

Caroline Oaks Homeowners Association, Inc.

April 23, 2024 • Burke, VA

RESERVE STUDY



Long-term thinking. Everyday commitment.

Caroline Oaks Homeowners Association, Inc.
Burke, Virginia

Dear Board of Directors of Caroline Oaks Homeowners Association, Inc.:

At the direction of the Board that recognizes the need for proper reserve planning, we have conducted a *Reserve Study* of Caroline Oaks Homeowners Association, Inc. in Burke, Virginia and submit our findings in this report. The effective date of this study is the date of our visual, noninvasive inspection, April 23, 2024.

This *Reserve Study* exceeds the Association of Professional Reserve Analysts (APRA) standards fulfilling the requirements of a “Level II Reserve Study Update.”

An ongoing review by the Board and an Update of this Reserve Study are necessary to ensure an equitable funding plan since a Reserve Study is a snapshot in time. We recommend the Board budget for an Update to this Reserve Study in two- to three-years. We look forward to continuing to help Caroline Oaks Homeowners Association, Inc. plan for a successful future.

As part of our long-term thinking and everyday commitment to our clients, we are available to answer any questions you may have regarding this study.

Respectfully submitted on May 29, 2024 by

Reserve Advisors, LLC

Visual Inspection and Report by: Caitlin Tatro
Review by: Nicholas R. Julia, RS¹, Engineering Manager
Alan M. Ebert, RS, PRA², Director of Quality Assurance



¹ RS (Reserve Specialist) is the reserve provider professional designation of the Community Associations Institute (CAI) representing America's more than 300,000 condominium, cooperative and homeowners associations.

² PRA (Professional Reserve Analyst) is the professional designation of the Association of Professional Reserve Analysts. Learn more about APRA at <http://www.apra-usa.com>.



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1. RESERVE STUDY EXECUTIVE SUMMARY

Client: Caroline Oaks Homeowners Association, Inc. (Caroline Oaks)

Location: Burke, Virginia

Reference: 210432

Property Basics: Caroline Oaks Homeowners Association, Inc. is a townhome style development which consists of 106 units in 19 buildings. The community was built in 1989.

Reserve Components Identified: 16 Reserve Components.

Inspection Date: April 23, 2024. We conducted the original inspection on July 1, 2021.

Funding Goal: The Funding Goal of this Reserve Study is to maintain reserves above an adequate, not excessive threshold during one or more years of significant expenditures. Our recommended Funding Plan recognizes this threshold funding year in 2038 due to the repaving of the asphalt pavement.

Methodology: We use the Cash Flow Method to compute the Reserve Funding Plan. This method offsets future variable Reserve Expenditures with existing and future stable levels of reserve funding. Our application of this method also considers:

- Current and future local costs of replacement
- 2.0% anticipated annual rate of return on invested reserves
- 3.0% future Inflation Rate for estimating Future Replacement Costs

Sources for Local Costs of Replacement: Our proprietary database, historical costs and published sources, i.e., R.S. Means, Incorporated.

Unaudited Cash Status of Reserve Fund:

- \$168,796 as of April 25, 2024
- 2024 budgeted Reserve Contributions of \$24,000

Project Prioritization: We note anticipated Reserve Expenditures for the next 30 years in the **Reserve Expenditures** tables and include a **Five-Year Outlook** table following the **Reserve Funding Plan** in Section 3. We recommend the Association prioritize the following projects in the next five years based on the conditions identified:

- Replacement of the original mailbox stations
- Replacement of the wood fences
- Partial replacement of the landscaping
- Crack repair, patch, and striping of the asphalt pavement
- Replacement of the stone retaining walls

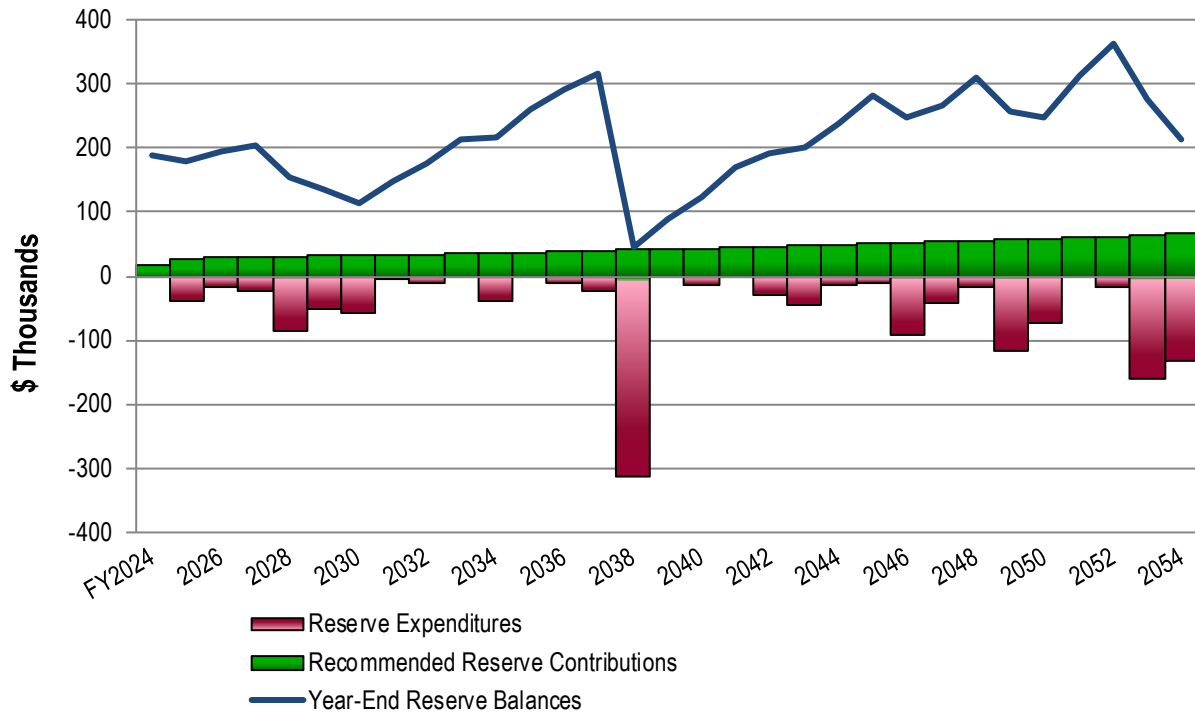
Recommended Reserve Funding: We recommend the following in order to achieve a stable and equitable Cash Flow Methodology Funding Plan:

- Increase to \$27,800 in 2025
- Inflationary increases thereafter through 2054, the limit of this study's Cash Flow Analysis
- Initial adjustment in Reserve Contributions of \$3,800 represents an average monthly increase of \$2.99 per owner and about a three percent (3.1%) adjustment in the 2024 total Operating Budget of \$123,952.



Caroline Oaks
Recommended Reserve Funding Table and Graph

Year	Reserve Contributions (\$)	Reserve Balances (\$)	Year	Reserve Contributions (\$)	Reserve Balances (\$)	Year	Reserve Contributions (\$)	Reserve Balances (\$)
2025	27,800	179,052	2035	37,400	259,298	2045	50,300	281,901
2026	28,600	193,678	2036	38,500	291,849	2046	51,800	248,803
2027	29,500	204,280	2037	39,700	315,090	2047	53,400	266,053
2028	30,400	153,244	2038	40,900	46,730	2048	55,000	310,498
2029	31,300	135,889	2039	42,100	90,186	2049	56,700	256,524
2030	32,200	114,387	2040	43,400	122,858	2050	58,400	247,779
2031	33,200	147,598	2041	44,700	170,462	2051	60,200	313,537
2032	34,200	174,857	2042	46,000	191,702	2052	62,000	363,942
2033	35,200	213,906	2043	47,400	199,488	2053	63,900	275,100
2034	36,300	217,180	2044	48,800	238,172	2054	65,800	212,104





2. RESERVE STUDY REPORT

At the direction of the Board that recognizes the need for proper reserve planning, we have conducted a *Reserve Study* of

Caroline Oaks Homeowners Association, Inc.

Burke, Virginia

and submit our findings in this report. The effective date of this study is the date of our visual, noninvasive inspection, April 23, 2024. We conducted the original inspection on July 1, 2021.

We present our findings and recommendations in the following report sections and spreadsheets:

- **Identification of Property** - Segregates all property into several areas of responsibility for repair or replacement
- **Reserve Expenditures** - Identifies reserve components and related quantities, useful lives, remaining useful lives and future reserve expenditures during the next 30 years
- **Reserve Funding Plan** - Presents the recommended Reserve Contributions and year-end Reserve Balances for the next 30 years
- **Five-Year Outlook** - Identifies reserve components and anticipated reserve expenditures during the first five years
- **Reserve Component Detail** - Describes the reserve components, includes photographic documentation of the condition of various property elements, describes our recommendations for repairs or replacement, and includes detailed solutions and procedures for replacements for the benefit of current and future board members
- **Methodology** - Lists the national standards, methods and procedures used to develop the Reserve Study
- **Definitions** - Contains definitions of terms used in the Reserve Study, consistent with national standards
- **Professional Service Conditions** - Describes Assumptions and Professional Service Conditions
- **Credentials and Resources**

IDENTIFICATION OF PROPERTY



Our investigation includes Reserve Components or property elements as set forth in your Declaration or which were identified as part of your request for proposed services. The Expenditure tables in Section 3 list the elements contained in this study. Our analysis begins by segregating the property elements into several areas of responsibility for repair and replacement.

Our process of identification helps assure that future boards and the management team understand whether reserves, the operating budget or Owners fund certain replacements and assists in preparation of the annual budget. We derive these segregated classes of property from our review of the information provided by the Association and through conversations with Management and the Board. These classes of property include:

- Reserve Components
- Long-Lived Property Elements
- Operating Budget Funded Repairs and Replacements
- Property Maintained by Owners
- Property Maintained by Others

We advise the Board to conduct an annual review of these classes of property to confirm its policy concerning the manner of funding, i.e., from reserves or the operating budget. Reserve Components are defined by CAI as property elements with:

- Caroline Oaks responsibility
- Limited useful life expectancies
- Predictable remaining useful life expectancies
- Replacement cost above a minimum threshold

The following tables depict the items excluded from the Reserve Expenditure plan:

Excluded Components

for
Caroline Oaks
Homeowners Association, Inc.
Burke, Virginia

Operating Budget Components

Repairs normally funded through the Operating Budget and Expenditures less than \$3,000 (These relatively minor expenditures have a limited effect on the recommended Reserve Contributions.)

The operating budget provides money for the repair and replacement of certain Reserve Components. The Association may develop independent criteria for use of operating and reserve funds.

- Catch Basins, Landscape
- Landscaping, General Maintenance
- Paint Finishes, Touch Up
- Signage, Miscellaneous

Long-Lived Components

These elements may not have predictable Remaining Useful Lives or their replacement may occur beyond the scope of this study. The operating budget should fund infrequent repairs. Funding untimely or unexpected replacements from reserves will necessitate increases to Reserve Contributions. Periodic updates of this Reserve Study will help determine the merits of adjusting the Reserve Funding Plan.

Useful Life

Estimated Cost

- | | Useful Life | Estimated Cost |
|--|---------------|----------------|
| • Electrical Systems, Common | Indeterminate | N/A |
| • Inlet/Outlet Structures, Concrete, Storm Water Management System | Indeterminate | N/A |

Owners Responsibility Components

Certain items have been designated as the responsibility of the Owners to repair or replace at their cost, including items billed back.

- Driveways
- Homes and Lots

Others Responsibility Components

Certain items have been designated as the responsibility of Others to repair or replace.

- Street System, Glenbard Court (Virginia Department of Transportation)
- Walking Path (Municipality)

3. RESERVE EXPENDITURES and FUNDING PLAN

The tables following this introduction present:

Reserve Expenditures

- Line item numbers
- Total quantities
- Quantities replaced per phase (in a single year)
- Reserve component inventory
- Estimated first year of event (i.e., replacement, application, etc.)
- Life analysis showing
 - useful life
 - remaining useful life
- 2024 local cost of replacement
 - Per unit
 - Per phase
 - Replacement of total quantity
- Percentage of future expenditures anticipated during the next 30 years
- Schedule of estimated future costs for each reserve component including inflation

Reserve Funding Plan

- Reserves at the beginning of each year
- Total recommended reserve contributions
- Estimated interest earned from invested reserves
- Anticipated expenditures by year
- Anticipated reserves at year end
- Predicted reserves based on current funding level

Five-Year Outlook

- Line item numbers
- Reserve component inventory of only the expenditures anticipated to occur within the first five years
- Schedule of estimated future costs for each reserve component anticipated to occur within the first five years

The purpose of a Reserve Study is to provide an opinion of reasonable annual Reserve Contributions. Prediction of exact timing and costs of minor Reserve Expenditures typically will not significantly affect the 30-year cash flow analysis. Adjustments to the times and/or costs of expenditures may not always result in an adjustment in the recommended Reserve Contributions.

Financial statements prepared by your association, by you or others might rely in part on information contained in this section. For your convenience, we have provided an electronic data file containing the tables of ***Reserve Expenditures*** and ***Reserve Funding Plan***.

RESERVE EXPENDITURES

**Caroline Oaks
Homeowners Association, Inc.**
Burke, Virginia

Explanatory Notes:

- 1) **3.0%** is the estimated Inflation Rate for estimating Future Replacement Costs.
- 2) **FY2024** is Fiscal Year beginning January 1, 2024 and ending December 31, 2024.

Line Item	Total Quantity	Per Phase Quantity	Units	Reserve Component Inventory	Estimated 1st Year of Event	Life Analysis, Years		Costs, \$			Percentage of Future Expenditures	RUL = 0 FY2024	1 2025	2 2026	3 2027	4 2028	5 2029	6 2030	7 2031	8 2032	9 2033	10 2034	11 2035	12 2036	13 2037	14 2038	15 2039
						Useful	Remaining	Unit (2024)	Per Phase (2024)	Total (2024)																	
4.020	8,650	8,650	Square Yards	Asphalt Pavement, Crack Repair, Patch and Striping	2026	3 to 5	2	1.00	8,650	8,650	7.2%			9,177				10,329				11,625					
4.040	8,650	8,650	Square Yards	Asphalt Pavement, Mill and Overlay	2038	15 to 20	14	18.50	160,025	160,025	17.0%																242,052
4.100	8	8	Each	Catch Basins, Inspections and Capital Repairs	2038	15 to 20	14	1,050.00	8,400	8,400	0.9%																12,706
4.110	5,500	410	Linear Feet	Concrete Curbs and Gutters, Partial	2030	to 65	6 to 30+	36.00	14,760	198,000	7.3%							17,624									22,326
4.140	18,100	1,360	Square Feet	Concrete Sidewalks, Partial	2030	to 65	6 to 30+	11.50	15,640	208,150	7.7%							18,675									23,657
4.285	1,010	1,010	Linear Feet	Fences, Wood	2029	15 to 20	5	44.00	44,440	44,440	10.1%						51,518										
4.500	1	1	Allowance	Landscape, Partial Replacements	2026	to 2	2	8,000.00	8,000	8,000	13.9%			8,487		9,004		9,552		10,134		10,751		11,406		12,101	
4.560	25	25	Each	Light Poles and Fixtures, Replacement	2028	to 25	4	2,700.00	67,500	67,500	16.5%					75,972											
4.561	1	1	Allowance	Light Poles and Fixtures, Supply Trenches, Partial Replacements	2034	to 15	10	11,100.00	11,100	11,100	2.7%											14,917					
4.600	8	8	Each	Mailbox Stations (Original)	2025	to 25	1	2,100.00	16,800	16,800	3.8%		17,304														
4.601	1	1	Each	Mailbox Station (Replaced in 2006)	2031	to 25	7	2,100.00	2,100	2,100	0.2%								2,583								
4.602	3	3	Each	Mailbox Stations (Replaced in 2020)	2045	to 25	21	2,100.00	6,300	6,300	0.8%																
4.650	1	1	Allowance	Pipes, Subsurface Utilities	2054	to 85+	30	8,000.00	8,000	8,000	1.4%																
4.750	340	340	Square Feet	Retaining Walls, Stone, Partial Replacements	2027	10 to 15	3	45.00	15,300	15,300	4.9%				16,719											22,469	
4.760	310	310	Square Feet	Retaining Walls, Timber, Replacement	2025	15 to 20	1	80.00	24,800	24,800	4.6%		22,223														
4.800	1	1	Allowance	Signage, Entrance Monument, Renovation	2027	15 to 20	3	5,600.00	5,600	5,600	1.2%				6,119												
Anticipated Expenditures, By Year (\$1,427,351 over 30 years)												0	39,527	17,664	22,838	84,976	51,518	56,180	2,583	10,134	0	37,294	0	11,406	22,469	312,841	0

RESERVE EXPENDITURES

**Caroline Oaks
Homeowners Association, Inc.**
Burke, Virginia

Line Item	Total Quantity	Per Phase Quantity	Units	Reserve Component Inventory	Estimated 1st Year of Event	Life Analysis, Years		Costs, \$			Percentage of Future Expenditures	16 2040	17 2041	18 2042	19 2043	20 2044	21 2045	22 2046	23 2047	24 2048	25 2049	26 2050	27 2051	28 2052	29 2053	30 2054	
						Useful	Remaining	Unit (2024)	Per Phase (2024)	Total (2024)																	
4.020	8,650	8,650	Square Yards	Asphalt Pavement, Crack Repair, Patch and Striping	2026	3 to 5	2	1.00	8,650	8,650	7.2%			14,726			16,574					18,655				20,996	
4.040	8,650	8,650	Square Yards	Asphalt Pavement, Mill and Overlay	2038	15 to 20	14	18.50	160,025	160,025	17.0%																
4.100	8	8	Each	Catch Basins, Inspections and Capital Repairs	2038	15 to 20	14	1,050.00	8,400	8,400	0.9%																
4.110	5,500	410	Linear Feet	Concrete Curbs and Gutters, Partial	2030	to 65	6 to 30+	36.00	14,760	198,000	7.3%							28,282								35,826	
4.140	18,100	1,360	Square Feet	Concrete Sidewalks, Partial	2030	to 65	6 to 30+	11.50	15,640	208,150	7.7%							29,968								37,962	
4.285	1,010	1,010	Linear Feet	Fences, Wood	2029	15 to 20	5	44.00	44,440	44,440	10.1%										93,047						
4.500	1	1	Allowance	Landscape, Partial Replacements	2026	to 2	2	8,000.00	8,000	8,000	13.9%	12,838		13,619		14,449		15,329		16,262		17,253		18,303		19,418	
4.560	25	25	Each	Light Poles and Fixtures, Replacement	2028	to 25	4	2,700.00	67,500	67,500	16.5%														159,068		
4.561	1	1	Allowance	Light Poles and Fixtures, Supply Trenches, Partial Replacements	2034	to 15	10	11,100.00	11,100	11,100	2.7%										23,241						
4.600	8	8	Each	Mailbox Stations (Original)	2025	to 25	1	2,100.00	16,800	16,800	3.8%														36,231		
4.601	1	1	Each	Mailbox Station (Replaced in 2006)	2031	to 25	7	2,100.00	2,100	2,100	0.2%																
4.602	3	3	Each	Mailbox Stations (Replaced in 2020)	2045	to 25	21	2,100.00	6,300	6,300	0.8%						11,720										
4.650	1	1	Allowance	Pipes, Subsurface Utilities	2054	to 85+	30	8,000.00	8,000	8,000	1.4%															19,418	
4.750	340	340	Square Feet	Retaining Walls, Stone, Partial Replacements	2027	10 to 15	3	45.00	15,300	15,300	4.9%								30,196								
4.760	310	310	Square Feet	Retaining Walls, Timber, Replacement	2025	15 to 20	1	80.00	24,800	24,800	4.6%				43,487												
4.800	1	1	Allowance	Signage, Entrance Monument, Renovation	2027	15 to 20	3	5,600.00	5,600	5,600	1.2%									11,052							
Anticipated Expenditures, By Year (\$1,427,351 over 30 years)												12,838	0	28,346	43,487	14,449	11,720	90,153	41,248	16,262	116,288	72,138	0	18,303	159,068	133,621	

RESERVE FUNDING PLAN

CASH FLOW ANALYSIS

Caroline Oaks
Homeowners Association, Inc.
Burke, Virginia

		Individual Reserve Budgets & Cash Flows for the Next 30 Years															
		FY2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
Reserves at Beginning of Year	(Note 1)	168,796	187,153	179,052	193,678	204,280	153,244	135,889	114,387	147,598	174,857	213,906	217,180	259,298	291,849	315,090	46,730
Total Recommended Reserve Contributions	(Note 2)	16,000	27,800	28,600	29,500	30,400	31,300	32,200	33,200	34,200	35,200	36,300	37,400	38,500	39,700	40,900	42,100
Estimated Interest Earned, During Year	(Note 3)	2,357	3,626	3,690	3,940	3,540	2,863	2,478	2,594	3,193	3,849	4,268	4,718	5,457	6,009	3,582	1,356
Anticipated Expenditures, By Year		0	(39,527)	(17,664)	(22,838)	(84,976)	(51,518)	(56,180)	(2,583)	(10,134)	0	(37,294)	0	(11,406)	(22,469)	(312,841)	0
Anticipated Reserves at Year End		<u>\$187,153</u>	<u>\$179,052</u>	<u>\$193,678</u>	<u>\$204,280</u>	<u>\$153,244</u>	<u>\$135,889</u>	<u>\$114,387</u>	<u>\$147,598</u>	<u>\$174,857</u>	<u>\$213,906</u>	<u>\$217,180</u>	<u>\$259,298</u>	<u>\$291,849</u>	<u>\$315,090</u>	<u>\$46,730</u>	<u>\$90,186</u>

(NOTE 5)

(continued)

		Individual Reserve Budgets & Cash Flows for the Next 30 Years, Continued														
		2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054
Reserves at Beginning of Year		90,186	122,858	170,462	191,702	199,488	238,172	281,901	248,803	266,053	310,498	256,524	247,779	313,537	363,942	275,100
Total Recommended Reserve Contributions		43,400	44,700	46,000	47,400	48,800	50,300	51,800	53,400	55,000	56,700	58,400	60,200	62,000	63,900	65,800
Estimated Interest Earned, During Year		2,109	2,904	3,586	3,873	4,333	5,149	5,254	5,098	5,708	5,614	4,993	5,558	6,708	6,327	4,824
Anticipated Expenditures, By Year		(12,838)	0	(28,346)	(43,487)	(14,449)	(11,720)	(90,153)	(41,248)	(16,262)	(116,288)	(72,138)	0	(18,303)	(159,068)	(133,621)
Anticipated Reserves at Year End		<u>\$122,858</u>	<u>\$170,462</u>	<u>\$191,702</u>	<u>\$199,488</u>	<u>\$238,172</u>	<u>\$281,901</u>	<u>\$248,803</u>	<u>\$266,053</u>	<u>\$310,498</u>	<u>\$256,524</u>	<u>\$247,779</u>	<u>\$313,537</u>	<u>\$363,942</u>	<u>\$275,100</u>	<u>\$212,104</u>

(NOTE 4)

Explanatory Notes:

- 1) Year 2024 starting reserves are as of April 25, 2024; FY2024 starts January 1, 2024 and ends December 31, 2024.
- 2) Reserve Contributions for 2024 are the remaining budgeted 8 months; 2025 is the first year of recommended contributions.
- 3) 2.0% is the estimated annual rate of return on invested reserves; 2024 is a partial year of interest earned.
- 4) Accumulated year 2054 ending reserves consider the age, size, overall condition and complexity of the property.
- 5) Threshold Funding Year (reserve balance at critical point).

FIVE-YEAR OUTLOOK

**Caroline Oaks
Homeowners Association, Inc.**
Burke, Virginia

Line Item	Reserve Component Inventory	RUL = 0 FY2024	1 2025	2 2026	3 2027	4 2028	5 2029
4.020	Asphalt Pavement, Crack Repair, Patch and Striping			9,177			
4.285	Fences, Wood						51,518
4.500	Landscape, Partial Replacements			8,487		9,004	
4.560	Light Poles and Fixtures, Replacement					75,972	
4.600	Mailbox Stations (Original)		17,304				
4.750	Retaining Walls, Stone, Partial Replacements				16,719		
4.760	Retaining Walls, Timber, Replacement		22,223				
4.800	Signage, Entrance Monument, Renovation				6,119		
Anticipated Expenditures, By Year (\$1,427,351 over 30 years)		0	39,527	17,664	22,838	84,976	51,518

4. RESERVE COMPONENT DETAIL

The Reserve Component Detail of this *Reserve Study* includes enhanced solutions and procedures for select significant components. This section describes the Reserve Components, documents specific problems and condition assessments, and may include detailed solutions and procedures for necessary capital repairs and replacements for the benefit of current and future board members. We advise the Board use this information to help define the scope and procedures for repair or replacement when soliciting bids or proposals from contractors. *However, the Report in whole or part is not and should not be used as a design specification or design engineering service.*

Asphalt Pavement, Repaving

Line Items: 4.020 and 4.040

Quantity: The Association maintains approximately 8,650 square yards of asphalt pavement at the streets

History:

- Repaving: Repaved in 2018.
- Repairs: Within the last 3 years

Condition: Good to fair overall with periodic cracks and patches evident.



Pavement overview



Speed bump overview



Pavement overview

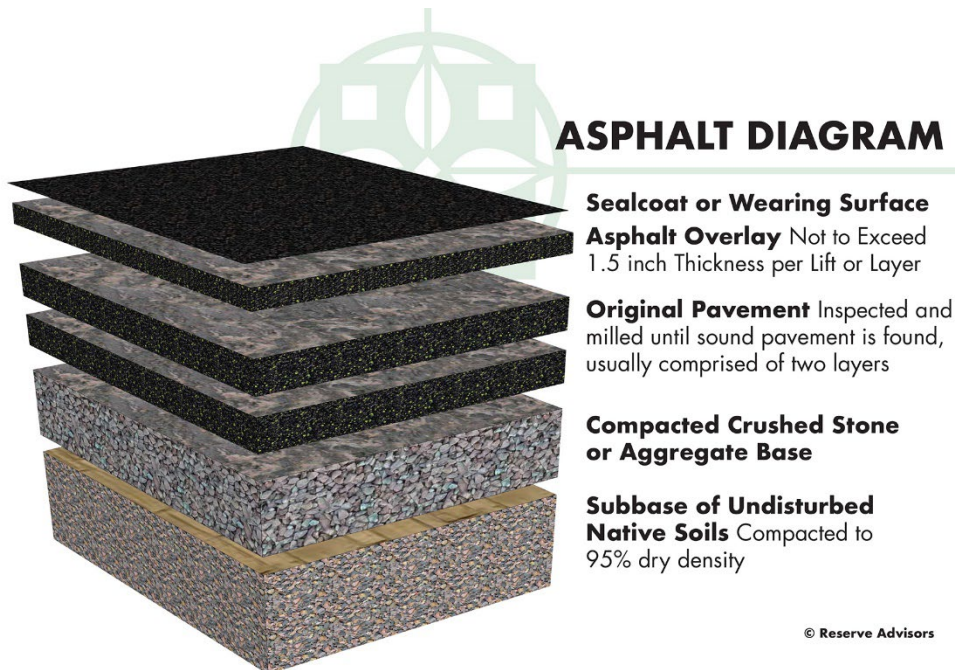


Pavement patch

Useful Life: 15- to 20-years with the benefit of crack repair and patch events every three- to five-years

Component Detail Notes: Proposals for seal coat applications should include crack repairs and patching. The contractor should only apply seal coat applications after repairs are completed. A seal coat does not bridge or close cracks; therefore, unrepaired cracks render the seal coat applications useless.

The initial installation of asphalt uses at least two lifts, or two separate applications of asphalt, over the base course. The first lift is the binder course. The second lift is the wearing course. The wearing course comprises a finer aggregate for a smoother more watertight finish. The following diagram depicts the typical components although it may not reflect the actual configuration at Caroline Oaks:



The manner of repaving is either a mill and overlay or total replacement. A mill and overlay is a method of repaving where cracked, worn and failed pavement is mechanically removed or milled until sound pavement is found. A new layer of asphalt is overlaid atop the remaining base course of pavement. Total replacement includes the removal of all existing asphalt down to the base course of aggregate and native soil followed by the application of two or more new lifts of asphalt. We recommend mill and overlayment on asphalt pavement that exhibits normal deterioration and wear. We recommend total replacement of asphalt pavement that exhibits severe deterioration, inadequate drainage, pavement that has been overlaid multiple times in the past or where the configuration makes overlayment not possible. Based on the apparent visual condition and configuration of the asphalt pavement, we recommend the mill and overlay method of repaving at Caroline Oaks.

Preventative Maintenance Notes: We note the following select recommended preventative maintenance activities to maximize the remaining useful life:

- Annually:
 - Inspect for settlement, large cracks and trip hazards, and ensure proper drainage
 - Repair areas which could cause vehicular damage such as potholes
- As needed:
 - Perform crack repairs and patching

Priority/Criticality: Defer only upon opinion of independent professional or engineer

Expenditure Detail Notes: Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. Our cost includes an allowance for crack repairs and patching of up to two percent (2%) of the pavement. Our cost for milling and overlayment includes area patching of up to ten percent (10%).

Catch Basins

Line Item: 4.100

Quantity: The Association maintains eight catch basins¹ throughout the community

History: Original

Condition: Good overall

¹ We utilize the terminology catch basin to refer to all storm water collection structures including curb inlets.



Catch basin overview

Useful Life: The useful life of catch basins is up to 65 years. However, achieving this useful life usually requires interim capital repairs or partial replacements every 15- to 20-years.

Component Detail Notes: Erosion causes settlement around the collar of catch basins. Left unrepaired, the entire catch basin will shift and need replacement.

Preventative Maintenance Notes: We note the following select recommended preventative maintenance activities to maximize the remaining useful life:

- Annually:
 - Inspect and repair any settlement and collar cracks
 - Ensure proper drainage and inlets are free of debris
 - If property drainage is not adequate in heavy rainfall events, typically bi-annual cleaning of the catch basins is recommended

Priority/Criticality: Defer only upon opinion of independent professional or engineer

Expenditure Detail Notes: Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. We recommend the Association plan for inspections and capital repairs to the catch basins in conjunction with repaving.

Concrete Curbs and Gutters

Line Item: 4.110

Quantity: The Association maintains approximately 5,500 linear feet of concrete curbs and gutters around the community

Condition: Good to fair overall with spalled concrete and damage evident.



Concrete curb and gutter overview



Concrete spalls



Concrete gutter damage



Concrete curb damage



Concrete curb and gutter previous repair

Useful Life: Up to 65 years although interim deterioration of areas is common

Preventative Maintenance Notes: We note the following select recommended preventative maintenance activities to maximize the remaining useful life:

- Annually:
 - Inspect and repair major cracks, spalls and trip hazards
 - Mark with orange safety paint prior to replacement or repair
 - Repair or perform concrete leveling in areas in immediate need of repair or possible safety hazard

Priority/Criticality: Per Board discretion

Expenditure Detail Notes: Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. We estimate that up to 1,640 linear feet of curbs and gutters, or approximately thirty percent (29.8%) of the total, will require replacement during the next 30 years.

Concrete Sidewalks

Line Item: 4.140

Quantity: The Association maintains approximately 18,100 square feet of concrete sidewalks around the community

History: Repairs conducted in 2023

Condition: Good to fair overall with previous repairs, trip hazards and minor damage evident.



Concrete sidewalk overview



Concrete sidewalk previous repairs



Sidewalk trip hazard near unit 9458



Concrete sidewalk damage

Useful Life: Up to 65 years although interim deterioration of areas is common

Preventative Maintenance Notes: We note the following select recommended preventative maintenance activities to maximize the remaining useful life:

- Annually:
 - Inspect and repair major cracks, spalls and trip hazards
 - Mark with orange safety paint prior to replacement or repair
 - Repair or perform concrete leveling in areas in immediate need of repair or possible safety hazard

Priority/Criticality: Per Board discretion

Expenditure Detail Notes: Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. We estimate that up to 5,440 square feet of concrete sidewalks, or approximately thirty percent (30.1%) of the total, will require replacement during the next 30 years.

Fences, Wood

Line Item: 4.285

Quantity: The Association maintains approximately 1,010 linear feet of wood fencing located at the north perimeter and around the farm

History: Original

Condition: Fair overall with wood deterioration, damaged sections, warped wood, wood rot and previous repairs evident.



Wood fence overview



Wood fence overview



Wood post deterioration



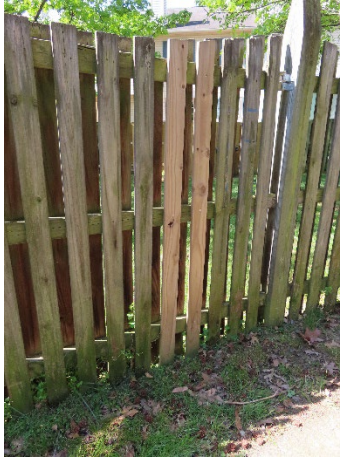
Damage to wood fence



Warped wood



Wood rot



Previous repairs

Useful Life: 15- to 20-years

Preventative Maintenance Notes: We note the following select recommended preventative maintenance activities to maximize the remaining useful life:

- Annually:
 - Inspect and repair loose sections, finish deterioration and damage
 - Repair leaning sections and clear vegetation from fence areas which could cause damage

Priority/Criticality: Per Board discretion

Expenditure Detail Notes: Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. The Association should anticipate periodic partial replacements due to the non-uniform nature of wood deterioration. Along with these partial replacements, the Association should apply periodic paint applications as needed and fund these activities through the operating budget.

Landscape

Line Item: 4.500

Component Detail Notes: The Association contains a large quantity of trees, shrubbery and other landscape elements. Replacement of these elements is an ongoing need. Many associations budget for these replacements as normal maintenance. Other associations fund ongoing replacements from reserves. Large amounts of landscape may need replacement due to disease, drought or other forces of nature. If the cost of removal and replacement is substantial, funding from reserves is logical. The Association may also desire to periodically update the appearance of the community through major improvements to the landscape.



Landscape overview



Tree trunk overview

Useful Life: At the request of Management and the Board, we include a landscape allowance for tree and tree trunk removal every two years.

Priority/Criticality: Per Board discretion

Expenditure Detail Notes: Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3.

Light Poles and Fixtures

Line Items: 4.560 and 4.561

Quantity: The Association maintains 25 metal poles with light fixtures and 18 electrical trenches

History: The light poles and fixtures were installed in 1995 with four electrical trenches replaced in 2019.

Condition: The light poles and fixtures are in fair overall condition with finish deterioration and leaning poles evident. The electrical trenches are reported in satisfactory condition.



Light pole and fixture overview



Finish deterioration



Leaning light pole

Useful Life: Replacement of the light poles and fixtures every 25 years with partial replacements of the electrical trenches every 15 years

Preventative Maintenance Notes: We note the following select recommended preventative maintenance activities to maximize the remaining useful life:

- As-needed:
 - Inspect and repair broken or dislodged fixtures, and leaning or damaged poles
 - Replaced burned out bulbs as needed

Priority/Criticality: Per Board discretion

Expenditure Detail Notes: Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. Our estimate of cost for the electrical trench replacements is based on information previously provided to us by the Association.

Mailbox Stations

Line Items: 4.600 through 4.602

Quantity: The Association maintains 12 mailbox stations around the community

History: Eight of the stations are original, one was replaced in 2006, and three were replaced in 2020.

Condition: The stations replaced in 2020 are in good overall condition. The stations replaced in 2006 are in good to fair overall condition with minor rust evident, and the original stations are in fair to poor overall condition with frequent rust evident.



Original mailbox station overview



2006 mailbox station overview



2020 mailbox station overview



Original mailbox station – Note: rust



2006 mailbox station – Note: Minor rust

Useful Life: Up to 25 years

Preventative Maintenance Notes: We note the following select recommended preventative maintenance activities to maximize the remaining useful life:

- As-needed:
 - Inspect and repair damage, vandalism, and finish deterioration
 - Verify posts are anchored properly

Priority/Criticality: Per Board discretion

Expenditure Detail Notes: Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3.

Pipes, Subsurface Utilities

Line Item: 4.650

Quantity: The Association maintains the subsurface utility pipes throughout the property.

Condition: Reported satisfactory

Useful Life: Up to and likely beyond 85 years

Component Detail Notes: The Association maintains the subsurface utility pipes throughout the property. The exact amounts and locations of the subsurface utility pipes were not ascertained due to the nature of the underground construction and the non-invasive nature of the inspection.

Preventative Maintenance Notes: We note the following select recommended preventative maintenance activities to maximize the remaining useful life:

- As-needed:
 - Video inspect waste pipes for breaks and damaged piping

- Monitor for water and gas leaks through pressure losses and present odors
- Partially replace damaged section of pipes

Priority/Criticality: Defer only upon opinion of independent professional or engineer

Expenditure Detail Notes: Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. At this time we do not anticipate replacement of continuous lengths of subsurface utility pipes. Rather we recommend the Association budget for repairs to isolated occurrences of breached utilities. Although it is likely that the times of replacement and extent of repair costs may vary from the budgetary allowance, Caroline Oaks could budget sufficient reserves for these utility repairs and can adjust its future reserves up or down to meet any changes to these budgetary estimates. Updates of this Reserve Study would incorporate changes to budgetary costs through a continued historical analysis of the rate of deterioration and actual repairs to budget sufficient reserves.

Retaining Walls, Stone

Line Item: 4.750

Quantity: The Association maintains two stone retaining walls comprising approximately 340 square feet

History: Unknown ages

Condition: Good to fair overall with minor stone displacement evident.



Stone retaining wall overview



Minor stone displacement

Useful Life: Stone retaining walls have indeterminate useful lives. However, we recommend the Association plan for partial replacements every 10- to 15-years to forestall deterioration.

Priority/Criticality: Defer only upon opinion of independent professional or engineer

Expenditure Detail Notes: Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. Our cost includes an allowance for an inspection, partial resetting and replacement of up to thirty-five percent (35%). Updates of this Reserve Study will continue to monitor the rate of deterioration and incorporate any available inspection reports.

Retaining Walls, Timber

Line Item: 4.760

Quantity: The Association maintains approximately 310 square feet of timber retaining walls. Two of the retaining walls are at the end of Peter Roy Court, one is near 4433 William Kirk Lane and one is behind 9410 William Kirk Lane.

History: Mostly original; the one near 4433 William Kirk Lane was replaced in 2016

Condition: Fair overall with frequent wood rot and a missing timber tier evident.



Timber retaining wall on Peter Roy Court



Timber retaining wall next to 9433 William Kirk Lane



Timber retaining wall on Peter Roy Court



Wood rot at Peter Roy Court



Wood rot at Peter Roy Court



Missing timber tier behind 9410 William Kirk Lane

Useful Life: 15- to 20-years

Preventative Maintenance Notes: We note the following select recommended preventative maintenance activities to maximize the remaining useful life:

- Annually:
 - Inspect and repair leaning sections or damaged areas
 - Inspect and repair erosion at the wall base and backside

Priority/Criticality: Defer only upon opinion of independent professional or engineer

Expenditure Detail Notes: Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. Due to the timber wall next to 9433 William Kirk Lane being replaced in 2016, the event in 2025 excludes the cost of replacing this wall.

Signage, Entrance Monument

Line Item: 4.800

Quantity: The property identification signage includes the following elements:

- Landscaping
- Light Fixtures
- Masonry

History: Original

Condition: Fair overall with mortar deterioration, efflorescence, lintel rust, mortar and masonry cracks, and minor organic growth evident.



Entrance monument overview



Monument light fixture overview



Mortar deterioration and efflorescence



Efflorescence



Mortar deterioration and lintel rust



Mortar cracks



Masonry cracks



Minor organic growth

Useful Life: 15- to 20-years

Component Detail Notes: Community signage contributes to the overall aesthetic appearance of the property to owners and potential buyers. Renovation or replacement of community signs is often predicated upon the desire to "update" the perceived identity of the community rather than for utilitarian concerns. Therefore, the specific times for replacement or renovation are discretionary.

Preventative Maintenance Notes: We note the following select recommended preventative maintenance activities to maximize the remaining useful life:

- Annually:
 - Inspect and repair damage, vandalism and loose components
 - Verify lighting is working properly
 - Touch-up paint finish applications if applicable

Priority/Criticality: Per Board discretion

Expenditure Detail Notes: Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. Our cost for renovation includes repairs to the masonry, replacement of the light fixtures and landscaping.

Reserve Study Update

An ongoing review by the Board and an Update of this Reserve Study are necessary to ensure an equitable funding plan since a Reserve Study is a snapshot in time. Many variables change after the study is conducted that may result in significant overfunding or underfunding the reserve account. Variables that may affect the Reserve Funding Plan include, but are not limited to:

- Deferred or accelerated capital projects based on Board discretion
- Changes in the interest rates on reserve investments
- Changes in the *local* construction inflation rate
- Additions and deletions to the Reserve Component Inventory



- The presence or absence of maintenance programs
- Unusually mild or extreme weather conditions
- Technological advancements

Periodic updates incorporate these variable changes since the last Reserve Study or Update. We recommend the Board budget for an Update to this Reserve Study every three years. Budgeting for an Update demonstrates the Board's objective to continue fulfilling its fiduciary responsibility to maintain the commonly owned property and to fund reserves appropriately.

5. METHODOLOGY

Reserves for replacement are the amounts of money required for future expenditures to repair or replace Reserve Components that wear out before the entire facility or project wears out. Reserving funds for future repair or replacement of the Reserve Components is also one of the most reliable ways of protecting the value of the property's infrastructure and marketability.

Caroline Oaks can fund capital repairs and replacements in any combination of the following:

1. Increases in the operating budget during years when the shortages occur
2. Loans using borrowed capital for major replacement projects
3. Level monthly reserve assessments annually adjusted upward for inflation to increase reserves to fund the expected major future expenditures
4. Special assessments

We do not advocate special assessments or loans unless near term circumstances dictate otherwise. Although loans provide a gradual method of funding a replacement, the costs are higher than if the Association were to accumulate reserves ahead of the actual replacement. Interest earnings on reserves also accumulate in this process of saving or reserving for future replacements, thereby defraying the amount of gradual reserve collections. We advocate the third method of *Level Monthly Reserve Assessments* with relatively minor annual adjustments. The method ensures that Owners pay their "fair share" of the weathering and aging of the commonly owned property each year. Level reserve assessments preserve the property and enhance the resale value of the homes.

This Reserve Study is in compliance with and exceeds the National standards¹ set forth by the Association of Professional Reserve Analysts (APRA) fulfilling the requirements of a "Level II Reserve Study Update." These standards require a Reserve Component to have a "predictable remaining Useful Life." Estimating Remaining Useful Lives and Reserve Expenditures beyond 30 years is often indeterminate. Long-Lived Property Elements are necessarily excluded from this analysis. We considered the following factors in our analysis:

- The Cash Flow Method to compute, project and illustrate the 30-year Reserve Funding Plan
- Local² costs of material, equipment and labor
- Current and future costs of replacement for the Reserve Components
- Costs of demolition as part of the cost of replacement
- Local economic conditions and a historical perspective to arrive at our estimate of long-term future inflation for construction costs in Burke, Virginia at an annual inflation rate³. Isolated or regional markets of greater

¹ Identified in the APRA "Standards - Terms and Definitions" and the CAI "Terms and Definitions".

² See Credentials for additional information on our use of published sources of cost data.

³ Derived from Marshall & Swift, historical costs and the Bureau of Labor Statistics.

construction (development) activity may experience slightly greater rates of inflation for both construction materials and labor.

- The past and current maintenance practices of Caroline Oaks and their effects on remaining useful lives
- Financial information provided by the Association pertaining to the cash status of the reserve fund and budgeted reserve contribution
- The anticipated effects of appreciation of the reserves over time in accord with a return or yield on investment of your cash equivalent assets. (We did not consider the costs, if any, of Federal and State Taxes on income derived from interest and/or dividend income).
- The Funding Plan excludes necessary operating budget expenditures. It is our understanding that future operating budgets will provide for the ongoing normal maintenance of Reserve Components.

Updates to this Reserve Study will continue to monitor historical facts and trends concerning the external market conditions.



6. CREDENTIALS

HISTORY AND DEPTH OF SERVICE

Founded in 1991, Reserve Advisors is the leading provider of reserve studies, insurance appraisals, developer turnover transition studies, expert witness services, and other engineering consulting services. Clients include community associations, resort properties, hotels, clubs, non-profit organizations, apartment building owners, religious and educational institutions, and office/commercial building owners in 48 states, Canada and throughout the world.

The **architectural engineering consulting firm** was formed to take a leadership role in helping fiduciaries, boards, and property managers manage their property like a business with a long-range master plan known as a Reserve Study.

Reserve Advisors employs the **largest staff of Reserve Specialists** with bachelor's degrees in engineering dedicated to Reserve Study services. Our founders are also founders of Community Associations Institute's (CAI) Reserve Committee that developed national standards for reserve study providers. One of our founders is a Past President of the Association of Professional Reserve Analysts (APRA). Our vast experience with a variety of building types and ages, on-site examination and historical analyses are keys to determining accurate remaining useful life estimates of building components.

No Conflict of Interest - As consulting specialists, our **independent opinion** eliminates any real or perceived conflict of interest because we do not conduct or manage capital projects.

TOTAL STAFF INVOLVEMENT

Several staff members participate in each assignment. The responsible advisor involves the staff through a Team Review, exclusive to Reserve Advisors, and by utilizing the experience of other staff members, each of whom has served hundreds of clients. We conduct Team Reviews, an internal quality assurance review of each assignment, including: the inspection; building component costing; lifing; and technical report phases of the assignment. Due to our extensive experience with building components, we do not have a need to utilize subcontractors.

OUR GOAL

To help our clients fulfill their fiduciary responsibilities to maintain property in good condition.

VAST EXPERIENCE WITH A VARIETY OF BUILDINGS

Reserve Advisors has conducted reserve studies for a multitude of different communities and building types. We've analyzed thousands of buildings, from as small as a 3,500-square foot day care center to a 2,600,000-square foot 98-story highrise. We also routinely inspect buildings with various types of mechanical systems such as simple electric heat, to complex systems with air handlers, chillers, boilers, elevators, and life safety and security systems.

We're familiar with all types of building exteriors as well. Our well-versed staff regularly identifies optimal repair and replacement solutions for such building exterior surfaces such as adobe, brick, stone, concrete, stucco, EIFS, wood products, stained glass and aluminum siding, and window wall systems.

OLD TO NEW

Reserve Advisors' experience includes ornate and vintage buildings as well as modern structures. Our specialists are no strangers to older buildings. We're accustomed to addressing the unique challenges posed by buildings that date to the 1800's. We recognize and consider the methods of construction employed into our analysis. We recommend appropriate replacement programs that apply cost effective technologies while maintaining a building's character and appeal.

Caitlin Tatro
Engineer, Northeast Region
Responsible Advisor

CURRENT CLIENT SERVICES

Caitlin Tatro, a Biomedical Engineer, is an Advisor for Reserve Advisors. Ms. Tatro is responsible for the inspection and analysis of the condition of clients' properties, and recommending engineering solutions to prolong the lives of the components. She also forecasts capital expenditures for the repair and/or replacement of the property components and prepares technical reports on assignments. She is responsible for conducting Life Cycle Cost Analyses and Capital Replacement Forecast services and the preparation of Reserve Study Reports for condominiums, townhomes, planned unit developments and homeowner associations.



The following is a partial list of clients served by Caitlin Tatro demonstrating the breadth of experiential knowledge of community associations in construction and related systems.

Occoquan Ridge Condominium – Located in Woodbridge, Virginia, this condominium was originally constructed in 1968 and provides home to 243 units between 17 four-story buildings. The community maintains a clubhouse with a kitchen, a grand room, restrooms, and two outdoor pools. The association also utilizes commercial and residential boilers, a cooling tower, and a chiller to regulate the temperature within the condominium units and to control water temperature in the buildings.

Cromwell Fountain Open Space Homeowners Association – Located in Glen Burnie, Maryland, this association was built in the early 1990s and consists of 977 units. The common areas enjoyed by the residents include a pool with a clubhouse adjacent to it where restrooms are located, two tennis courts, and a playground. The homeowner's association also features a pond with inlet/outlet structures, wood and chain-linked fences, and an entrance monument.

Lansdowne Square Condominium – Located in Leesburg, Virginia, this community consists of 23 residential and 15 commercial units comprising three buildings. Each residential unit comes with the luxury of a private garage, and either a rooftop deck or a balcony. Each commercial unit has a glass storefront, exterior light fixtures, and an awning at the entrances.

Ocean Pines Independent Living Condominium Association – Located in Berlin, Maryland this condominium is the home to 52 condominium units. Residents in this independent living community enjoy well-prepared meals from the commercial kitchen, participate in activities in the game room, and attend movie nights in the on-site theater.

Lake Audubon Place Cluster Association – Located in Reston, Virginia, this homeowner's association consists of five townhomes with 26 units and was built in 1983. This community overlooks Lake Audubon and features a composite dock with pilings and a wooden bulkhead along the shoreline. In addition to the lake, the association features asphalt pavement roads and walking paths, concrete sidewalks, property identification traffic management, and parking signs.

Preserve at Tuscarora Community Association – Located in Frederick, Maryland, this community consists of 67 single-family homes and 183 townhomes. Residents enjoy the multiple walking paths throughout the community along with the playground. This association also maintains multiple large retaining walls and bio-retention basins, concrete sidewalks, and light poles and fixtures around the community.

PRIOR RELEVANT EXPERIENCE

Before joining Reserve Advisors, LLC, Ms. Tatro attended Western New England University in Springfield, Massachusetts where she attained her Bachelor of Science degree in Biomedical Engineering. Her rigorous coursework focused on using problem solving to understand mechanical systems and principles. Additionally, Ms. Tatro worked as an intern at General Dynamics Mission Systems during her undergraduate education where she did requirement analysis and system decomposition along with organizing deliverables mandated by the contract she was working on.

EDUCATION

Western New England University – B.S. Biomedical Engineering

NICHOLAS R. JULIA, RS
Regional Engineering Manager, Northeast Region

CURRENT CLIENT SERVICES

Nicholas R. Julia, a Civil Engineer, is an Advisor for Reserve Advisors, LLC. Mr. Julia is responsible for the inspection and analysis of the condition of clients' property, and recommending engineering solutions to prolong the lives of the components. He also forecasts capital expenditures for the repair and/or replacement of the property components and prepares technical reports on assignments. He is responsible for conducting Life Cycle Cost Analysis and Capital Replacement Forecast services and the preparation of Reserve Study Reports for condominiums, townhomes and homeowner associations. Nicholas Julia often serves as Quality Assurance Reviewer for all types of developments to ensure our reports maintain the level of quality which is expected of our firm.



The following is a partial list of clients served by Nicholas Julia demonstrating his breadth of experiential knowledge of community associations in construction and related buildings systems.

One Park Crest Condominium is an upscale 19-story high rise building located in McLean, Virginia just outside of Washington, D.C. Residents enjoy an 18th floor club room and outdoor pool. The building also contains an exercise room, library, professionally decorated lobby and underground parking.

The Maryland Club is an exclusive club located in the heart of Baltimore, Maryland. The elegant white marble main building dates back to 1892. The club contains squash courts, a banquet area, a dining hall, and a professional kitchen amongst many other amenities.

Town of St. Michaels, a scenic town located on the Eastern Shore of Maryland. The town includes an administrative building, police station, public works garage and offices, and a historic log cabin. The municipality also maintains the asphalt pavement streets throughout the town, multiple parks, two water towers and a complex arsenic removal water treatment system.

One Loudoun Neighborhood Association is an upscale planned unit development comprising townhomes and single family homes located in Ashburn, Virginia. The property includes a high-end clubhouse with over 12,000 square feet of interior space including a gymnasium and yoga studio. The property also includes walking trails, multiple playgrounds, a tennis court, sports court, and a pool.

3883 Connecticut Avenue Condominium is a 10-story midrise located in Washington, D.C. The building was constructed in 2002 and contains luxurious amenities including an elevated outdoor pool on the 8th floor, party room, exercise facility and an underground parking garage.

Lake Petersburg Association This man-made lake community of 380 single family homes is located in Petersburg, Illinois. Components of the property include a community boat launch, dock, three tennis courts, a basketball court, two maintenance buildings, an office, and vehicular equipment. The Association also maintains an earthen dam on the far side of the lake.

PRIOR RELEVANT EXPERIENCE

Before joining Reserve Advisors, Mr. Julia attended Marquette University in Milwaukee, Wisconsin where he attained his Bachelor of Science degree in Civil Engineering. His studies focused on transportation engineering and construction management engineering.

EDUCATION

Marquette University - B.S. Civil Engineering

PROFESSIONAL AFFILIATIONS / DESIGNATIONS

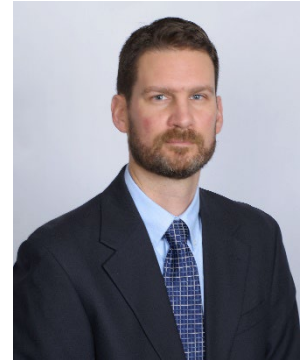
Engineer in Training (E.I.T.) – Washington D.C.
Reserve Specialist (RS) - Community Association Institute

ALAN M. EBERT, P.E., PRA, RS
Director of Quality Assurance

CURRENT CLIENT SERVICES

Alan M. Ebert, a Professional Engineer, is the Director of Quality Assurance for Reserve Advisors. Mr. Ebert is responsible for the management, review and quality assurance of reserve studies. In this role, he assumes the responsibility of stringent report review analysis to assure report accuracy and the best solution for Reserve Advisors' clients.

Mr. Ebert has been involved with thousands of Reserve Study assignments. The following is a partial list of clients served by Alan Ebert demonstrating his breadth of experiential knowledge of community associations in construction and related buildings systems.



Brownsville Winter Haven Located in Brownsville, Texas, this unique homeowners association contains 525 units. The Association maintains three pools and pool houses, a community and management office, landscape and maintenance equipment, and nine irrigation canals with associated infrastructure.

Rosemont Condominiums This unique condominium is located in Alexandria, Virginia and dates to the 1940's. The two mid-rise buildings utilize decorative stone and brick masonry. The development features common interior spaces, multi-level wood balconies and common asphalt parking areas.

Stillwater Homeowners Association Located in Naperville, Illinois, Stillwater Homeowners Association maintains four tennis courts, an Olympic sized pool and an upscale ballroom with commercial-grade kitchen. The community also maintains three storm water retention ponds and a detention basin.

Birchfield Community Services Association This extensive Association comprises seven separate parcels which include 505 townhome and single family homes. This Community Services Association is located in Mt. Laurel, New Jersey. Three lakes, a pool, a clubhouse and management office, wood carports, aluminum siding, and asphalt shingle roofs are a few of the elements maintained by the Association.

Oakridge Manor Condominium Association Located in Londonderry, New Hampshire, this Association includes 104 units at 13 buildings. In addition to extensive roads and parking areas, the Association maintains a large septic system and significant concrete retaining walls.

Memorial Lofts Homeowners Association This upscale high rise is located in Houston, Texas. The 20 luxury units include large balconies and decorative interior hallways. The 10-story building utilizes a painted stucco facade and TPO roof, while an on-grade garage serves residents and guests.

PRIOR RELEVANT EXPERIENCE

Mr. Ebert earned his Bachelor of Science degree in Geological Engineering from the University of Wisconsin-Madison. His relevant course work includes foundations, retaining walls, and slope stability. Before joining Reserve Advisors, Mr. Ebert was an oilfield engineer and tested and evaluated hundreds of oil and gas wells throughout North America.

EDUCATION

University of Wisconsin-Madison - B.S. Geological Engineering

PROFESSIONAL AFFILIATIONS/DESIGNATIONS

Professional Engineering License – Wisconsin, North Carolina, Illinois, Colorado

Reserve Specialist (RS) - Community Associations Institute

Professional Reserve Analyst (PRA) - Association of Professional Reserve Analysts



RESOURCES

Reserve Advisors utilizes numerous resources of national and local data to conduct its Professional Services. A concise list of several of these resources follows:

Association of Construction Inspectors, (ACI) the largest professional organization for those involved in construction inspection and construction project management. ACI is also the leading association providing standards, guidelines, regulations, education, training, and professional recognition in a field that has quickly become important procedure for both residential and commercial construction, found on the web at www.iami.org.

American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc., (ASHRAE) the American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc., devoted to the arts and sciences of heating, ventilation, air conditioning and refrigeration; recognized as the foremost, authoritative, timely and responsive source of technical and educational information, standards and guidelines, found on the web at www.ashrae.org. Reserve Advisors actively participates in its local chapter and holds individual memberships.

Community Associations Institute, (CAI) America's leading advocate for responsible communities noted as the only national organization dedicated to fostering vibrant, responsive, competent community associations. Their mission is to assist community associations in promoting harmony, community, and responsible leadership.

Marshall & Swift / Boeckh, (MS/B) the worldwide provider of building cost data, co-sourcing solutions, and estimating technology for the property and casualty insurance industry found on the web at www.marshallswift.com.

R.S. Means CostWorks, North America's leading supplier of construction cost information. As a member of the Construction Market Data Group, Means provides accurate and up-to-date cost information that helps owners, developers, architects, engineers, contractors and others to carefully and precisely project and control the cost of both new building construction and renovation projects found on the web at www.rsmeans.com.

Reserve Advisors' library of numerous periodicals relating to reserve studies, condition analyses, chapter community associations, and historical costs from thousands of capital repair and replacement projects, and product literature from manufacturers of building products and building systems.

7. DEFINITIONS

Definitions are derived from the standards set forth by the Community Associations Institute (CAI) representing America's 305,000 condominium and homeowners associations and cooperatives, and the Association of Professional Reserve Analysts, setting the standards of care for reserve study practitioners.

Cash Flow Method - A method of calculating Reserve Contributions where contributions to the reserve fund are designed to offset the variable annual expenditures from the reserve fund. Different Reserve Funding Plans are tested against the anticipated schedule of reserve expenses until the desired funding goal is achieved.

Component Method - A method of developing a Reserve Funding Plan with the total contribution is based on the sum of the contributions for individual components.

Current Cost of Replacement - That amount required today derived from the quantity of a *Reserve Component* and its unit cost to replace or repair a Reserve Component using the most current technology and construction materials, duplicating the productive utility of the existing property at current *local* market prices for *materials*, *labor* and manufactured equipment, contractors' overhead, profit and fees, but without provisions for building permits, overtime, bonuses for labor or premiums for material and equipment. We include removal and disposal costs where applicable.

Fully Funded Balance - The Reserve balance that is in direct proportion to the fraction of life "used up" of the current Repair or Replacement cost similar to Total Accrued Depreciation.

Funding Goal (Threshold) - The stated purpose of this Reserve Study is to determine the adequate, not excessive, minimal threshold reserve balances.

Future Cost of Replacement - *Reserve Expenditure* derived from the inflated current cost of replacement or current cost of replacement as defined above, with consideration given to the effects of inflation on local market rates for materials, labor and equipment.

Long-Lived Property Component - Property component of Caroline Oaks responsibility not likely to require capital repair or replacement during the next 30 years with an unpredictable remaining Useful Life beyond the next 30 years.

Percent Funded - The ratio, at a particular point of time (typically the beginning of the Fiscal Year), of the actual (or projected) Reserve Balance to the Fully Funded Balance, expressed as a percentage.

Remaining Useful Life - The estimated remaining functional or useful time in years of a *Reserve Component* based on its age, condition and maintenance.

Reserve Component - Property elements with: 1) Caroline Oaks responsibility; 2) limited Useful Life expectancies; 3) predictable Remaining Useful Life expectancies; and 4) a replacement cost above a minimum threshold.

Reserve Component Inventory - Line Items in *Reserve Expenditures* that identify a *Reserve Component*.

Reserve Contribution - An amount of money set aside or *Reserve Assessment* contributed to a *Reserve Fund* for future *Reserve Expenditures* to repair or replace *Reserve Components*.

Reserve Expenditure - Future Cost of Replacement of a Reserve Component.

Reserve Fund Status - The accumulated amount of reserves in dollars at a given point in time, i.e., at year end.

Reserve Funding Plan - The portion of the Reserve Study identifying the *Cash Flow Analysis* and containing the recommended Reserve Contributions and projected annual expenditures, interest earned and reserve balances.

Reserve Study - A budget planning tool that identifies the current status of the reserve fund and a stable and equitable Funding Plan to offset the anticipated future major common area expenditures.

Useful Life - The anticipated total time in years that a *Reserve Component* is expected to serve its intended function in its present application or installation.



8. PROFESSIONAL SERVICE CONDITIONS

Our Services - Reserve Advisors, LLC ("RA") performs its services as an independent contractor in accordance with our professional practice standards and its compensation is not contingent upon our conclusions. The purpose of our reserve study is to provide a budget planning tool that identifies the current status of the reserve fund, and an opinion recommending an annual funding plan, to create reserves for anticipated future replacement expenditures of the subject property. The purpose of our energy benchmarking services is to track, collect and summarize the subject property's energy consumption over time for your use in comparison with other buildings of similar size and establishing a performance baseline for your planning of long-term energy efficiency goals.

Our inspection and analysis of the subject property is limited to visual observations, is noninvasive and is not meant to nor does it include investigation into statutory, regulatory or code compliance. RA inspects sloped roofs from the ground and inspects flat roofs where safe access (stairs or ladder permanently attached to the structure) is available. Our energy benchmarking services with respect to the subject property is limited to collecting energy and utility data and summarizing such data in the form of an Energy Star Portfolio Manager Report or any other similar report, and hereby expressly excludes any recommendations with respect to the results of such energy benchmarking services or the accuracy of the energy information obtained from utility companies and other third-party sources with respect to the subject property. The reserve report and any energy benchmarking report (i.e., any Energy Star Portfolio Manager Report) (including any subsequent revisions thereto pursuant to the terms hereof, collectively, the "Report") are based upon a "snapshot in time" at the moment of inspection. RA may note visible physical defects in the Report. The inspection is made by employees generally familiar with real estate and building construction. Except to the extent readily apparent to RA, RA cannot and shall not opine on the structural integrity of or other physical defects in the property under any circumstances. Without limitation to the foregoing, RA cannot and shall not opine on, nor is RA responsible for, the property's conformity to specific governmental code requirements for fire, building, earthquake, occupancy or otherwise.

RA is not responsible for conditions that have changed between the time of inspection and the issuance of the Report. RA does not provide invasive testing on any mechanical systems that provide energy to the property, nor can RA opine on any system components that are not easily accessible during the inspection. RA does not investigate, nor assume any responsibility for any existence or impact of any hazardous materials, such as asbestos, urea-formaldehyde foam insulation, other chemicals, toxic wastes, environmental mold or other potentially hazardous materials or structural defects that are latent or hidden defects which may or may not be present on or within the property. RA does not make any soil analysis or geological study as part of its services, nor does RA investigate vapor, water, oil, gas, coal, or other subsurface mineral and use rights or such hidden conditions, and RA assumes no responsibility for any such conditions. The Report contains opinions of estimated replacement costs or deferred maintenance expenses and remaining useful lives, which are neither a guarantee of the actual costs or expenses of replacement or deferred maintenance nor a guarantee of remaining useful lives of any property element.

RA assumes, without independent verification, the accuracy of all data provided to it. Except to the extent resulting from RA's willful misconduct in connection with the performance of its obligations under this agreement, you agree to indemnify, defend, and hold RA and its affiliates, officers, managers, employees, agents, successors and assigns (each, an "RA Party") harmless from and against (and promptly reimburse each RA Party for) any and all losses, claims, actions, demands, judgments, orders, damages, expenses or liabilities, including, without limitation, reasonable attorneys' fees, asserted against or to which any RA Party may become subject in connection with this engagement, including, without limitation, as a result of any false, misleading or incomplete information which RA relied upon that was supplied by you or others under your direction, or which may result from any improper use or reliance on the Report by you or third parties under your control or direction or to whom you provided the Report. NOTWITHSTANDING ANY OTHER PROVISION HEREIN TO THE CONTRARY, THE AGGREGATE LIABILITY (IF ANY) OF RA WITH RESPECT TO THIS AGREEMENT AND RA'S OBLIGATIONS HEREUNDER IS LIMITED TO THE AMOUNT OF THE FEES ACTUALLY RECEIVED BY RA FROM YOU FOR THE SERVICES AND REPORT PERFORMED BY RA UNDER THIS AGREEMENT, WHETHER ARISING IN CONTRACT, TORT (INCLUDING NEGLIGENCE), STRICT LIABILITY OR OTHERWISE. YOUR REMEDIES SET FORTH HEREIN ARE EXCLUSIVE AND ARE YOUR SOLE REMEDIES FOR ANY FAILURE OF RA TO COMPLY WITH ITS OBLIGATIONS HEREUNDER OR OTHERWISE. RA SHALL NOT BE LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL, CONSEQUENTIAL, PUNITIVE OR EXEMPLARY DAMAGES OF ANY KIND, INCLUDING, BUT NOT LIMITED TO, ANY LOST PROFITS AND LOST SAVINGS, LOSS OF USE OR INTERRUPTION OF BUSINESS, HOWEVER CAUSED, WHETHER ARISING IN CONTRACT, TORT (INCLUDING NEGLIGENCE), BREACH OF WARRANTY, STRICT LIABILITY OR OTHERWISE, EVEN IF RA HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. IN NO EVENT WILL RA BE LIABLE FOR THE COST OF PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES. RA DISCLAIMS ALL REPRESENTATIONS AND WARRANTIES WHATSOEVER, EXPRESS OR IMPLIED OR OF ANY NATURE, WITH REGARD TO THE SERVICES AND THE REPORT, INCLUDING, WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Report - RA will complete the services in accordance with the Proposal. The Report represents a valid opinion of RA's findings and recommendations with respect to the reserve study and is deemed complete. RA will consider any additional information made available to RA within 6 months of issuing the Report and issue a revised Report based on such additional information if a timely request for a revised Report is made by you. RA retains the right to withhold a revised Report if payment for services was not tendered in a timely manner. All information received by RA and all files, work papers or documents developed by RA during the course of the engagement shall remain the property of



RA and may be used for whatever purpose it sees fit. RA reserves the right to, and you acknowledge and agree that RA may, use any data provided by you in connection with the services, or gathered as a result of providing such services, including in connection with creating and issuing any Report, in a de-identified and aggregated form for RA's business purposes.

Your Obligations - You agree to provide us access to the subject property for an inspection. You agree to provide RA all available, historical and budgetary information, the governing documents, and other information that we request and deem necessary to complete the Report. Additionally, you agree to provide historical replacement schedules, utility bills and historical energy usage files that RA requests and deems necessary to complete the energy benchmarking services, and you agree to provide any utility release(s) reasonably requested by RA permitting RA to obtain any such data and/or information from any utility representative or other third party. You agree to pay actual attorneys' fees and any other costs incurred to collect on any unpaid balance for RA's services.

Use of Our Report and Your Name - Use of the Report is limited to only the purpose stated herein. You acknowledge that RA is the exclusive owner of all intellectual property rights in and relating to the Report. You hereby acknowledge that any use or reliance by you on the Report for any unauthorized purpose is at your own risk and that you will be liable for the consequences of any unauthorized use or distribution of the Report. Use or possession of the Report by any unauthorized third party is prohibited. The Report in whole or in part **is not and cannot be used as a design specification for design engineering purposes or as an appraisal**. You may show the Report in its entirety to the following third parties: members of your organization (including your directors, officers, tenants and prospective purchasers), your accountants, attorneys, financial institutions and property managers who need to review the information contained herein, and any other third party who has a right to inspect the Report under applicable law including, but not limited to, any government entity or agency, or any utility companies. Without the written consent of RA, you shall not disclose the Report to any other third party. By engaging our services, you agree that the Report contains intellectual property developed (and owned solely) by RA and agree that you will not reproduce or distribute the Report **to any party that conducts reserve studies without the written consent of RA**.

RA will include (and you hereby agree that RA may include) your name in our client lists. RA reserves the right to use (and you hereby agree that RA may use) property information to obtain estimates of replacement costs, useful life of property elements or otherwise as RA, in its sole discretion, deems appropriate.

Payment Terms, Due Dates and Interest Charges - If reserve study and energy benchmarking services are performed by RA, then the retainer payment is due upon execution of this agreement and prior to the inspection by RA, and any balance is due net 30 days from the Report shipment date. If only energy benchmarking services are performed by RA, then the retainer payment is due upon execution of this agreement and any balance is due net 30 days from the Report shipment date. In any case, any balance remaining 30 days after delivery of the Report shall accrue an interest charge of 1.5% per month. Unless this agreement is earlier terminated by RA in the event you breach or otherwise fail to comply with your obligations under this agreement, RA's obligations under this agreement shall commence on the date you execute and deliver this agreement and terminate on the date that is 6 months from the date of delivery of the Report by RA. Notwithstanding anything herein to the contrary, each provision that by its context and nature should survive the expiration or early termination of this agreement shall so survive, including, without limitation, any provisions with respect to payment, intellectual property rights, limitations of liability and governing law. We reserve the right to limit or decline refunds in our sole discretion. Refunds vary based on the applicable facts and circumstances.

Miscellaneous – Neither party shall be liable for any failures or delays in performance due to fire, flood, strike or other labor difficulty, act of God, act of any governmental authority, riot, embargo, fuel or energy shortage, pandemic, wrecks or delays in transportation, or due to any other cause beyond such party's reasonable control; provided, however, that you shall not be relieved from your obligations to make any payment(s) to RA as and when due hereunder. In the event of a delay in performance due to any such cause, the time for completion or date of delivery will be extended by a period of time reasonably necessary to overcome the effect of such delay. You may not assign or otherwise transfer this agreement, in whole or in part, without the prior written consent of RA. RA may freely assign or otherwise transfer this agreement, in whole or in part, without your prior consent. This agreement shall be governed by the laws of the State of Wisconsin without regard to any principles of conflicts of law that would apply the laws of another jurisdiction. Any dispute with respect to this agreement shall be exclusively venued in Milwaukee County Circuit Court or in the United States District Court for the Eastern District of Wisconsin. Each party hereto agrees and hereby waives the right to a trial by jury in any action, proceeding or claim brought by or on behalf of the parties hereto with respect to any matter related to this agreement.