/refinishing and cleaning as needed.

It is our understanding that there are no plans to refinish the exterior stucco. In the future, if decision is made to treat stucco, there are several ways to refinish when appearance becomes an issue; most similar associations in our experience paint with quality vapor permeable 100% acrylic (around $2.50/sf). If cracking becomes more apparent you can also use an elastomeric paint (cost about 50% more). Another option is to install new skim coat (around $7.00/sf) or simply not refinish and clean professionally periodically. Funding can be added to future reserve study updates at discretion of the Board.

Stucco is a relatively low maintenance material, although sealants require more maintenance. As annual maintenance, inspect stucco and sealants for any visible problems. Replacing sealants is an important part of maintaining stucco's waterproofing. Sealants are typically located at the intersections of the stucco and other material such as windows, door and vents. We have assumed the sealants are silicone, which under good conditions may have a useful life of approximately 16 to 20 years. Urethane sealants would have a useful life of 6-8 years.

Additional information on Stucco is available at the Portland Cement Association's website http://www.cement.org/stucco/index.asp. The Northwest Wall and Ceiling Bureau has published the Stucco Resource Guide Their website is: http://www.nwcb.org/

Useful Life:

Remaining Life:

Best Case: Worst Case:

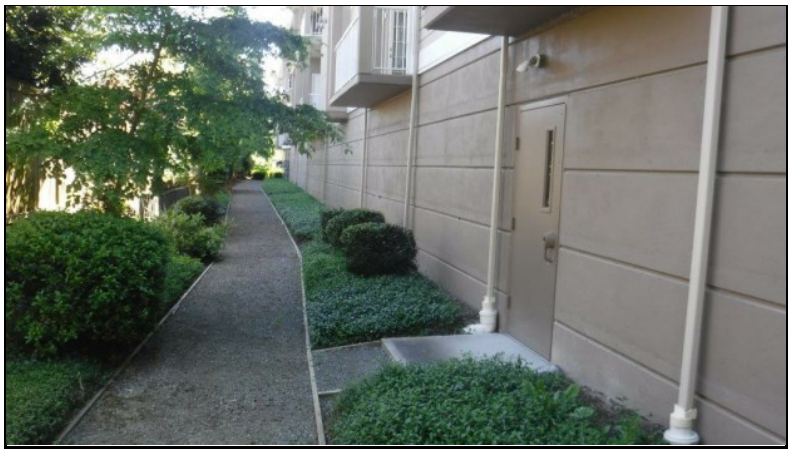
Cost Source:

Comp #: 530 Siding: Stucco - Clean/Inspect **Quantity: ~ 6,840 GSF**
Location: Exterior building surfaces: Stucco
Funded?: Yes.
History: Reported planned for 2018
Evaluation: The majority of stucco siding appeared to be in good, clean condition.

We recommend regular cleaning and inspection of siding surfaces to remove dirt and pollutants and extend the useful life of the building exterior. Cost and typical useful life shown below is based on research with MetroClean Systems. www.metrocleansystems.com.

Useful Life:
15 years

Remaining Life:
0 years



Best Case: $ 3,000 Worst Case: $ 3,700

Lower Allowance Higher Allowance

Cost Source: ARI Cost Database: Similar Project Cost History

Comp #: 535 Windows - Replace **Quantity: ~ (167) windows**

Location: Building exterior elevations

Funded?: Yes.

History: No history reported

Evaluation: Windows have vinyl frames with horizontal sliders, vertical sliders and fixed operation. No head flashing observed at windows set in stucco. Head flashing was observed protruding from under window trim. Sealant was observed between flashing and trim. Jambs and sills had sealant joint between window frame and cladding. Weep holes, at exterior lower corners, were observed to be clear, in the few windows sampled for our report. No condensation was observed between window panes, which is typically indicative of failed glazing seals.

Factors effecting useful life include: quality of windows and installation, waterproofing flashing details, exposure to wind driven rain, building movement over time, structural details, etc... We recommend financially planning for a 40-year useful life range timed with other large scale building exterior projects for efficiency and proper integration into waterproofing systems. Note: there are many types of glazing and windows types, material and quality, available in today's market; and costs can vary greatly. A mid-range funding allowance is presented below.

Inspect regularly, including sealant, and repair as needed. Keep weep holes free and clear to allow proper drainage of water that gets into window frame. Do not block (caulk or seal) gap at top of head flashing, if any, as this allows water that gets behind the siding to drain out.

Proper sealant/caulking is critical to keeping water out of the walls, and preventing water damage. Two common types of sealants/caulking are urethane and silicone. If properly installed, urethane has a life of approximately 6-8 years and silicone's life can be 16-20 years. Incorrect installation of sealant is common, and can greatly decrease its useful life. Inspect sealant, more frequently as it ages, to determine if it is failing. Typical sealant failures include; lack of adherence to adjacent materials, tearing/splitting of the sealant itself, and loss of elasticity. Loss of elasticity can be caused by exposure to ultra-violet light and general aging. Remove and replace all sealants as signs of failure begin to appear. Proper cleaning, prep work, and proper installation are critical for a long lasting sealant/caulking.

One of the most important factors in selection window is the design pressure rating. The design pressure rating (DP) is the ability of the window to withstand wind blown rain, and a few other criteria. Manufacturers can choose to have a sample of their windows tested. Independent third parties perform testing following American Architectural Manufacturers Association (AAMA) standards and procedures. AAMA stickers are placed on windows with the specific DP rating (psf) and largest size of the window that meets the design pressure.

Note: Costs below include fees for architectural/engineering specifications and installation oversight.

Useful Life:
40 years

Remaining Life:
25 years

Best Case: $ 101,000 Worst Case: $ 161,000

Lower Allowance Higher Allowance

Cost Source: ARI Cost Database: Similar Project Cost History

Comp #: 540 Decks - Clean/Repair/Re-coat **Quantity: ~ 2,250 Sq Ft**

Location: Decks throughout association
Funded?: Yes.
History: Decks were recoated in 2012 by J & F Construction at a cost of ~$13,107
Evaluation: Deck surfaces reportedly consist of Pacific Polymers elastomeric coating system. Surface appeared to be in good condition on the two decks we were able to access during our May 2018 inspection. Drip edge of deck was open and vertical portion of drip edge flashing was observed. Coating was turned up the wall and threshold of door was raised above the deck surface. Venting on the underside of the deck, at the soffit below was observed. Venting is a good practice as it can reduce problems from minor water infiltration. Railing connections are attached through deck surface. The fewer penetrations through the waterproof surface the fewer opportunities there are for water penetration. Monitor closely and maintain well.

Elastomeric deck surfaces are typically a three-coat system. Coatings lose thickness each year due to wear and exposure to ultraviolet sunlight. If more than the topcoat is allowed to wear off, the surface may still appear to be in 'good' condition to the untrained eye, but waterproof integrity may be compromised. Once water gets past the coating, it can damage the underlying structure of the deck. Evaluate and repair as needed before recoating. Clean with mild solution such as TSP, bleach can be added if mold/mildew become a problem.

Re-application of the topcoat is recommended every 6-8 years to maintain waterproof integrity. This is the most cost effective cycle. Extending time between coatings runs the risk of increased costs, due to wear on the second coat in addition to the topcoat. It also increases the risk of water penetration, which can damage the underlying wood structure of the deck, which can greatly increase costs.

Useful Life:
8 years

Remaining Life:
2 years

Best Case: $ 13,100 Worst Case: $ 17,500

Lower Allowance Higher Allowance

Cost Source: Inflated Client Cost History

Comp #: 550 Deck Rail - Repair/Replace **Quantity: ~ 540 Lin Ft**

Location: Adjacent to elevated decks
Funded?: Yes.
History: No history reported
Evaluation: Generally metal deck rails appeared in fair condition. Rails were attached through the waterproof surface of the deck; these connections should be inspected periodically for structural and/or waterproofing issues.

This type of railing is a sturdy item that can typically last for an extended period with ordinary care and maintenance. In our experience, however, eventual replacement is warranted due to constant wear and exposure over time. Plan to replace at roughly the time frame below.

As routine maintenance, inspect regularly to ensure safety and stability; repair promptly as needed using general operating/maintenance funds. No anticipation of refinishing of this type of powder coated aluminum rail at this time. Timeline for future painting is difficult to predict, suggest possible inclusion into future reserve study update.

Useful Life:
40 years

Remaining Life:
25 years

Best Case: $ 23,600 Worst Case: $ 35,400

Lower Allowance Higher Allowance

Cost Source: ARI Cost Database: Similar Project Cost History

Comp #: 560 Exterior Lights - Replace **Quantity: ~ (10) assorted fixtures**
Location: Building exterior
Funded?: No. Cost projected to be too small for reserve funding
History: No history reported
Evaluation: Majority of exterior wall lighting appeared in good condition. Observed during daylight hours; assumed to be in functional operating condition.

Small total quantity and individual replacement costs typically not at reserve funding threshold, therefore not suitable for reserve funding. Evaluate needs each year and replace individual fixtures locally as needed using general maintenance and repair funds.

As routine maintenance, inspect, repair/change bulbs as needed.

Useful Life:

Remaining Life:

Best Case: Worst Case:

Cost Source:

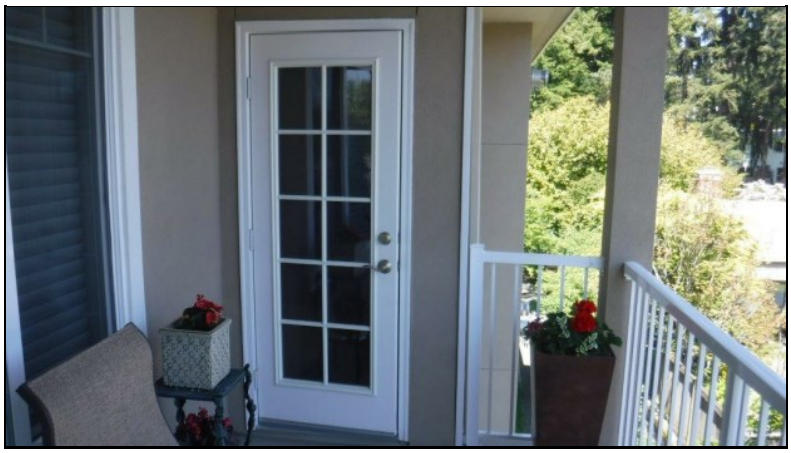
Comp #: 580 Deck Doors - Repaint **Quantity: ~ (54) wood/glass doors**
Location: Access to elevated decks
Funded?: Yes.
History: Reported planned for 2018
Evaluation: These doors are well sheltered from the elements which accounts for extending the typical useful life to 15 year paint cycles.

Plan on reoccurring paint cycles at roughly the time frame indicated below. Adjust as needed in future reserve study updates based on actual project cost and necessary useful life cycle.

Inspect periodically and repair as needed to maintain appearance, security and operation with maintenance funds. Touch up paint as needed between larger painting cycles.

Useful Life:
15 years

Remaining Life:
0 years



Best Case: $ 3,300 Worst Case: $ 4,400

Lower Allowance Higher Allowance

Cost Source: Inflated Estimate from Gordon Trepus Painting Provided by Client

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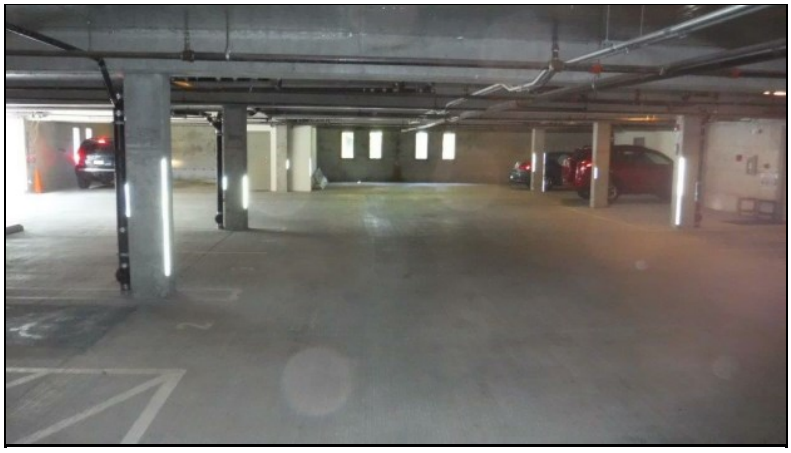
Comp #: 600 Garage - Maintain/Repair **Quantity: ~ 24,000 Sq Ft**
Location: Lower level parking structure
Funded?: No. Useful life not predictable
History: No history reported
Evaluation: Generally fair condition with no significant cracking, settling, or deterioration to indicate that predictable large scale expenses suitable for reserve designation will occur.

As routine maintenance, inspect and clean as needed. Continue to monitor, and as Association ages, if regular patterns of deterioration emerge, funding can be incorporated into future reserve study updates. No basis for reserve funding at this time.

Useful Life:

Remaining Life:



Best Case: Worst Case:

Cost Source:

Comp #: 605 Garage Doors - Repair/Replace **Quantity: (2) metal doors 7' x 17'**

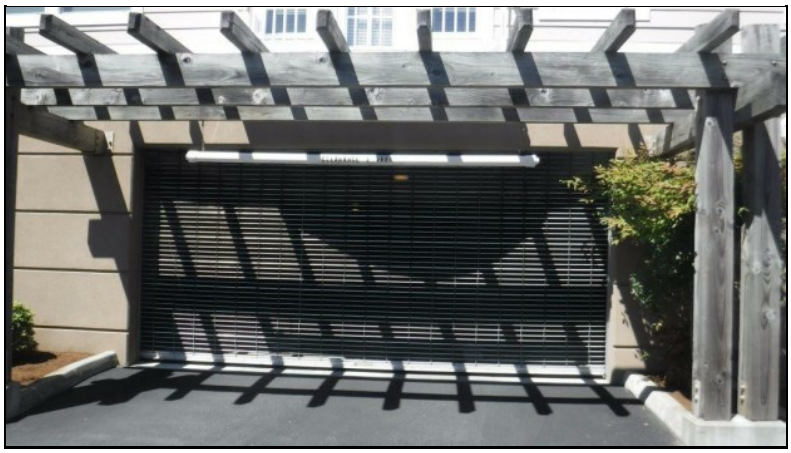
Location: Entry / exit of parking garage
Funded?: Yes.
History: No history reported
Evaluation: Parking garage doors were observed to be in functional condition, no significant damage observed.

These types of doors can last for many years if properly serviced and not damaged or abused. In our experience, vehicle damage not covered by insurance (or prohibitive due to high deductible) is a typical cause for replacement. Although timing of accidents is not predictable, we suggest setting aside funds for large repairs or to replace periodically. Pricing can range widely depending upon specifications and features. A general replacement allowance is factored below.

Regular maintenance, inspection and service as needed is recommended for maximum life. Note: expect some smaller cost items as periodic repair/replacement of peripheral components (i.e. - springs, sensors, etc…) funded as general operating/maintenance expense.

Useful Life:
30 years

Remaining Life:
15 years



Best Case:	$ 13,100	Worst Case:	$ 17,500
	Lower Allowance		Higher Allowance

Cost Source: ARI Cost Database: Similar Project Cost History

Comp #: 610 Garage Door Operators - Replace **Quantity: (2) 1/2 HP Liftmaster**
Location: Garage doors
Funded?: Yes.
History: No history reported
Evaluation: We noted functional condition of garage door operators, with no problems observed or reported.

Typical life expectancy of operators is about 10 to 15 years with ordinary care and regular maintenance. Even with ongoing maintenance, plan for eventual total replacement at some point. Track actual expenses closely for future reserve study updates.

As routine maintenance, inspect operator regularly and repair as needed.

Useful Life:
15 years

Remaining Life:
0 years

Best Case: $ 2,200 Worst Case: $ 4,400

Lower Allowance Higher Allowance

Cost Source: ARI Cost Database: Similar Project Cost History

Comp #: 700 Carpet - Replace **Quantity: ~ 734 Sq Yds**

Location: Common area hallways, stairways & meeting rooms
Funded?: Yes.
History: Reported planned for early 2018
Evaluation: Although intact and in generally fair condition, showing signs of wear as consistent with age. Association reports carpet to be replaced contiguous with interior paint in the Fall of 2017, see component #710. No bids yet received.

Wide variety of type and quality available; a mid-range funding allowance is factored below for planning purposes.

As part of ongoing maintenance program, vacuum regularly and professionally clean as needed.

Useful Life:
15 years

Remaining Life:
0 years

Best Case: $ 32,100 Worst Case: $ 48,100

Lower Allowance Higher Allowance

Cost Source: ARI Cost Database: Similar Project Cost History

Comp #: 703 Tile Floor - Replace **Quantity: ~ 650 Sq Ft**
Location: Entry way area, bathrooms and elevator floor
Funded?: No. Useful life not predictable
History: No history reported
Evaluation: Generally good condition, no significant damage or grouting issues noted.

With ordinary care and maintenance, tile can last for an extended period of time. No predictable expectation for complete replacement within foreseeable future, so no reserve funding suggested at this time.

As part of ongoing maintenance program, inspect regularly, replace any individual damaged tiles and clean, seal using operating funds.

Useful Life:

Remaining Life:

Best Case: Worst Case:

Cost Source:

Comp #: 710 Interior Walls/Trim - Paint **Quantity: ~ 15,000 Sq Ft**

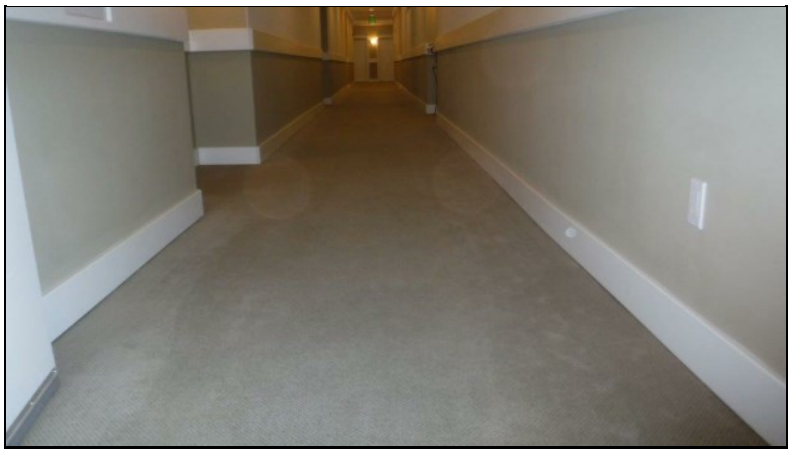
Location: Hallways, baseboards, chair rails, crown molding and interior doors
Funded?: Yes.
History: Reported planned for early 2018
Evaluation: Painted surfaces were noted to be in generally fair condition with localized areas showing signs of wear consistent with age. Surfaces include interior hallway and stairwell walls, baseboards, chair rails, crown molding and doors. Association reports plans to paint interior halls/trim in fall 2017.

Regular cycles of professional painting are recommended to maintain appearance; best timed prior to carpet replacement (component #700).

Keep touch-up paint on site for in between cycle maintenance projects.

Useful Life:
8 years

Remaining Life:
0 years



Best Case: $ 28,400 Worst Case: $ 32,800

Lower Allowance Higher Allowance

Cost Source: Inflated Average Estimate from 3 Client Vendors

Comp #: 712 Stairwells - Paint **Quantity: ~ 3,000 Sq Ft**
Location: Stairwells
Funded?: Yes.
History: Reported planned for Fall 2017
Evaluation: Stairwell surfaces appeared to be in fair condition.

Regular cycles of professional painting are recommended to maintain appearance.

Keep touch-up paint on site for in between cycle maintenance projects.

Useful Life:
10 years

Remaining Life:
9 years

Best Case: $ 5,500 Worst Case: $ 7,700

Lower Allowance Higher Allowance

Cost Source: Estimate Provided by Client

Comp #: 715 Unit Entry/Utility Doors - Replace **Quantity: ~ (87) assorted doors**
Location: Interior unit entry, deck storage, stairwells, parking garage, storage and utility rooms
Funded?: No. Useful life not predictable
History: No history reported
Evaluation: Generally fair to good condition noted with no widespread damage or unusual wear.

With ordinary care and maintenance, there is no predictable expectation to replace these on cyclical basis as reserve project at this time. If need becomes apparent to replace in large scale, funding should be incorporated into future reserve study updates.

As routine maintenance, inspect periodically and repair / replace as needed using general building repair funds within operating budget. Clean and paint as needed along with other building surfaces, no need for separate funding.

Useful Life:

Remaining Life:

Best Case: Worst Case:

Cost Source:

Comp #: 720 Interior Lights - Replace **Quantity: ~ (130) assorted fixtures**
Location: Interior common areas such as lobby, hallways, garage, stairwells, etc…
Funded?: No. Useful life not predictable
History: No history reported
Evaluation: Interior lights appear to be in good, functional condition.

With ordinary care and maintenance, there is no predictable expectation to replace all at once or in large scale at these protected interior locations. Evaluate needs each year and replace individual fixtures locally as needed using general maintenance and repair funds. If association desires aesthetic upgrade, funds can be included within reserve study updates.

As routine maintenance, inspect, repair/change bulbs as needed.

Useful Life:

Remaining Life:

Best Case: Worst Case:

Cost Source:

Comp #: 730 Mailboxes - Replace **Quantity: (3) clusters**
Location: Lobby/main entry area
Funded?: No. Useful life not predictable
History: No history reported
Evaluation: These durable metal components when housed within an enclosed lobby such as this will typically have a functional life cycle beyond the scope of this reserve study.

As routine maintenance, inspect regularly, clean by wiping down for appearance, change lock cylinders, lubricate hinges and repair as needed from operating budget.

Useful Life:

Remaining Life:

Best Case: Worst Case:

Cost Source:

Comp #: 755 Bathrooms - Refurbish **Quantity: (2) bathrooms**
Location: Meeting rooms
Funded?: No. Useful life not predictable
History: No history reported
Evaluation: Functional, clean condition, no problems reported. We were informed that both bathrooms get very minor usage.

No expectation for large scale replacement within the scope of this report. We recommend that eventual refurbishment be factored into the general maintenance budget, not reserves.

As routine maintenance, inspect regularly, perform any necessary repairs promptly.

Useful Life:

Remaining Life:

Best Case: Worst Case:

Cost Source:

Comp #: 760 Furniture - Replace **Quantity: Assorted pieces**
Location: Meeting rooms and lobby area
Funded?: Yes.
History: No history reported
Evaluation: Generally good condition and appearance noted.

This component suggests setting aside funding for periodic replacement / refurbishment of furnishings in order to maintain a quality aesthetic throughout. Typical replacements from similar communities include: sofas, chairs, wall décor, tables, etc... Follow roughly the time frame indicated below.

Useful Life:
20 years

Remaining Life:
5 years

Best Case: $ 2,200 Worst Case: $ 3,300

Lower Allowance Higher Allowance

Cost Source: ARI Cost Database: Similar Project Cost History

Systems / Equipment / Other

Comp #: 900 Plumbing - Repair/Replace **Quantity: Supply, drain systems**
Location: Throughout common areas of association
Funded?: No. Useful life not predictable
History: No history reported
Evaluation: Analysis of plumbing system beyond visual inspection is not within the scope of a reserve study as majority of systems are hidden. No reported problems at this time.

Treat minor local repairs as ongoing maintenance expense. If patterns of significant repair costs emerge, funding may be incorporated into reserve study updates to supplement the operating budget. No predictable basis for reserve funding at this time.

Some types of piping used historically are known to be life limited. Manufacturing defects also become apparent from time to time and certain site conditions can contribute to premature deterioration of system components. Regular professional inspections should be conducted.

Typically, if installed per architectural specifications and local building codes, there is no predictable time frame for large scale repair/replacement expenses within the scope of our report. If leaks, poor flow, sediments, defective material and/or installation become evident, have qualified plumber and / or engineer inspect closely and develop scope of any repair/replacement needed; funding for even one time projects can be incorporated within reserve study updates if basis exists.

Useful Life:

Remaining Life:

Best Case: Worst Case:

Cost Source:

Comp #: 905 Electrical System - Maintain/Repair **Quantity: Main, branch systems**
Location: Throughout common areas of association
Funded?: No. Useful life not predictable
History: No history reported
Evaluation: Analysis of electrical system(s) beyond visual inspection is not within the scope of a reserve study. No reported problems at this time.

Typically, if installed per architectural specifications and local building codes, there is no predictable time frame for large scale repair/replacement expenses within the scope of our report.

Service life typically lasts well beyond rated life of components. Treat minor repairs as ongoing maintenance expense. Periodic inspections of distribution system by qualified electrician are wise to clean and tighten, exercise breakers, etc… Some associations employ infrared or other testing methodologies to ward off trouble spots and potential hazards. A good resource book available for purchase is NFPA 70B Recommended Practices for Electrical Equipment Maintenance. Funding may be incorporated into future reserve study updates if conditions dictate. No basis for reserve funding at this time.

Some electrical system components used historically are known to be life limited. Manufacturing defects become apparent from time to time and certain site conditions can contribute to premature deterioration of system components.

Useful Life:

Remaining Life:

Best Case: Worst Case:

Cost Source:

Comp #: 915 Exhaust / Supply Fan - Replace **Quantity: (1) fan**
Location: Parking garage
Funded?: No. Useful life not predictable
History: No history reported
Evaluation: Functional condition assumed, no problems reported.

With ongoing, ordinary care and maintenance, expenses are typically lower cost for component replacement and below the reserve funding threshold of the association. With no predictable basis for larger scale cyclical projects, reserve funding is not suggested at this time.

Ongoing, routine inspections/service should be factored in the annual operating budget.

Useful Life:

Remaining Life:

Best Case: Worst Case:

Cost Source:

Comp #: 950 Entry Access System - Replace **Quantity: (1) Aegis 7000 panel**
Location: Main pedestrian entryway
Funded?: Yes.
History: No history reported
Evaluation: Functional condition observed, no problems reported. Added three years to remaining useful life for 2018 report.

Anticipate periodic need to replace system components due to advancing technology and future obsolescence typical of this equipment as well as ordinary wear. Handle periodic local minor repair / replacement as maintenance expense.

Useful Life:
15 years

Remaining Life:
3 years

Best Case: $ 2,200 Worst Case: $ 3,300

Lower Allowance Higher Allowance

Cost Source: ARI Cost Database: Similar Project Cost History

Comp #: 955 Security Equipment - Replace **Quantity: (4) cameras, equipment**

Location: Electronic equipment housed in office, cameras at common areas

Funded?: Yes.

History: No history reported

Evaluation: Camera system is assumed to be in functional condition, no reported problems with existing setup. Three years added to remaining useful life for 2018 report.

Although difficult to predict timing, cost and scope of future replacement, we suggest a general funding allowance for periodic upgrades, significant repair/replacement. Expect some local repair funded from operating and general maintenance budget in between overhaul cycles. Cost can vary greatly due to number and quality of the cameras desired.

Another option at time of major refurbish is to set up a lease arrangement with the vendor. Lease covers hardware costs, maintenance and operation for a given time period (typically 10 years). At end of the lease the association has the option of purchasing the existing for a nominal fee and using it, or installing new hardware with either a lease option or outright purchase.

Useful Life:
20 years

Remaining Life:
5 years

Best Case: $ 1,100 Worst Case: $ 2,200

Lower Allowance Higher Allowance

Cost Source: ARI Cost Database: Similar Project Cost History

Comp #: 960 Elevator - Modernize **Quantity: (1) 3-stop elevator**

Location: Elevator is in main lobby; machinery in elevator machine room
Funded?: Yes.
History: No history reported
Evaluation: Functional condition observed, no problems reported. Regular testing and inspections indicated.

Elevator companies and Building Owners and Managers Association (BOMA) typically recommend major modernization at roughly the twenty to thirty year mark of life.

Elevator modernization typically includes: controller board, pump unit, mechanical door components, and upgrades for code compliance. Discuss these items with your elevator service provider in order to develop a modernization plan that best suits your needs.

There are two general ways to approach modernization, reactive and proactive. Reactive can be risky and expensive. Elevator modernization can also be brought about when spare parts are no longer available for repair/maintenance work.

Prior to modernization, we suggest that you consider hiring a professional elevator consultant to evaluate the existing elevator, design, and specify new installation requirements. Doing so will help competitively bid the project, select the best bidder, and periodically observe installation to increase the likelihood of proper installation. We believe that competitive bidding may reduce the costs of the project.

Useful Life:
30 years

Remaining Life:
15 years

Best Case: $ 70,000 Worst Case: $ 110,000

Lower Allowance Higher Allowance

Cost Source: ARI Cost Database: Similar Project Cost History

Comp #: 961 Elevator Cab - Remodel **Quantity: (1) elevator cab**

Location: Elevator interior
Funded?: Yes.
History: No history reported
Evaluation: Elevator cab interior is in good, clean condition with no unusual damage or unexpected deterioration. Pads used on walls and floors during moves.

This component factors periodic remodeling of the elevator cab interiors for best appearance and function. Timing of this type of elective project is at the discretion of the board of directors. Cost can vary quite a bit depending upon chosen design. A general funding allowance based upon our experience if factored below for planning purposes - include actual cost within reserve study update when known.

Useful Life:
20 years

Remaining Life:
5 years

Best Case: $ 6,600 Worst Case: $ 8,700

Lower Allowance Higher Allowance

Cost Source: ARI Cost Database: Similar Project Cost History

Comp #: 965 Fire Alarm Panel - Replace **Quantity: (1) Silent Knight panel**
Location: Mechanical room
Funded?: Yes.
History: No history reported
Evaluation: Fire alarm panel is assumed to be in functional condition. Log notes indicated the panel has been inspected annually.

Fire alarm panels are required to be inspected annually and the company performing the inspection is required to log/note it at the panel, so the fire department can view it. Fire departments can issue a fine if inspections are not performed. Fire panel is a critical life safety item that needs to be maintained in top condition, follow all requirements of NFPA 25.

Service as required by qualified technician, to maintain in operating condition at all times. Scope of work at time of repairs, can vary greatly, based on amount of work needed to bring the existing fire system to the level required by the fire/building codes in place at that time. Evaluating the entire system is beyond the scope of a reserve study. Replace as needed. Costs below are for repair and/or replacement of only the panel. As panels age, manufacturers can discontinue support of panel and parts. Service availability may therefore be limited in coming years. Our experience suggests a 20-year useful life for the panel, which we use for financial planning purposes.

Useful Life:
20 years

Remaining Life:
5 years

Best Case: $ 2,200 Worst Case: $ 3,300

Lower Allowance Higher Allowance

Cost Source: ARI Cost Database: Similar Project Cost History

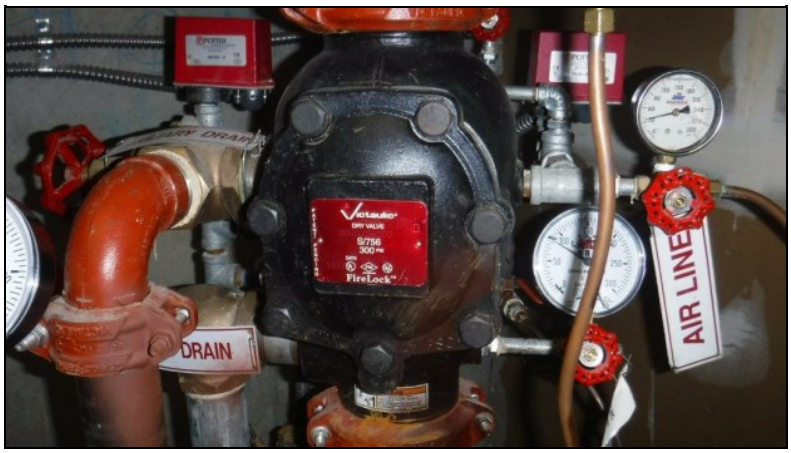
Comp #: 967 Fire System Pumps/Valves - Replace **Quantity: Assorted pumps, valves**
Location: Mechanical room
Funded?: Yes.
History: "Actuator" replaced 2016
Evaluation: Association reports actuator on existing dry pipe valve was replaced in 2016. At time of replacement, fire vendor reported that existing 4" Victaulic S/756 valve (pictured below) is no longer available and if valve needs replacement it should be replaced with a Tyco DPV. Association requests funding and life cycles noted below.

Regular testing / exercise and inspection indicated.

Continue to inspect regularly as part of routine maintenance program and expect periodic local repairs (valve assembly, seal, gasket work, pump rebuild, etc…) that can be funded through operating budget.

Useful Life:
20 years

Remaining Life:
5 years



Best Case: $ 5,500 Worst Case: $ 7,500

Lower Allowance Higher Allowance

Cost Source: Estimate Provided by Client - AAA Fire

Comp #: 969 Fire System Compressor - Replace **Quantity: (1) Gast Compressor**
Location: Mechanical room
Funded?: No. Cost projected to be too small for reserve funding
History: No history reported
Evaluation: Functional condition assumed, no problems reported.

Costs are too small and replacement timing is too indeterminate for Reserve designation. Treat periodic repair / replacement as general maintenance expense.

Useful Life:

Remaining Life:

Best Case: Worst Case:

Cost Source:

Comp #: 970 Gas Sensor/Controller - Replace **Quantity: (3) AirTest CT-1000**
Location: Scattered throughout parking garage
Funded?: No. Cost projected to be too small for reserve funding
History: No history reported
Evaluation: The CT-1000 Parking Structure Monitor is a single channel Vehicle Exhaust emissions gas detection system featuring Low and High user-adjustable alarm points.

Costs are typically too small for reserve designation. Treat periodic repair / replacement as general maintenance expense.

Inspect regularly and repair/replace as needed.

Useful Life:

Remaining Life:

Best Case: Worst Case:

Cost Source:

Comp #: 999 Reserve Study - Update **Quantity: Every three years**
Location: Common areas of association
Funded?: Yes.
History: With-Site-Visit studies completed in for 2018. 2015, 2012 fiscal years
Evaluation: Per Washington law (RCW), reserve studies are to be updated annually, with site inspections by an independent reserve study professional to occur no less than every three years to assess changes in condition (i.e., physical, economic, governmental, etc...) and the resulting effect on the community's long-term reserve plan.

Funding shown below represents the future Richmond Manor COA estimate for a With-Site-Visit Reserve Study Update to occur every three years.

Thank you for choosing Association Reserves!
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Useful Life:
3 years

Remaining Life:
2 years

ASSOCIATION RESERVES
Est. 1986
Over 30,000 Reserve Studies nationwide

Best Case: $ 1,800 Worst Case: $ 2,000

Lower Allowance Higher Allowance

Cost Source: Client Cost History
