

Full Reserve Study Woodbine Homes Association Blacksburg, Virginia



**Prepared for FY 2020
Report Date: February 14, 2020**





February 14, 2020

Mr. Scott Rapier, President
Woodbine Homes Association
2101 Broken Oak Drive
Blacksburg Virginia 24060

Re: Reserve Study Report for Woodbine Homes Association

Dear Mr. Rapier:

Community Advisors is pleased to provide this Reserve Study report for the above referenced Association. A site visit was conducted to determine the condition of your major components and provide an opinion of their remaining useful life.

We have developed a plan to fund future capital component replacements which is dependent on adequate funding, component maintenance, usage, weather and other factors. Component replacement cost is determined using local vendors and industry standard publications. This Reserve Study was prepared under the guidelines of the National Reserve Study Standards which is administrated by CAI and the Standards of Practice establish by APRA. Once you have reviewed this report and considered recent expenditures and any historic cost data, we will make necessary adjustments

Respectively submitted,

Charles R. Sheppard *RS PRA CCI*
Professional Reserve Analyst

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Woodbine Homes Association
Blacksburg, Virginia
Executive Summary

Report Date	February 14, 2020
Account Number	1567
Version	1
Budget Year Beginning	January 1, 2020
Budget Year Ending	December 31, 2020
Total Units	170

<i>Report Parameters</i>	
Inflation	2.50%
Annual Assessment Increase	3.00%
Interest Rate on Reserve Deposit	1.50%
2020 Beginning Balance	\$49,653

PROPERTY INFORMATION

- Date of Completion: January 1, 1987
- Date of site visit: December 12, 2019
- Components Included: 4
- Current replacement cost: \$98,128

FINANCIAL INFORMATION

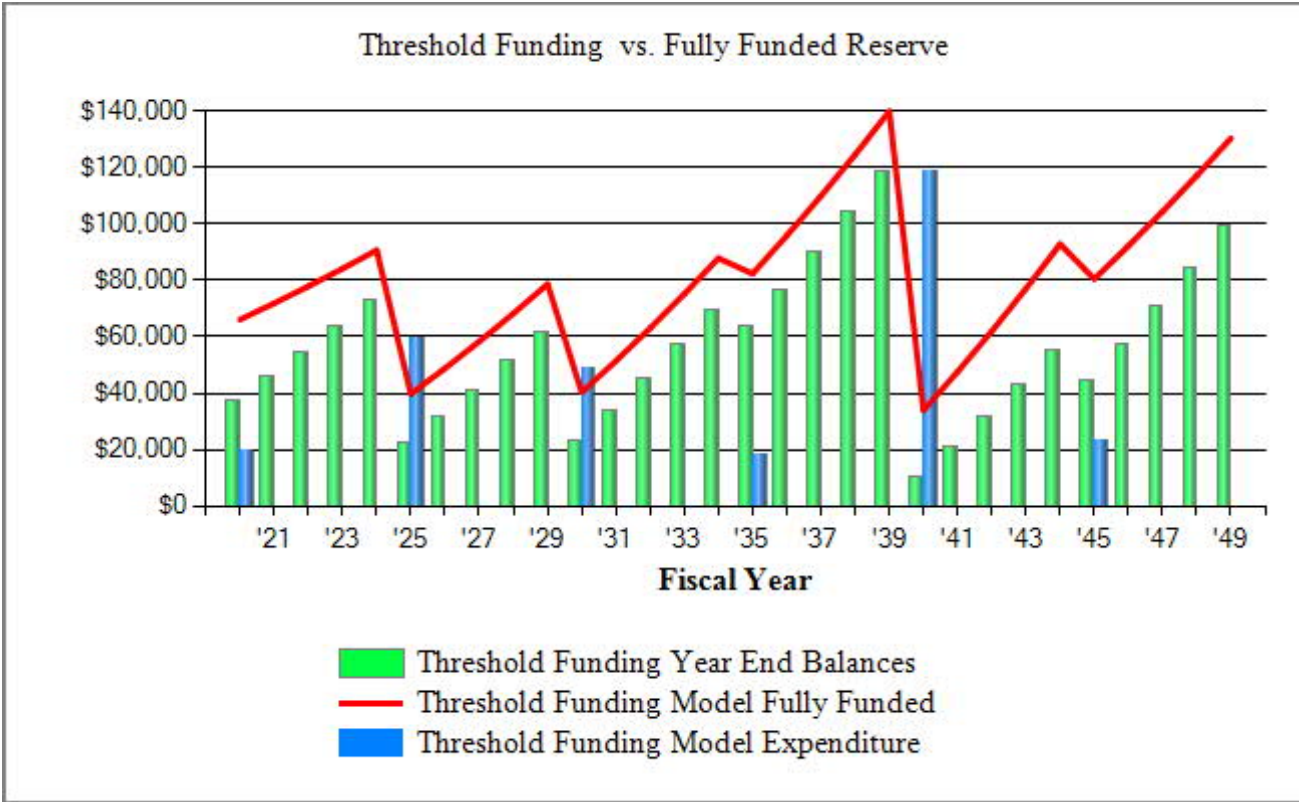
- Level of Service: Level I Full Reserve Study
- Funding Method: The Cash Flow Method
- Funding Goal: Adequate funding with moderate contributions
- Fully Funded Reserve Balance: \$80,621.
- Full Funding Contribution: of \$35,969 provides minimum risk of deferred component replacement or special assessment
- Recommend Funding Contribution: Annual contribution of \$7,397 for FY 2020 provides adequate funding assuming no unknown construction defects are present, regular preventative maintenance is performed and this study is updated regularly
- Update includes evaluation of new and replaced components, adjustment of current replacement cost and updating interest and inflation rates. We recommend a financial update annually with site visits on a 2-3-year schedule.

<i>Threshold Funding Model Summary of Calculations</i>	
Required Annual Contribution	\$7,396.65
<i>\$43.51 per unit annually</i>	
Average Net Annual Interest Earned	<u>\$555.74</u>
Total Annual Allocation to Reserves	\$7,952.39
<i>\$46.78 per unit annually</i>	

**Woodbine Homes Association
Threshold Funded Plan**

Beginning Balance: \$49,653

Year	Current Cost	Annual Contribution	Annual Interest	Annual Expenditures	Projected Ending Reserves	Fully Funded Reserves	Percent Funded
2020	98,128	7,397	556	20,000	37,605	66,142	57%
2021	100,581	7,619	678		45,902	71,902	64%
2022	103,096	7,847	806		54,556	77,909	70%
2023	105,673	8,083	940		63,578	84,171	76%
2024	108,315	8,325	1,079		72,981	90,697	80%
2025	111,023	8,575	330	59,544	22,342	39,801	56%
2026	113,798	8,832	468		31,642	48,861	65%
2027	116,643	9,097	611		41,350	58,350	71%
2028	119,559	9,370	761		51,481	68,283	75%
2029	122,548	9,651	917		62,049	78,676	79%
2030	125,612	9,940	348	48,807	23,530	40,413	58%
2031	128,752	10,239	507		34,275	51,466	67%
2032	131,971	10,546	672		45,493	63,046	72%
2033	135,271	10,862	845		57,201	75,174	76%
2034	138,652	11,188	1,026		69,415	87,868	79%
2035	142,119	11,524	940	18,289	63,589	82,403	77%
2036	145,672	11,869	1,132		76,590	95,826	80%
2037	149,313	12,226	1,332		90,148	109,868	82%
2038	153,046	12,592	1,541		104,282	124,552	84%
2039	156,872	12,970	1,759		119,010	139,902	85%
2040	160,794	10,035	151	119,009	10,187	33,957	30%
2041	164,814	10,337	308		20,831	47,661	44%
2042	168,934	10,647	472		31,950	62,029	52%
2043	173,158	10,966	644		43,560	77,086	57%
2044	177,487	11,295	823		55,678	92,857	60%
2045	181,924	11,634	659	23,412	44,559	80,572	55%
2046	162,475	11,983	848		57,390	92,212	62%
2047	166,537	12,342	1,046		70,778	104,383	68%
2048	170,700	12,713	1,252		84,743	117,106	72%
2049	174,968	13,094	1,468		99,304	130,399	76%



This chart illustrates year end balances compared to a fully funded reserve with annual expenditures. The Threshold Funding Plan maintains lower annual balances while providing funding for annual expenditures.

**Woodbine Homes Association
Income & Expense Spreadsheet**

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Beginning Balance	49,653	37,605	45,902	54,556	63,578	72,981	22,342	31,642	41,350	51,481
Annual Assessment	7,397	7,619	7,847	8,083	8,325	8,575	8,832	9,097	9,370	9,651
Interest Earned	556	678	806	940	1,079	330	468	611	761	917
Expenditures	20,000					59,544				
Fully Funded Reserves	66,142	71,902	77,909	84,171	90,697	39,801	48,861	58,350	68,283	78,676
Percent Fully Funded	57%	64%	70%	76%	80%	56%	65%	71%	75%	79%
Ending Balance	37,605	45,902	54,556	63,578	72,981	22,342	31,642	41,350	51,481	62,049

Description

Misc. Site Components

Asphalt Walking Path						14,287				
Drainage Improvement Allowance	20,000									
Wood Bridge Repair/Replace										
Misc. Site Components Total:	20,000					14,287				

Playground

Play Equipment Allowance						45,256				
Playground Total:						45,256				

Components Not Included

Monument Sign	<i>Unfunded</i>									
Playground Play Surface	<i>Unfunded</i>									
Playground Play Surface Borders	<i>Unfunded</i>									

Year Total:	20,000					59,544				
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**Woodbine Homes Association
Income & Expense Spreadsheet**

	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
Beginning Balance	62,049	23,530	34,275	45,493	57,201	69,415	63,589	76,590	90,148	104,282
Annual Assessment	9,940	10,239	10,546	10,862	11,188	11,524	11,869	12,226	12,592	12,970
Interest Earned	348	507	672	845	1,026	940	1,132	1,332	1,541	1,759
Expenditures	48,807					18,289				
Fully Funded Reserves	40,413	51,466	63,046	75,174	87,868	82,403	95,826	109,868	124,552	139,902
Percent Fully Funded	58%	67%	72%	76%	79%	77%	80%	82%	84%	85%
Ending Balance	23,530	34,275	45,493	57,201	69,415	63,589	76,590	90,148	104,282	119,010

Description

Misc. Site Components

Asphalt Walking Path	16,165					18,289				
Drainage Improvement Allowance										
Wood Bridge Repair/Replace	32,642									
Misc. Site Components Total:	48,807					18,289				

Playground

Play Equipment Allowance										
Playground Total:										

Components Not Included

Monument Sign	<i>Unfunded</i>									
Playground Play Surface	<i>Unfunded</i>									
Playground Play Surface Borders	<i>Unfunded</i>									

Year Total:

48,807

18,289

**Woodbine Homes Association
Income & Expense Spreadsheet**

	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049
Beginning Balance	119,010	10,187	20,831	31,950	43,560	55,678	44,559	57,390	70,778	84,743
Annual Assessment	10,035	10,337	10,647	10,966	11,295	11,634	11,983	12,342	12,713	13,094
Interest Earned	151	308	472	644	823	659	848	1,046	1,252	1,468
Expenditures	119,009					23,412				
Fully Funded Reserves	33,957	47,661	62,029	77,086	92,857	80,572	92,212	104,383	117,106	130,399
Percent Fully Funded	30%	44%	52%	57%	60%	55%	62%	68%	72%	76%
Ending Balance	10,187	20,831	31,950	43,560	55,678	44,559	57,390	70,778	84,743	99,304

Description

Misc. Site Components

Asphalt Walking Path	20,692					23,412				
Drainage Improvement Allowance	32,772									
Wood Bridge Repair/Replace										
Misc. Site Components Total:	53,465					23,412				

Playground

Play Equipment Allowance	65,545									
Playground Total:	65,545									

Components Not Included

Monument Sign	<i>Unfunded</i>									
Playground Play Surface	<i>Unfunded</i>									
Playground Play Surface Borders	<i>Unfunded</i>									

Year Total:

119,009

23,412

**Woodbine Homes Association
Annual Expenditure Detail**

Description	Expenditures
Replacement Year 2020	
Misc. Site Components	
Drainage Improvement Allowance	20,000
Total for 2020	<u>\$20,000</u>
 <i>No Replacement in 2021</i>	
<i>No Replacement in 2022</i>	
<i>No Replacement in 2023</i>	
<i>No Replacement in 2024</i>	
 Replacement Year 2025	
Misc. Site Components	
Asphalt Walking Path	14,287
Playground	
Play Equipment Allowance	45,256
Total for 2025	<u>\$59,544</u>
 <i>No Replacement in 2026</i>	
<i>No Replacement in 2027</i>	
<i>No Replacement in 2028</i>	
<i>No Replacement in 2029</i>	
 Replacement Year 2030	
Misc. Site Components	
Asphalt Walking Path	16,165
Wood Bridge Repair/Replace	32,642
Total for 2030	<u>\$48,807</u>
 <i>No Replacement in 2031</i>	
<i>No Replacement in 2032</i>	
<i>No Replacement in 2033</i>	
<i>No Replacement in 2034</i>	
 Replacement Year 2035	
Misc. Site Components	
Asphalt Walking Path	18,289
Total for 2035	<u>\$18,289</u>

**Woodbine Homes Association
Annual Expenditure Detail**

Description	Expenditures
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No Replacement in 2036
No Replacement in 2037
No Replacement in 2038
No Replacement in 2039

Replacement Year 2040

Misc. Site Components

Asphalt Walking Path	20,692
Drainage Improvement Allowance	32,772

Playground

Play Equipment Allowance	65,545
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Total for 2040	<u>\$119,009</u>
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No Replacement in 2041
No Replacement in 2042
No Replacement in 2043
No Replacement in 2044

Replacement Year 2045

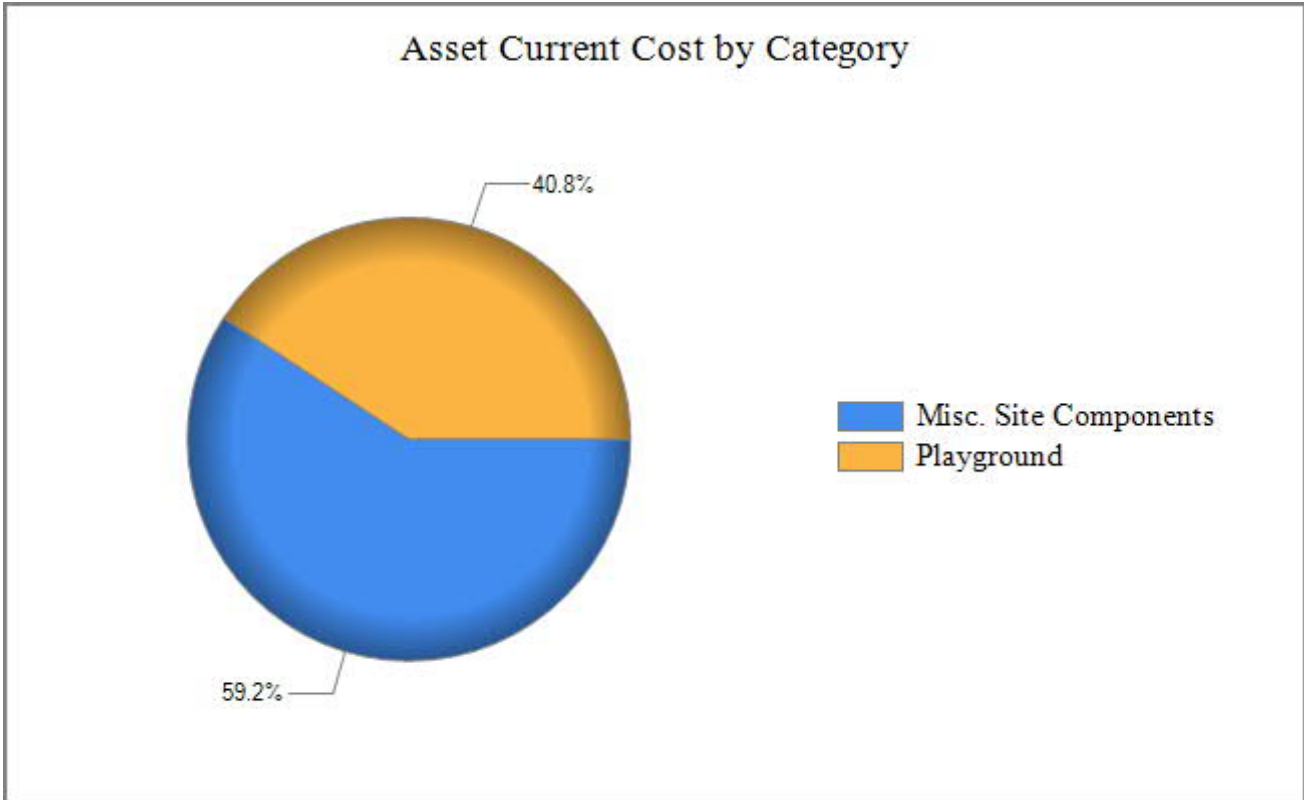
Misc. Site Components

Asphalt Walking Path	23,412
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Total for 2045	<u>\$23,412</u>
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No Replacement in 2046
No Replacement in 2047
No Replacement in 2048
No Replacement in 2049

**Woodbine Homes Association
Asset Current Cost by Category**



**Woodbine Homes Association
Component Inventory**

Description	<i>Date in Service</i>	<i>Replacement Year</i>	<i>Useful</i>	<i>Adjustment</i>	<i>Remaining</i>	<i>Units</i>	<i>Unit Cost</i>	<i>Current Cost</i>
Misc. Site Components								
Asphalt Walking Path	2020	2025	5	5	5	574 Square Yards	22.00	12,628
Drainage Improvement Allowance	1987	2020	20	0	0	1 Lump Sum	20,000.00	20,000
Wood Bridge Repair/Replace	1987	2030	20	23	10	3 Each	8,500.00	<u>25,500</u>
Misc. Site Components - Total								<u>\$58,128</u>
Playground								
Play Equipment Allowance	1987	2025	15	23	5	1 Lump Sum	40,000.00	<u>40,000</u>
Playground - Total								<u>\$40,000</u>
Components Not Included								
Monument Sign								<i>Unfunded</i>
Playground Play Surface								<i>Unfunded</i>
Playground Play Surface Borders								<i>Unfunded</i>
Components Not Included - Total								
Total Asset Summary								<u>\$98,128</u>

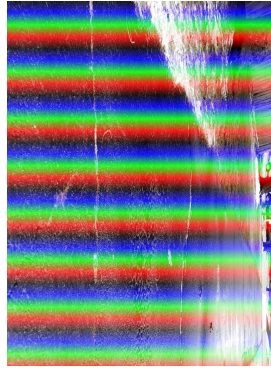
**Woodbine Homes Association
Component Detail Index**

Asset ID	Description	Replacement	Page
Misc. Site Components			
1001	Asphalt Walking Path	2025	5-3
1005	Drainage Improvement Allowance	2020	5-3
1006	Wood Bridge Repair/Replace	2030	5-4
Playground			
1004	Play Equipment Allowance	2025	5-5
Components Not Included			
1007	Monument Sign	Unfunded	5-6
1008	Playground Play Surface	Unfunded	5-6
1009	Playground Play Surface Borders	Unfunded	5-6
	Total Funded Assets	4	
	Total Unfunded Assets	<u>3</u>	
	Total Assets	7	

**Woodbine Homes Association
Component Detail**

Asphalt Walking Path - 2025

Asset ID	1001	574 Square Yards	@ \$22.00
		Asset Cost	\$12,628.00
		Percent Replacement	100%
		Future Cost	\$14,287.42
Misc. Site Components			
Placed in Service	January 2020		
Useful Life	5		
Adjustment	5		
Replacement Year	2025		
Remaining Life	5		



Total of 2,870 SY of asphalt replaced 20% every 5 years

Drainage Improvement Allowance - 2020

Asset ID	1005	1 Lump Sum	@ \$20,000.00
		Asset Cost	\$20,000.00
		Percent Replacement	100%
		Future Cost	\$20,000.00
Misc. Site Components			
Placed in Service	January 1987		
Useful Life	20		
Replacement Year	2020		
Remaining Life	0		

**Woodbine Homes Association
Component Detail**

Drainage Improvement Allowance continued...



Wood Bridge Repair/Replace - 2030

		3 Each	@ \$8,500.00
Asset ID	1006	Asset Cost	\$25,500.00
		Percent Replacement	100%
	Misc. Site Components	Future Cost	\$32,642.16
Placed in Service	January 1987		
Useful Life	20		
Adjustment	23		
Replacement Year	2030		
Remaining Life	10		



**Woodbine Homes Association
Component Detail**

Play Equipment Allowance - 2025

			1 Lump Sum	@ \$40,000.00
Asset ID	1004		Asset Cost	\$40,000.00
	Playground		Percent Replacement	100%
Placed in Service	January 1987		Future Cost	\$45,256.33
Useful Life	15			
Adjustment	23			
Replacement Year	2025			
Remaining Life	5			



Several play areas are located along the walking path with wood and steel play equipment. An allowance for partial replacement is included.

**Woodbine Homes Association
Component Detail**

Monument Sign

Asset ID	1007	Asset Cost	
		Percent Replacement	100%
Components Not Included		Future Cost	
Placed in Service	January 1987		
No Useful Life			

Playground Play Surface

Asset ID	1008	Asset Cost	
		Percent Replacement	100%
Components Not Included		Future Cost	
Placed in Service	January 1987		
No Useful Life			

Playground Play Surface Borders

Asset ID	1009	Asset Cost	
		Percent Replacement	100%
Components Not Included		Future Cost	
Placed in Service	January 1987		
No Useful Life			



METHODOLOGY

Reserve Analysis is a process that identifies capital expenses the Association can expect and creates a plan to fund them. This is accomplished by a site visit to visually evaluate components to measure quantities and determine their remaining life. Component Selection Process is based on the Community Associations Institute (CAI) standards for reserve studies and selection of components.

Component must be a commonly owned, have a limited and predictable life, replacement cost must be above a minimum threshold cost. Useful life and replacement cost are obtained from site inspection by experienced inspectors and our database of information, historical information, local Vendors and comparison of similar component cost found at other properties.

The funding plan we develop includes; adequate cash balances, even contributions so all owners pay their fair share over time and moderate contributions with acceptable increases. Percent Funded is defined by industry standards as 70-100% strong, 30-70% fair or adequate and below 30% weak or inadequate. We recommend Full Funding to avoid deferred maintenance or special assessments. Baseline Funding maintains funds above zero resulting is a high risk of special assessments or deferred maintenance and should be avoided. Threshold Funding maintains reserves above a "Threshold" level providing adequate funding with moderate risk.

CREDENTIALS

Community Advisors, LLC provides capital reserve planning, property inspection, and construction oversight for a broad base of clients including High-rise Condominiums, Homeowner Associations, Churches, Private Schools, Time Shares, Active Adult, Municipal Utility Plants, Marinas, Historic Buildings & Museums and commercial investment properties.

Personal Service is not a common business practice but our attention to detail, quick response and interest in client relationships continues to earn us a larger market share of work each year.

Range of Experience includes a broad selection of building types, ages and uses from protected historic structures to new communities ready for developer turnover. As commercial general contractors we have experience building many of the types of structure we now provide reserve analysis for, so we understand potential problem areas. As commercial inspectors we have experienced a variety of structural and cosmetic conditions offering solutions for repair. Areas of expertise include MEP systems, energy management, life safety systems, building envelope and roof components, marine structures, street and other site improvements.

Detailed Site Evaluation is Conducted to make sure we know your property and include all your assets in our analysis. With our years of experience with community development and commercial construction projects we understand both horizontal and vertical construction and utilize realistic replacement cost and useful life projections in our analysis. *Financial Plan Meets CAI & APRA Standards* with information obtained during the site visit we build a custom-made financial plan to ensure adequate funding for future component replacement which equates to maintaining community value.

Reserve Analyst Credentials: Mr. Charles Sheppard is the owner of Community Advisors responsible for field inspection oversight and day to day operations. Mr. Sheppard hold a BS degree from VA Tech and has conducted building evaluations for over 30 years. He is a licensed Florida General Contractor, Home Inspector and earned the professional designations of Certified Construction Inspector (CCI), Professional Reserve Analyst (PRA) and Reserve Specialist (RS).

TERMS OF SERVICE

We have completed an analysis of your capital components that serves as a budgeting tool. This reserve study reflects the information provided by this client and is not for the purposes of performing an audit or estimating construction projects. Our site visit includes visual observation of components that are accessible and safe for our inspectors to evaluate. Roof evaluation is limited to ground observation for sloped roofs and roof top inspection for flat roofs if safe and stable access is available that meets our safety standards.

We are not responsible for any hidden defects or determining the condition of hidden or underground components or systems. Observing environmental conditions, hazardous materials or determine compliance with building codes or other regulations is not included in our scope of work. Our site visit is not a safety inspection and we are not responsible for any hazards that exist. Destructive testing is not conducted. It has been assumed, unless otherwise noted in this report, that all assets have been designed and constructed properly and that each estimated useful life will approximate that of the norm per industry standards and/or manufacturer's specifications.

Projections of component remaining useful life assumes this client will perform necessary preventative maintenance and repair per industry standards. This reserve analysis study and the parameters under which it has been completed are based upon information provided to us in part by the Client and its contractors, assorted vendors, specialist and independent contractors. Reserve fund balances and contribution amounts for use in our analysis is furnished by the client and deemed accurate. Useful life projections are determined by historical records, component condition and our opinion based on evaluating similar components on other projects. These life projections are changed by weather conditions, use, maintenance procedures and other factors out of our control therefore regular updates to this analysis are needed to maintain funding accuracy. Replacement cost is determined by our experience with similar projects, local vendor pricing and client historical records and should not be considered suitable for budgeting repair or replacement projects. Local contractor proposals must be obtained for this work. No liability is assumed as the result of changing market prices or inaccurate estimates or projections of remaining useful life of components.

Component replacement cost and interest rates constantly change. In order to maintain accuracy of your funding plan updates to this analysis should be conducted annually with a site visit every 2-3 years unless conditions warrant annual visits. Community Advisors, LLC shall not be required to participate in any legal action taken by or against our clients for any reason and shall also not be required to give testimony in depositions or in court. In all cases the liability of Community Advisors, LLC and its Principals, Employees, contractors and Vendors shall be limited to the consulting fee agreed upon for the production of this report. Client financial information is considered confidential and is not disclosed to third parties without your approval. We do use your name for our list of valued clients and when submitting proposals for new projects that request references or recent projects. That request may include size of property, number of units or major components. We also use photos from time to time of components as an example for educational and marketing efforts. Community Advisors and the analyst who prepared this study do not have any relationship that can be considered a conflict of interest. From time to time our Clients ask that we manage repair or replacement of components due to our experience in construction management. We do so with the understanding that full disclosure for both parties is completed.

DEFINITIONS

Adjustment to Useful Life: Typical useful life projections are used for each component. The adjustment is used to modify that life projection for earlier or later replacement. It only applies to the current replacement cycle.

Cash Flow Method: A method of determining reserve contributions that are “pooled” to fund replacement cost as needed without restricting funds to any one component.

Component Method: A funding method that fully funds each reserve component then sums those for the annual contribution.

Current Funding Plan: The funding plan currently used at the time of this analysis with updated component inventory and financial assumptions. This allows you to see how the current contribution level funds future component replacement.

Effective Age: Difference of useful and remaining useful life.

Fully Funded Balance: Represents the cost of used component life represented by the formula.

$$\text{FFB} = (\text{Current Cost} \times \text{Effective Age}) / \text{Useful Life}$$

Interest Contribution: The interest that should be earned on invested reserves.

Percent Funded: Ratio of reserve balance to fully funded balance.

Remaining Life: Number of years a component is projected to continue to function.

Threshold Funding: This plan maintains fund balance above a predetermined threshold dollar or percent funded amount.

Useful Life: The estimated useful life of an asset based upon industry standards, manufacturer specification, visual inspection, location, usage, association standards and prior history.