

CAPITAL RESERVE STUDY

FOR THE

Villas At Snowden Overlook Condominium II

Columbia, Maryland



Management Company: WPM Real Estate
Contact Name: Patricia Lall

Project Number: 21-1232
Date: January 27, 2022

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Executive Summary

The Villas at Snowden Overlook Condominium is a 79 unit complex located in Columbia, Maryland. The condominium consists of 20 buildings in townhouse style living units. The community was constructed between 2007 and 2010 and is located off Dried Earth Boulevard, with Sage Brush Way and Vast Rose Drive private streets providing access to the residences.

Level of Service	Level I: New Study
Fiscal Year of Study	2023

Current Status of Reserve Fund (Component Method)

Current Balance	\$856,111
Fully Funded Balance	\$1,343,905
Percent Funded	63.70%

Reserve Budget Recommendations

	Prior Budget Year Contribution	Component Method *	5% Threshold *	10% Threshold *
Contribution/Year	\$74,000	\$153,482	\$81,006	\$83,554
Contribution/Unit	\$937	\$1,943	\$1,025	\$1,058
Contribution/Unit/Month	\$78	\$162	\$85	\$88

* Please note that this is the contribution for the period of January 2023 through December 2023.

Reserve Study Disclosures

General - Becht Engineering BT is not aware of any involvement with this Association, which would lead to an actual or perceived conflict of interest.

Physical Analysis - The inspections performed to determine the current physical condition of the common elements were visual in nature; no destructive testing or invasive inspections were performed. Quantities were taken from a combination of field counts/measurements and plan take-offs.

Personnel Credentials - Preparation of this Reserve Study was performed by a CAI designated Reserve Specialist and licensed Building Inspector.

Completeness - This Reserve Study assumes that proper preventative and corrective maintenance has been and will continue to be performed on the common elements. Failure to properly maintain the common elements may lead to premature failure. It should be noted that higher rates of inflation, lower earned interest rates or prematurely failing components can result in a negative closing cash balance. In addition, it is important to note that the capital fund contributions each year are assumed to rise at the assumed rate of inflation. Failure to raise the annual contributions with inflation will reduce the closing balance and may lead to a future shortfall.

Reliance on Client Data - This Reserve Study was prepared based on certain information provided by an official representative of the Association. This information includes the current asset balance of the Reserve Fund and the ages of the common elements and dates of most recent replacements.

Scope - This Reserve Study is a reflection of the information provided to us and assembled for the Association's use for budgeting purposes, not for the purpose of performing an audit, quality/forensic analysis or background checks of historical records. Interpretation of contradictions that may exist within the governing document's definition of common elements is not within the scope of this Study.

Reserve Balance - The actual and projected Reserve Fund Balance is based upon information provided by the Association and was not audited.

Component Quantities - Where this Reserve Study is an update of a previously prepared Study, the Association is considered to have deemed previously developed component listings and quantities as accurate and reliable.

Estimated Replacement Costs - Replacement costs are to be considered estimated projections of the cost to replace common elements in kind. These cost estimates are to be considered preliminary until such time as a project specific design or scope of work is developed. These costs can be affected by many variables including inflation, project scope and hidden damage conditions.

Reserve Projects - While the information provided in this Study is to be considered reliable, on-site inspections are not to be considered a project audit or quality inspection.

Introduction

The purpose of a Capital Reserve Study is to estimate the amount of money that must be funded annually to replace those common element components that will require replacement before the end of the effective life of the project.

Mortgage lenders recognize the conditions of inadequate reserves. Reserves are important in preserving the qualities of a particular complex or building and therefore can affect property values. Consequently, capital reserves are directly related to the security and risk of a lender's investment and the marketability of the property.

The Capital Reserve Study develops a recommended basic annual contribution based upon current replacement costs. Inflation may increase future costs unpredictably, and the accumulation of interest on the reserve fund deposits increases available funds. Accurate projection of these factors is not possible. However, the effects of inflation and interest are shown via cash flow projections using assumed inflation and interest rates. Accurate reserve funding requires regular updates. The Community Associations Institute recommends yearly reviews and a formal study every three years.

Capital Reserve Methodology

In preparing this study, when provided, we reviewed the master deed and offering statement to identify the common element components that the Association owns. Industry guidelines suggest that only components with estimated remaining lives of 30 years or less be included in the capital reserve study. Components with estimated remaining lives that are greater than 30 years, such as building structures, piping and electrical wiring are usually replaced during a major renovation and financed at that time. Including these components in the reserve fund would result in an unrealistically high-recommended annual contribution to the capital reserve. With the Board's approval we may include certain items of longer life expectancy, such as retaining walls or building siding when doing so will reduce the likelihood of future substantial increases in contributions.

Quantities of the components to be included in the reserve fund were then determined by field measurements, as well as a review of building and site plans, if available.

Estimates of the costs to replace each component were derived from published industry standards, such as the R.S. Means Company cost-estimating guides and from our own experience in designing and supervising construction of similar projects. These cost estimates are to be considered preliminary until such time as a project specific design or scope of work is developed.

Finally, estimated remaining lives were determined for each of the included components based on the reported or evident present age, available industry data related to typical useful lives and the condition of the component, as determined by our physical inspection.

The capital reserve fund is not intended to cover annual maintenance. If maintenance items are included in the Capital Reserve Study, the tax status of the reserve fund can be jeopardized. However, expected lives are based on the assumption that proper annual maintenance is being performed. Therefore, this annual maintenance should be included in the Association's budget and maintenance fee. Without proper maintenance, accelerated deterioration can be expected, with shortened lives. Please note, it is only possible to reserve for future expenditures and that a current need must be financed separately by borrowing or assessments.

This Capital Reserve Study is developed as an aid in the proper financial planning of the Association. As such, the common element components included are evaluated for their physical condition and only for the purpose of estimating their remaining lives. Identification of possible deficient conditions is beyond the intent and scope of the Capital Reserve Study.

Capital Reserve Calculation

We have provided two Capital Reserve calculation methods as described below.

Component Method

The first method provided in this reserve study is what is known as the Component Method. This is the most conservative approach to calculating the reserve requirement. The Component Method analyzes each component individually and assumes that the money collected for each item will only be used to replace that item. Our program uses assumed rates of interest and inflation in the calculation of the annual contribution and fully funded balance. We compare the actual balance in the Association's Reserve Fund with the calculated fully funded balance and determine if a surplus or deficit condition exists. If a deficit condition exists, an additional contribution is calculated for each component to offset the deficit.

Threshold Funding Method

The second calculation method is known as the Threshold Funding Method. This method pools all the components and assumes that the money contributed to the fund is available for replacement of any item. Looking out over the next 30 years, the annual contribution is determined by lowering the contribution until the closing balance for any given year reaches a predetermined threshold. We typically provide two Threshold Method scenarios. These thresholds are based on a percentage of the current replacement cost of all the components in the Reserve Study. Basing the threshold on a percentage of the replacement cost of all components keeps the minimum proportional to the needs of a specific community.

This minimizes the annual contribution while maintaining a minimum closing balance. Determining the optimum minimum closing balance is a subjective task. Certainly, the lower the minimum acceptable balance is the greater the risk that the fund will experience a deficit. It should be noted that this method only considers Reserve Account balances over the next 30 years. Large capital expenditures just beyond the 30-year window will not be considered using this method until in the future they fall within the 30-year window.

Capital Reserve Recommendations

Villas At Snowden Overlook Condominium II has a total of 11 components in the reserve analysis with a current Replacement Cost of \$2,338,808. Villas At Snowden Overlook Condominium II presently has a total of \$856,111 in the reserve fund. Using the Component Method, we have determined that the Basic Annual Contribution to the reserve fund should be \$106,840. The fully funded balance required is \$1,343,905. This leaves deficit of \$487,794 in the reserve fund. The deficit will be offset on an annual basis, for each reserve component, based on the estimated remaining lives. The total of the next budget year contribution to the Contribution Adjustment is \$46,643. This results in a Total Contribution to the reserve fund for the next budget year of \$153,482. Please see the Executive Summary page for our Threshold Method recommendations.

Based on your evaluation of the preferred calculation method, we suggest that you plan your annual contributions over the next few years according to the appropriate cash flow schedule. Each year for the next three years, you may choose to review these assumptions. At no later than three years, we suggest that you contact us for an update based on a proper engineering review of the facility and replacement costs.

It should be noted that higher rates of inflation, lower earned interest rates or prematurely failing components can result in a negative closing cash balance. In addition, it is important to note that the capital fund contributions each year are assumed to rise at the assumed rate of inflation. Failure to raise the annual contributions with inflation will reduce the closing balance. We recommend that the Association review this Capital Reserve Study with their Certified Public Accountant to be utilized in the preparation of their annual budget.



James H. Stegemerten RS
Senior Project Manager
CAI Reserve Specialist #145



Component Narrative

Project Name: Villas At Snowden Overlook Condominium II
Project Location: Columbia, Maryland
Project Number: 21-1232
Date of Study: January 2022
Month Contributions Commence: January 2023

Interest Rate: 1.00%
Inflation Rate: 3.00%

Architectural

Description: Gutters and Downspouts

Quantity: 9,500 LF	Cost Per Unit: \$9.50	Replacement Cost: \$90,250
	Typical Life: 25	Est Rem Life: 11

Comment:
 The estimated cost is for the replacement of the aluminum gutters and downspouts on the units.



Description: Masonry Brick and Stone Veneer Restoration, 20%

Quantity: 3,290 LS	Cost Per Unit: \$24.00	Replacement Cost: \$78,960
	Typical Life: 40	Est Rem Life: 26

Comment:
 The estimated cost is for the restoration of the masonry and stone cladding located on the various building styles. The total areas is calculated as 16,450 SF.



Component Narrative

Project Name: Villas At Snowden Overlook Condominium II
Project Location: Columbia, Maryland
Project Number: 21-1232
Date of Study: January 2022
Month Contributions Commence: January 2023

Interest Rate: 1.00%
Inflation Rate: 3.00%

Architectural

Description: Metal Roofing

Quantity: 52 EA	Cost Per Unit: \$2,300.00	Replacement Cost: \$119,600
	Typical Life: 40	Est Rem Life: 26

Comment:
 The estimated cost is for the replacement of metal roofing elements on the various building styles.



Description: Roof, Shingles

Quantity: 213,616 SF	Cost Per Unit: \$4.25	Replacement Cost: \$907,868
	Typical Life: 25	Est Rem Life: 11

Comment:
 The estimated cost is for the removal and replacement of the asphalt shingles, including all the required underlayments and flashings.



Component Narrative

Project Name: Villas At Snowden Overlook Condominium II
Project Location: Columbia, Maryland
Project Number: 21-1232
Date of Study: January 2022
Month Contributions Commence: January 2023

Interest Rate: 1.00%
Inflation Rate: 3.00%

Architectural

Description:	Siding, Vinyl			
Quantity:	100,400 SF	Cost Per Unit:	\$8.50	Replacement Cost: \$853,400
		Typical Life:	40	Est Rem Life: 26

Comment:
 The estimated cost is for the removal and replacement of vinyl cladding located on various building styles. This includes all the required underlayments and new flashings.



Component Narrative

Project Name:	Villas At Snowden Overlook Condominium II	Interest Rate:	1.00%
Project Location:	Columbia, Maryland	Inflation Rate:	3.00%
Project Number:	21-1232		
Date of Study:	January 2022		
Month Contributions Commence:	January 2023		

Site

Description:	Asphalt Paving		
Quantity:	7,980 SY	Cost Per Unit:	\$22.00
		Typical Life:	20
		Replacement Cost:	\$175,560
		Est Rem Life:	6

Comment:
The estimated cost is for a full mill and 2 inch overlay of the asphalt paving. The measurement provided is area.

Asphalt paving requires regular maintenance, including crack filling and pot hole repair to prevent accelerated damage.



Description:	Asphalt Paving, Crack Fill		
Quantity:	1 LS	Cost Per Unit:	\$5,500.00
		Typical Life:	5
		Replacement Cost:	\$5,500
		Est Rem Life:	3

Comment:
The cost is for crack filling of the asphalt paving. This cost, and inclusion in this study, is by request from the Board.

Description:	Concrete Catch Basin Allowance		
Quantity:	1 LS	Cost Per Unit:	\$4,000.00
		Typical Life:	30
		Replacement Cost:	\$4,000
		Est Rem Life:	16

Comment:
The estimated cost is provided as an allowance for storm water catch basin and inlet repairs. This is typically performed during an asphalt re-paving project.

Component Narrative

Project Name: Villas At Snowden Overlook Condominium II
Project Location: Columbia, Maryland
Project Number: 21-1232
Date of Study: January 2022
Month Contributions Commence: January 2023

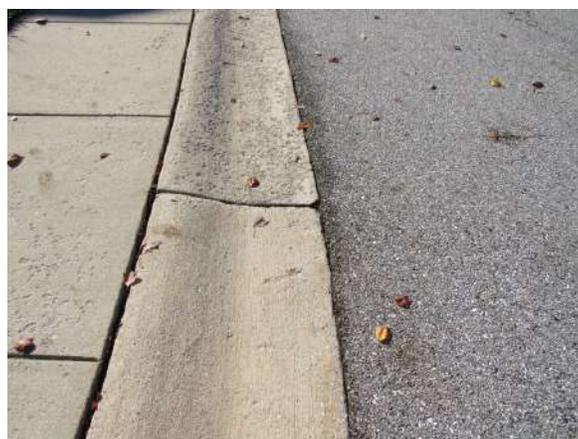
Interest Rate: 1.00%
Inflation Rate: 3.00%

Site

Description: Concrete Curb, 15%

Quantity: 894 LF	Cost Per Unit: \$42.00	Replacement Cost: \$37,548
	Typical Life: 20	Est Rem Life: 9

Comment:
 The estimated cost is provided as an allowance for the replacement of the concrete curbing along the private roadways, as required. A percentage anticipated to be replaced over the next 10 years is provided based on condition and age. The total area is calculated as 5,960 LF.



Description: Concrete Sidewalks, 20%

Quantity: 4,781 SF	Cost Per Unit: \$12.00	Replacement Cost: \$57,372
	Typical Life: 20	Est Rem Life: 9

Comment:
 The estimated cost is provided as an allowance for the replacement of the concrete main walks throughout, as required. A percentage anticipated to be replaced over the next 10 years is provided based on condition and age. The total area is calculated as 23,905 SF.



Component Narrative

Project Name: Villas At Snowden Overlook Condominium II
Project Location: Columbia, Maryland
Project Number: 21-1232
Date of Study: January 2022
Month Contributions Commence: January 2023

Interest Rate: 1.00%
Inflation Rate: 3.00%

Miscellaneous

Description: Mailbox Clusters

Quantity: 5 EA	Cost Per Unit: \$1,750.00	Replacement Cost: \$8,750
	Typical Life: 25	Est Rem Life: 11

Comment:
 The estimated cost is for the replacement of the mailbox cluster units located throughout the community.



Capital Reserve Calculations



Reserve Summary

Project Name: Villas At Snowden Overlook Condominium II
 Project Location: Columbia, Maryland
 Project Number: 21-1232
 Date of Study: January 2022
 Month Contributions Commence: January 2023

Interest Rate: 1.00%
 Inflation Rate: 3.00%

	Replacement Cost	RESERVES			CONTRIBUTION		
		Present Fund	Required Fund	Surplus (Deficit)	Basic Annual	Adjustment*	Total
Architectural	\$2,050,078	\$724,857	\$1,137,866	(\$413,009)	\$87,889	\$34,215	\$122,104
Site	\$279,980	\$127,590	\$200,288	(\$72,698)	\$18,495	\$12,205	\$30,700
Miscellaneous	\$8,750	\$3,664	\$5,752	(\$2,088)	\$456	\$223	\$679
TOTALS	\$2,338,808	\$856,111	\$1,343,905	(\$487,794)	\$106,840	\$46,643	\$153,482



Component Schedule

Project Name: Villas At Snowden Overlook Condominium II
Project Location: Columbia, Maryland
Project Number: 21-1232
Date of Study: January 2022
Month Contributions Commence: January 2023

Interest Rate: 1.00%
Inflation Rate: 3.00%

Description	Replacement Cost	Est. Rem. Life	Typical Life	Basic Annual Contrib.	Percent Total	Present Fund	Required Fund	Surplus (Deficit)	Contrib. Adjustment
Architectural									
Gutters and Downspouts	\$90,250	11	25	\$4,701	4.41%	\$37,795	\$59,329	(\$21,535)	\$2,298
Masonry Brick and Stone Veneer Restoration, 20%	\$78,960	26	40	\$2,695	2.69%	\$23,034	\$36,158	(\$13,124)	\$660
Metal Roofing	\$119,600	26	40	\$4,082	4.08%	\$34,889	\$54,768	(\$19,879)	\$1,000
Roof, Shingles	\$907,868	11	25	\$47,288	44.41%	\$380,193	\$596,819	(\$216,626)	\$23,118
Siding, Vinyl	\$853,400	26	40	\$29,124	29.08%	\$248,947	\$390,792	(\$141,845)	\$7,138
Site									
Asphalt Paving	\$175,560	6	20	\$11,112	10.10%	\$86,472	\$135,742	(\$49,270)	\$9,070
Asphalt Paving, Crack Fill	\$5,500	3	5	\$1,198	0.17%	\$1,479	\$2,322	(\$843)	\$297
Concrete Catch Basin Allowance	\$4,000	16	30	\$177	0.17%	\$1,462	\$2,295	(\$833)	\$64
Concrete Curb, 15%	\$37,548	9	20	\$2,377	1.76%	\$15,102	\$23,706	(\$8,605)	\$1,097
Concrete Sidewalks, 20%	\$57,372	9	20	\$3,631	2.70%	\$23,075	\$36,222	(\$13,148)	\$1,677
Miscellaneous									
Mailbox Clusters	\$8,750	11	25	\$456	0.43%	\$3,664	\$5,752	(\$2,088)	\$223
Totals	\$2,338,808			\$106,840	100.00%	\$856,111	\$1,343,905	(\$487,794)	\$46,643



Component Detail

Project Name: Villas At Snowden Overlook Condominium II
Project Location: Columbia, Maryland
Project Number: 21-1232
Date of Study: January 2022
Month Contributions Commence: January 2023

Interest Rate: 1.00%
Inflation Rate: 3.00%

Architectural	Quantity	Replacement Cost	RESERVES			CONTRIBUTION		
			Present Fund	Required Fund	Surplus (Deficit)	Basic Annual	Adjustment*	Total
Gutters and Downspouts	9,500 LF	\$90,250	\$37,795	\$59,329	(\$21,535)	\$4,701	\$2,298	\$6,999
Masonry Brick and Stone Veneer Restoration, 20%	3,290 LS	\$78,960	\$23,034	\$36,158	(\$13,124)	\$2,695	\$660	\$3,355
Metal Roofing	52 EA	\$119,600	\$34,889	\$54,768	(\$19,879)	\$4,082	\$1,000	\$5,082
Roof, Shingles	213,616 SF	\$907,868	\$380,193	\$596,819	(\$216,626)	\$47,288	\$23,118	\$70,406
Siding, Vinyl	100,400 SF	\$853,400	\$248,947	\$390,792	(\$141,845)	\$29,124	\$7,138	\$36,262
TOTALS		\$2,050,078	\$724,857	\$1,137,866	(\$413,009)	\$87,889	\$34,215	\$122,104



Component Detail

Project Name: Villas At Snowden Overlook Condominium II
Project Location: Columbia, Maryland
Project Number: 21-1232
Date of Study: January 2022
Month Contributions Commence: January 2023

Interest Rate: 1.00%
Inflation Rate: 3.00%

Site	Quantity	Replacement Cost	RESERVES			CONTRIBUTION		
			Present Fund	Required Fund	Surplus (Deficit)	Basic Annual	Adjustment*	Total
Asphalt Paving	7,980 SY	\$175,560	\$86,472	\$135,742	(\$49,270)	\$11,112	\$9,070	\$20,182
Asphalt Paving, Crack Fill	1 LS	\$5,500	\$1,479	\$2,322	(\$843)	\$1,198	\$297	\$1,494
Concrete Catch Basin Allowance	1 LS	\$4,000	\$1,462	\$2,295	(\$833)	\$177	\$64	\$241
Concrete Curb, 15%	894 LF	\$37,548	\$15,102	\$23,706	(\$8,605)	\$2,377	\$1,097	\$3,474
Concrete Sidewalks, 20%	4,781 SF	\$57,372	\$23,075	\$36,222	(\$13,148)	\$3,631	\$1,677	\$5,308
TOTALS		\$279,980	\$127,590	\$200,288	(\$72,698)	\$18,495	\$12,205	\$30,700



Component Detail

Project Name: Villas At Snowden Overlook Condominium II
 Project Location: Columbia, Maryland
 Project Number: 21-1232
 Date of Study: January 2022
 Month Contributions Commence: January 2023

Interest Rate: 1.00%
 Inflation Rate: 3.00%

Miscellaneous	Quantity	Replacement Cost	RESERVES			CONTRIBUTION		
			Present Fund	Required Fund	Surplus (Deficit)	Basic Annual	Adjustment*	Total
Mailbox Clusters	5 EA	\$8,750	\$3,664	\$5,752	(\$2,088)	\$456	\$223	\$679
TOTALS		\$8,750	\$3,664	\$5,752	(\$2,088)	\$456	\$223	\$679



Disbursement Schedule

Project Name: Villas At Snowden Overlook Condominium II
 Project Location: Columbia, Maryland
 Project Number: 21-1232
 Date of Study: January 2022
 Month Contributions Commence: January 2023

Interest Rate: 1.00%
 Inflation Rate: 3.00%

Year	Description	Base Cost	Future Replacement Cost
2026	Asphalt Paving, Crack Fill	\$5,500	\$6,010
		\$5,500	\$6,010
2029	Asphalt Paving	\$175,560	\$209,628
		\$175,560	\$209,628
2031	Asphalt Paving, Crack Fill	\$5,500	\$6,967
		\$5,500	\$6,967
2032	Concrete Curb, 15%	\$37,548	\$48,992
	Concrete Sidewalks, 20%	\$57,372	\$74,857
		\$94,920	\$123,849
2034	Gutters and Downspouts	\$90,250	\$124,927
	Mailbox Clusters	\$8,750	\$12,112
	Roof, Shingles	\$907,868	\$1,256,702
		\$1,006,868	\$1,393,741
2036	Asphalt Paving, Crack Fill	\$5,500	\$8,077
		\$5,500	\$8,077
2039	Concrete Catch Basin Allowance	\$4,000	\$6,419
		\$4,000	\$6,419
2041	Asphalt Paving, Crack Fill	\$5,500	\$9,363
		\$5,500	\$9,363



Disbursement Schedule

Project Name: Villas At Snowden Overlook Condominium II
 Project Location: Columbia, Maryland
 Project Number: 21-1232
 Date of Study: January 2022
 Month Contributions Commence: January 2023

Interest Rate: 1.00%
 Inflation Rate: 3.00%

Year	Description	Base Cost	Future Replacement Cost
<hr/>			
2046	Asphalt Paving, Crack Fill	\$5,500	\$10,855
		\$5,500	\$10,855
<hr/>			
2049	Asphalt Paving	\$175,560	\$378,611
	Masonry Brick and Stone Veneer Restoration, 20%	\$78,960	\$170,284
	Metal Roofing	\$119,600	\$257,928
	Siding, Vinyl	\$853,400	\$1,840,435
		\$1,227,520	\$2,647,259
<hr/>			
2051	Asphalt Paving, Crack Fill	\$5,500	\$12,584
		\$5,500	\$12,584
<hr/>			
2052	Concrete Curb, 15%	\$37,548	\$88,484
	Concrete Sidewalks, 20%	\$57,372	\$135,201
		\$94,920	\$223,685



Reserve Fund Scenario

Project Name: Villas At Snowden Overlook Condominium II
Project Location: Columbia, Maryland
Project Number: 21-1232
Date of Study: January 2022
Month Contributions Commence: January 2023

Calculation Method: Component

Interest Rate: 1.00%
Inflation Rate: 3.00%

Year	Opening Balance	Annual Contribution	Contribution Adjustment	Disbursements	Earned Interest	Closing Balance
2023	\$856,111	\$106,840	\$46,643	\$0	\$9,392	\$1,018,986
2024	\$1,018,986	\$110,045	\$48,042	\$0	\$11,046	\$1,188,119
2025	\$1,188,119	\$113,346	\$49,483	\$0	\$12,763	\$1,363,711
2026	\$1,363,711	\$116,747	\$50,644	\$6,010	\$14,544	\$1,539,635
2027	\$1,539,635	\$120,249	\$52,163	\$0	\$16,330	\$1,728,377
2028	\$1,728,377	\$123,856	\$53,728	\$0	\$18,246	\$1,924,207
2029	\$1,924,207	\$127,572	\$44,509	\$209,628	\$20,174	\$1,906,835
2030	\$1,906,835	\$131,399	\$45,845	\$0	\$20,028	\$2,104,108
2031	\$2,104,108	\$135,341	\$47,220	\$6,967	\$22,030	\$2,301,732
2032	\$2,301,732	\$139,401	\$45,017	\$123,849	\$24,016	\$2,386,317
2033	\$2,386,317	\$143,583	\$46,367	\$0	\$24,892	\$2,601,160
2034	\$2,601,160	\$147,891	\$12,268	\$1,393,741	\$26,879	\$1,394,457
2035	\$1,394,457	\$152,328	\$12,636	\$0	\$14,838	\$1,574,259
2036	\$1,574,259	\$156,898	\$13,015	\$8,077	\$16,663	\$1,752,757
2037	\$1,752,757	\$161,604	\$13,405	\$0	\$18,476	\$1,946,243
2038	\$1,946,243	\$166,453	\$13,808	\$0	\$20,439	\$2,146,942
2039	\$2,146,942	\$171,446	\$14,119	\$6,419	\$22,475	\$2,348,563
2040	\$2,348,563	\$176,590	\$14,543	\$0	\$24,521	\$2,564,216
2041	\$2,564,216	\$181,887	\$14,979	\$9,363	\$26,709	\$2,778,427
2042	\$2,778,427	\$187,344	\$15,428	\$0	\$28,883	\$3,010,082
2043	\$3,010,082	\$192,964	\$15,891	\$0	\$31,232	\$3,250,170
2044	\$3,250,170	\$198,753	\$16,368	\$0	\$33,667	\$3,498,958
2045	\$3,498,958	\$204,716	\$16,859	\$0	\$36,190	\$3,756,722
2046	\$3,756,722	\$210,857	\$17,365	\$10,855	\$38,803	\$4,012,893
2047	\$4,012,893	\$217,183	\$17,886	\$0	\$41,402	\$4,289,363
2048	\$4,289,363	\$223,698	\$18,422	\$0	\$44,205	\$4,575,689
2049	\$4,575,689	\$230,409	\$0	\$2,647,259	\$47,005	\$2,205,845
2050	\$2,205,845	\$237,322	\$0	\$0	\$23,344	\$2,466,510
2051	\$2,466,510	\$244,441	\$0	\$12,584	\$25,989	\$2,724,357
2052	\$2,724,357	\$251,774	\$0	\$223,685	\$28,607	\$2,781,054
2053	\$2,781,054	\$259,328	\$0	\$0	\$29,215	\$3,069,596



Reserve Fund Scenario

Project Name: Villas At Snowden Overlook Condominium II
Project Location: Columbia, Maryland
Project Number: 21-1232
Date of Study: January 2022
Month Contributions Commence: January 2023

Calculation Method: 5% of Rep. Cost
Minimum Balance: \$116,940
Interest Rate: 1.00%
Inflation Rate: 3.00%

Year	Opening Balance	Annual Contribution	Contribution Adjustment	Disbursements	Earned Interest	Closing Balance
2023	\$856,111	\$81,006	\$0	\$0	\$9,000	\$946,117
2024	\$946,117	\$83,436	\$0	\$0	\$9,913	\$1,039,466
2025	\$1,039,466	\$85,939	\$0	\$0	\$10,860	\$1,136,265
2026	\$1,136,265	\$88,517	\$0	\$6,010	\$11,842	\$1,230,614
2027	\$1,230,614	\$91,173	\$0	\$0	\$12,800	\$1,334,587
2028	\$1,334,587	\$93,908	\$0	\$0	\$13,855	\$1,442,350
2029	\$1,442,350	\$96,725	\$0	\$209,628	\$14,947	\$1,344,394
2030	\$1,344,394	\$99,627	\$0	\$0	\$13,984	\$1,458,005
2031	\$1,458,005	\$102,616	\$0	\$6,967	\$15,136	\$1,568,790
2032	\$1,568,790	\$105,694	\$0	\$123,849	\$16,260	\$1,566,895
2033	\$1,566,895	\$108,865	\$0	\$0	\$16,259	\$1,692,019
2034	\$1,692,019	\$112,131	\$0	\$1,393,741	\$17,528	\$427,937
2035	\$427,937	\$115,495	\$0	\$0	\$4,905	\$548,337
2036	\$548,337	\$118,960	\$0	\$8,077	\$6,128	\$665,348
2037	\$665,348	\$122,529	\$0	\$0	\$7,317	\$795,194
2038	\$795,194	\$126,205	\$0	\$0	\$8,636	\$930,035
2039	\$930,035	\$129,991	\$0	\$6,419	\$10,004	\$1,063,611
2040	\$1,063,611	\$133,891	\$0	\$0	\$11,361	\$1,208,863
2041	\$1,208,863	\$137,908	\$0	\$9,363	\$12,836	\$1,350,244
2042	\$1,350,244	\$142,045	\$0	\$0	\$14,272	\$1,506,561
2043	\$1,506,561	\$146,306	\$0	\$0	\$15,858	\$1,668,725
2044	\$1,668,725	\$150,695	\$0	\$0	\$17,504	\$1,836,924
2045	\$1,836,924	\$155,216	\$0	\$0	\$19,210	\$2,011,350
2046	\$2,011,350	\$159,872	\$0	\$10,855	\$20,979	\$2,181,346
2047	\$2,181,346	\$164,668	\$0	\$0	\$22,705	\$2,368,719
2048	\$2,368,719	\$169,608	\$0	\$0	\$24,606	\$2,562,933
2049	\$2,562,933	\$174,696	\$0	\$2,647,259	\$26,576	\$116,946
2050	\$116,946	\$179,937	\$0	\$0	\$2,144	\$299,027
2051	\$299,027	\$185,335	\$0	\$12,584	\$3,994	\$475,772
2052	\$475,772	\$190,895	\$0	\$223,685	\$5,792	\$448,774
2053	\$448,774	\$196,622	\$0	\$0	\$5,553	\$650,949

Reserve Fund Scenario

Project Name: Villas At Snowden Overlook Condominium II
 Project Location: Columbia, Maryland
 Project Number: 21-1232
 Date of Study: January 2022
 Month Contributions Commence: January 2023

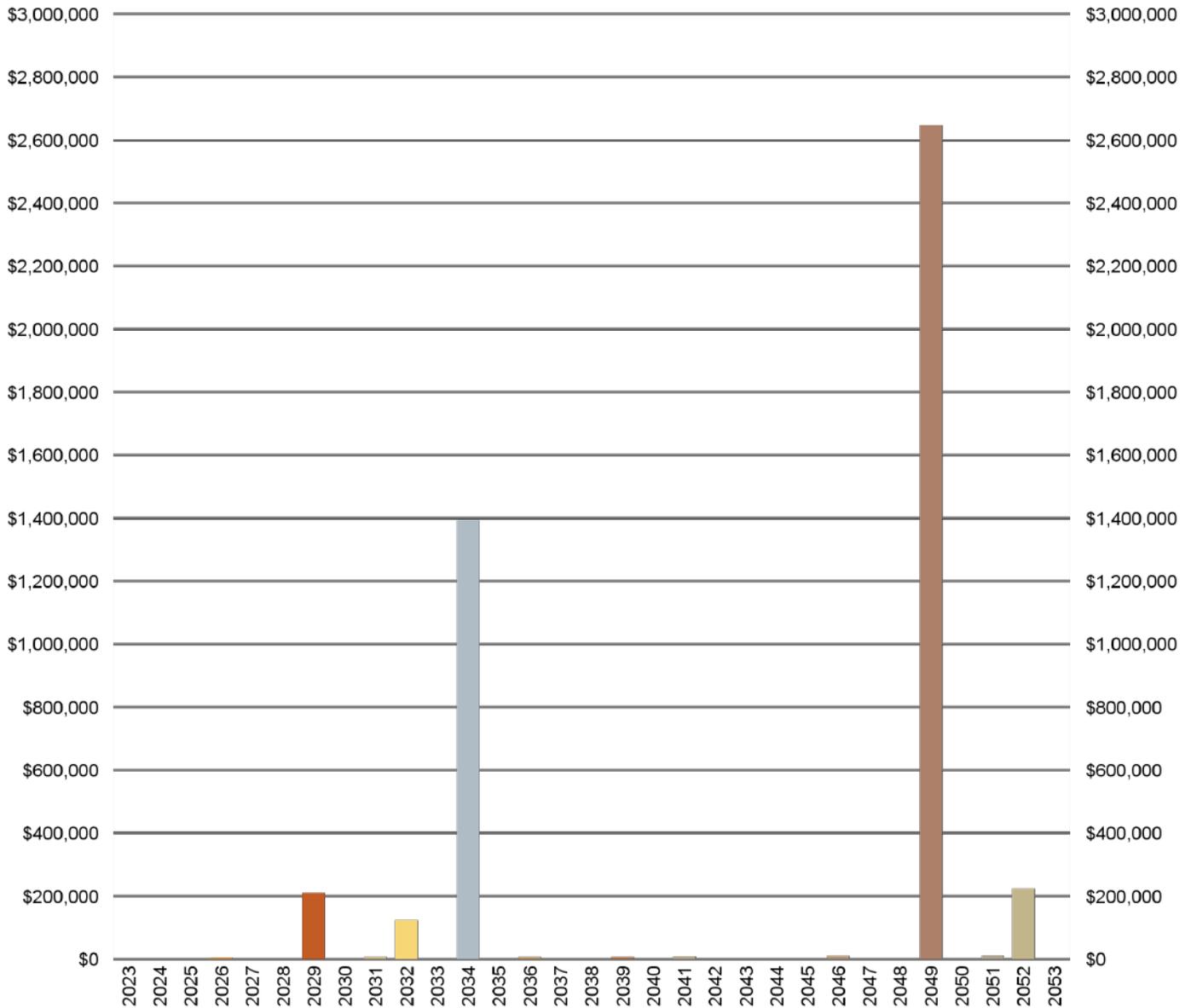
Calculation Method: 10% of Rep. Cost
 Minimum Balance: \$233,881
 Interest Rate: 1.00%
 Inflation Rate: 3.00%

Year	Opening Balance	Annual Contribution	Contribution Adjustment	Disbursements	Earned Interest	Closing Balance
2023	\$856,111	\$83,554	\$0	\$0	\$9,014	\$948,679
2024	\$948,679	\$86,061	\$0	\$0	\$9,953	\$1,044,693
2025	\$1,044,693	\$88,643	\$0	\$0	\$10,927	\$1,144,263
2026	\$1,144,263	\$91,302	\$0	\$6,010	\$11,937	\$1,241,492
2027	\$1,241,492	\$94,041	\$0	\$0	\$12,924	\$1,348,457
2028	\$1,348,457	\$96,862	\$0	\$0	\$14,009	\$1,459,328
2029	\$1,459,328	\$99,768	\$0	\$209,628	\$15,134	\$1,364,602
2030	\$1,364,602	\$102,761	\$0	\$0	\$14,203	\$1,481,566
2031	\$1,481,566	\$105,844	\$0	\$6,967	\$15,389	\$1,595,832
2032	\$1,595,832	\$109,019	\$0	\$123,849	\$16,549	\$1,597,551
2033	\$1,597,551	\$112,290	\$0	\$0	\$16,584	\$1,726,425
2034	\$1,726,425	\$115,659	\$0	\$1,393,741	\$17,891	\$466,234
2035	\$466,234	\$119,129	\$0	\$0	\$5,308	\$590,671
2036	\$590,671	\$122,703	\$0	\$8,077	\$6,571	\$711,868
2037	\$711,868	\$126,384	\$0	\$0	\$7,803	\$846,055
2038	\$846,055	\$130,176	\$0	\$0	\$9,166	\$985,397
2039	\$985,397	\$134,081	\$0	\$6,419	\$10,580	\$1,123,639
2040	\$1,123,639	\$138,103	\$0	\$0	\$11,984	\$1,273,726
2041	\$1,273,726	\$142,246	\$0	\$9,363	\$13,508	\$1,420,117
2042	\$1,420,117	\$146,513	\$0	\$0	\$14,995	\$1,581,625
2043	\$1,581,625	\$150,908	\$0	\$0	\$16,634	\$1,749,167
2044	\$1,749,167	\$155,435	\$0	\$0	\$18,334	\$1,922,936
2045	\$1,922,936	\$160,098	\$0	\$0	\$20,097	\$2,103,131
2046	\$2,103,131	\$164,901	\$0	\$10,855	\$21,925	\$2,279,102
2047	\$2,279,102	\$169,848	\$0	\$0	\$23,711	\$2,472,661
2048	\$2,472,661	\$174,943	\$0	\$0	\$25,674	\$2,673,278
2049	\$2,673,278	\$180,191	\$0	\$2,647,259	\$27,709	\$233,919
2050	\$233,919	\$185,597	\$0	\$0	\$3,345	\$422,861
2051	\$422,861	\$191,165	\$0	\$12,584	\$5,264	\$606,706
2052	\$606,706	\$196,900	\$0	\$223,685	\$7,134	\$587,055
2053	\$587,055	\$202,807	\$0	\$0	\$6,969	\$796,831

Disbursements by Year

Project Name: Villas At Snowden Overlook Condominium II
Project Location: Columbia, Maryland
Project Number: 21-1232
Date of Study: January 2022

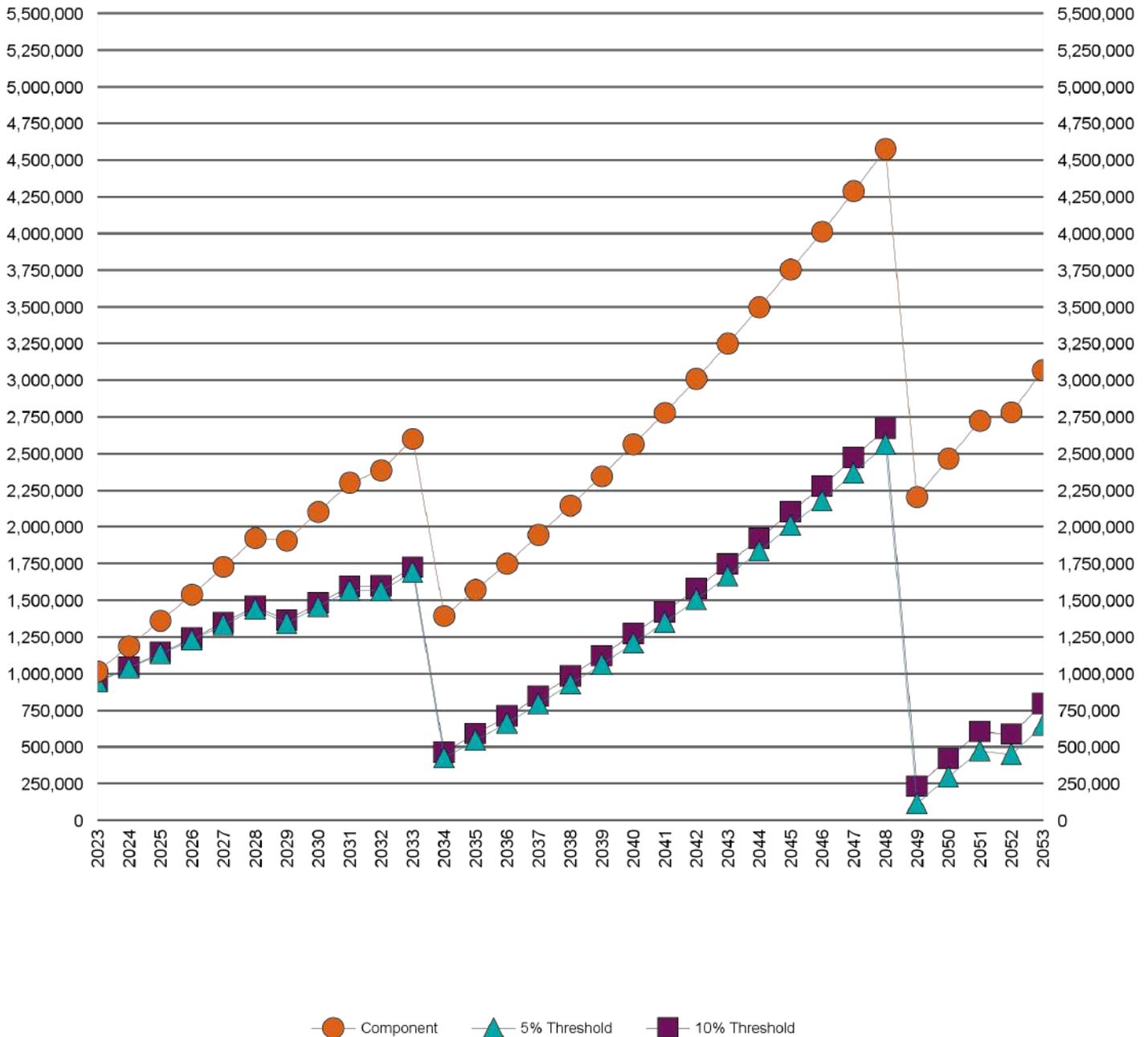
Interest Rate: 1.00%
Inflation Rate: 3.00%



Reserve Fund Closing Balance

Project Name: Villas At Snowden Overlook Condominium II
 Project Location: Columbia, Maryland
 Project Number: 21-1232
 Date of Study: January 2022

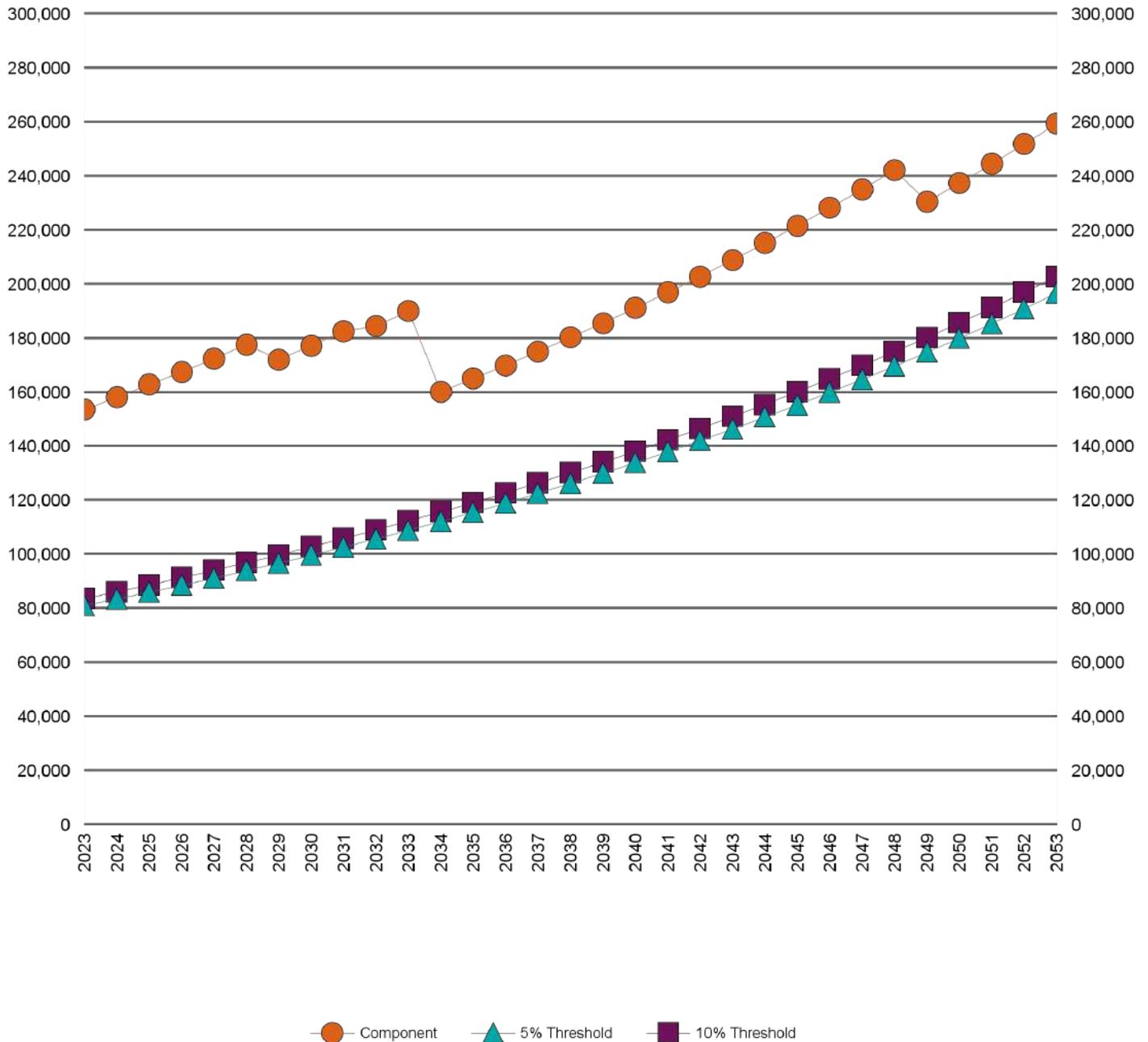
Interest Rate: 1.00%
 Inflation Rate: 3.00%



Reserve Fund Contributions

Project Name: Villas At Snowden Overlook Condominium II
 Project Location: Columbia, Maryland
 Project Number: 21-1232
 Date of Study: January 2022

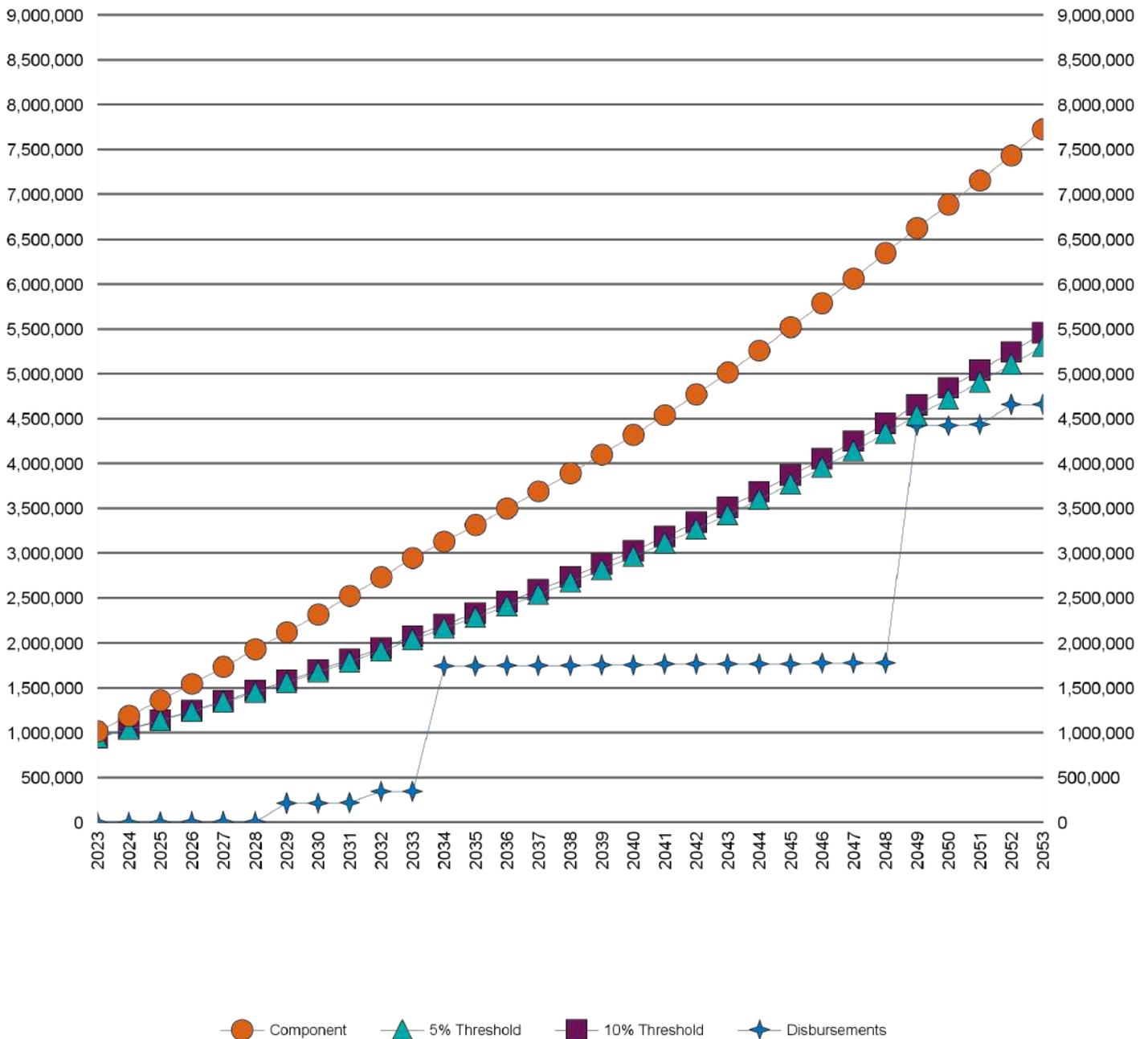
Interest Rate: 1.00%
 Inflation Rate: 3.00%



Cumulative Contributions and Disbursements

Project Name: Villas At Snowden Overlook Condominium II
 Project Location: Columbia, Maryland
 Project Number: 21-1232
 Date of Study: January 2022

Interest Rate: 1.00%
 Inflation Rate: 3.00%



Definitions

Definitions

Base Cost - See definition "Current Replacement Cost Allowance." This calculation, based on current costs, is increased according to the assumed rates of inflation in the "Disbursement Schedule."

Basic Annual Contribution - This is the amount that should have been contributed each year, while considering assumed rates of interest and inflation, to accumulate a reserve equal to the Current Replacement Cost at the anticipated replacement time (end-of-life). This is roughly calculated.

Contribution Adjustment - If the capital reserve fund for a component is not fully funded, this is the increase in annual contributions that would be required to fully fund the reserve before the estimated end-of-life. If the capital reserve fund for a component is over-funded, this is the decrease in annual contributions that would offset the over-funded condition.

Contribution, Total - This is the recommended Basic Annual Contribution plus the "Contribution Adjustment" (see definition) required to make up for past underfunding before replacement of the component is estimated to be required. The amount can decrease in future years because the required Contribution Adjustment decreases each year in which a reserve fund for a capital component is fully funded.

Current Replacement Cost - The estimated cost to replace a component in kind at the time of the Study.

Estimated Remaining Life - The anticipated number of years before replacement of this component can be expected to be necessary. This is based on the normal life, the current age, and an engineering assessment that considers site-specific condition.

Deficit - This shows the amount that the Present Fund is undercapitalized. It is the present fund minus the Required Fund, A positive number (surplus) means excess cash reserves have been set aside to date. A negative number indicates a deficit in the Present Fund; this underfunding can be made up in one of two ways: 1) an increase in the annual fees to catch up or, 2) a special assessment between now and when the component requires replacement. This Study assumes the second method is used and recommends annual makeup on that basis.

Interest - Interest accumulated on the capital reserve fund deposit based on the assumed interest rate listed at the top of the "Projected Cash Flow" pages.

Inflation - The increased cost of future replacement expenditures are based on an assumed rate of inflation.

Opening Balance - On the "Projected Cash Flow" pages, this is the reported total reserve fund on deposit

for the condominium Association.

Percent Funded - Represents the ratio of the Reserve Fund balance to the Required Fund or Fully Funded Balance. This is a measure of the financial health of the Reserve Fund and an indicator of the risk of the future necessity of special assessments.

Percentage Of Total - Percent of total recommended Basic Annual Contribution. This shows the significance of specific components relative to required contributions to the capital reserve fund.

Present Age - Age of the component at the time of this Study.

Present Fund - Present funds set aside for capital component replacement at this time. If present funds are not reserved for specific components but are an unallocated pool, the total present funds allocated between the components according to the Percentage Of Total column.

Required Fund - This amount should have been set aside for each component in the fund to be considered fully funded.

Surplus - This shows the amount that the Present Fund is overcapitalized. It is the present fund minus the Required Fund. A positive number (surplus) means excess cash reserves have been set aside to date.

Typical Life - The anticipated number of years that a component may be expected to provide adequate service. Please note that this is based on industry standards. A component may outlive, or require replacement prior to, its typical life.

Abbreviations:

EA - Each

LF - Linear Foot

LS - Lump Sum

SF - Square Foot

SY - Square Yard