

# Briar Lake

## Unit Owners' Association

Inspected: May 31, 2024 • Revised on: September 9, 2024  
Lebanon, PA

FULL RESERVE STUDY



Briar Lake Unit Owners' Association  
Lebanon, Pennsylvania

Dear Board of Directors of Briar Lake Unit Owners' Association:

At the direction of the Board that recognizes the need for proper reserve planning, we have conducted a *Full Reserve Study* of Briar Lake Unit Owners' Association in Lebanon, Pennsylvania and submit our findings in this report. The effective date of this study is the date of our visual, noninvasive inspection, May 31, 2024.

This *Full Reserve Study* exceeds the Association of Professional Reserve Analysts (APRA) standards fulfilling the requirements of a "Level I Full Reserve Study."

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 Briar Lake Unit Owners' Association 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 September 9, 2024 by

*Reserve Advisors, LLC*

Visual Inspection and Report by: Christopher J. Quinlan

Review by: Jon R. Walker, RS<sup>1</sup>, Regional Engineering Manager

Review by: Alan M. Ebert, RS, PRA<sup>2</sup>, Director of Quality Assurance



<sup>1</sup> 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.

<sup>2</sup> 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:** Briar Lake Unit Owners' Association (Briar Lake)

**Location:** Lebanon, Pennsylvania

**Reference:** 081193

**Property Basics:** Briar Lake Unit Owners' Association is a homeowners association which is responsible for the common elements shared by 107 single family homes. The community was built from 2005 to 2010.

**Reserve Components Identified:** 40 Reserve Components.

**Inspection Date:** May 31, 2024. We conducted the original inspection on May 21, 2010.

**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 streets paved in 2020. In addition, the Reserve Funding Plan recommends 2054 year end accumulated reserves of approximately \$1,469,200. We judge this amount of accumulated reserves in 2054 necessary to fund the likely repaving of the streets paved in 2020 after 2054. Future replacement costs beyond the next 30 years for the repaving of the streets paved in 2020 are likely to more than double the current cost of repaving, now estimated at approximately \$554,800 (14,600 square yards times \$38.00 per square yard). These future needs, although beyond the limit of the Cash Flow Analysis of this Reserve Study, are reflected in the amount of accumulated 2054 year end reserves.

**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:**

- \$459,284 as of April 30, 2024
- 2024 budgeted Reserve Contributions of \$21,600
- A potential deficit in reserves might occur by 2029 based upon continuation of the most recent annual reserve contribution of \$21,600 and the identified Reserve Expenditures.

**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:

- Partial replacement of the wood deck walking path with pavement (2024 is planned)
- Replacement of the remaining wood deck walking path
- Replacement of the clubhouse roof, gutters and downspouts
- Replacement of the wood dock
- Sediment removal at the farm pond



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

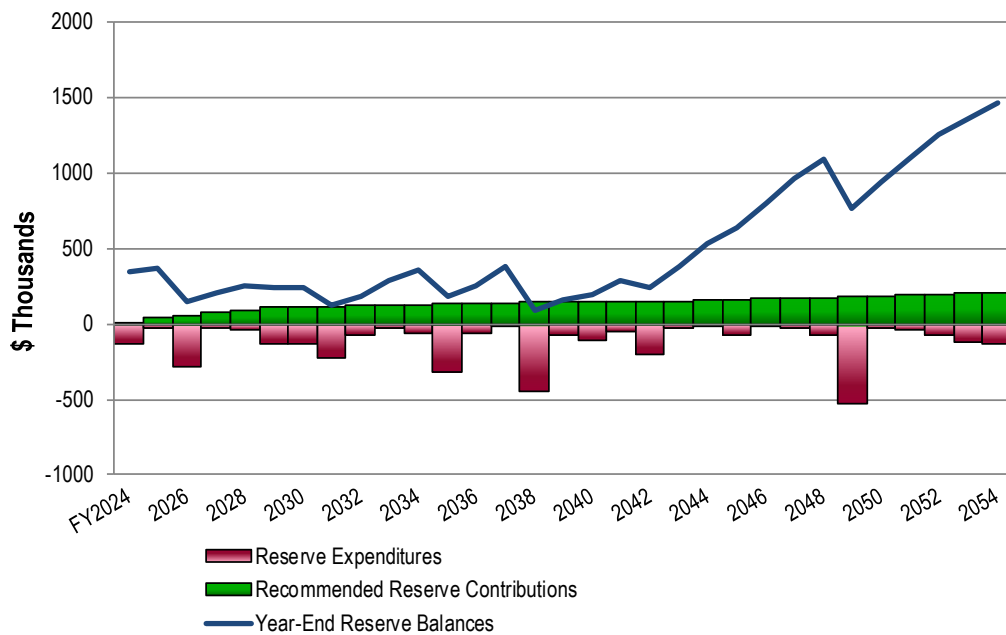
- Phased increases of \$17,700 from 2025 through 2029
- Inflationary increases from 2030 through 2038
- Stable contributions of \$143,600 from 2039 through 2041
- Inflationary increases thereafter through 2054, the limit of this study's Cash Flow Analysis
- Initial adjustments in Reserve Contributions of \$17,700 represents an average quarterly increase of \$41.36 per owner and about a fifteen percent (14.8%) adjustment in the 2024 total Operating Budget
- These recommended Reserve Contributions ensure that each owner funds their use of the Association maintained elements annually. The actual Reserve Contributions approved by the Board may vary based on factors external to the Reserve Study such as the financial impact on unit owners, desire to utilize funding mechanisms other than reserves and the market value of the units. We include stepped or phased annual increases in the Reserve Contribution based on the current financial conditions of the Association, significant recommended Reserve Contributions and the critical Reserve Balances. Any phase in the required Reserve Contribution increase defers the cost burden to future owners. We therefore limit the number of phased increases to limit the deferred cost burden to future owners. We opine this funding method adheres to APRA Standards of Practice which state in part "... any Funding Plan shall meet the Following Funding Principles: Sufficient funds when required, stable contribution rate over the years, evenly distributed contributions over the years, and fiscally responsible."



## Briar Lake

### Recommended Reserve Funding Table and Graph

Year	Reserve Contributions (\$)	Reserve Balances (\$)	Year	Reserve Contributions (\$)	Reserve Balances (\$)	Year	Reserve Contributions (\$)	Reserve Balances (\$)
2025	39,300	366,299	2035	131,400	183,812	2045	161,600	635,689
2026	57,000	144,566	2036	135,300	257,108	2046	166,400	800,017
2027	74,700	201,162	2037	139,400	387,336	2047	171,400	966,207
2028	92,400	258,967	2038	143,600	88,985	2048	176,500	1,088,344
2029	110,100	246,148	2039	143,600	158,366	2049	181,800	766,058
2030	113,400	236,865	2040	143,600	196,439	2050	187,300	938,315
2031	116,800	129,644	2041	143,600	291,873	2051	192,900	1,107,826
2032	120,300	185,418	2042	147,900	245,964	2052	198,700	1,257,879
2033	123,900	283,250	2043	152,300	378,877	2053	204,700	1,366,991
2034	127,600	359,865	2044	156,900	530,876	2054	210,800	1,469,205





## 2. RESERVE STUDY REPORT

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

**Briar Lake Unit Owners' Association**

**Lebanon, Pennsylvania**

and submit our findings in this report. The effective date of this study is the date of our visual, noninvasive inspection, May 31, 2024. We conducted the original inspection on May 21, 2010.

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 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 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:

- Briar Lake 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  
**Briar Lake**  
**Unit Owners' Association**  
Lebanon, Pennsylvania

### **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
- Deck, Composite, Deck Boards and Interim Repairs
- Detention Basins, Adjacent to Main Lake, General Maintenance
- Dock, Wood, Deck Boards and Interim Repairs
- Landscape, General Maintenance
- Light Fixtures and Fans, Clubhouse Interior, Replacement
- Light Fixtures, Clubhouse Exterior, Replacement
- Paint Finishes, Touch Up
- Retaining Walls, Masonry, Clubhouse Rear Patio, Repairs and Replacement
- Signage, Street and Traffic, Replacement
- Site Furniture, Replacements
- Sutters, Vinyl, Clubhouse Exterior, Replacement
- Walls, Thin Stone Veneer, Clubhouse Exterior, Inspections and Capital Repairs

### **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.

	<b>Useful Life</b>	<b>Estimated Cost</b>
• Electrical System, Clubhouse	to 70+ years	N/A
• Foundation, Clubhouse	Indeterminate	N/A
• Pipes, Clubhouse Interior, Domestic Water, Sanitary Waste, Vent, Building Heating and Cooling	to 80+ years	N/A
• Pipes, Subsurface Utilities	to 85+ years	N/A
• Structural Frame, Clubhouse	Indeterminate	N/A

**Excluded Components**

for  
Briar Lake  
Unit Owners' Association  
Lebanon, Pennsylvania

<b>Owners Responsibility Components</b>
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Certain items have been designated as the responsibility of the Owners to repair or replace at their cost, including items billed back.
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- |                  |
|------------------|
| • Homes and Lots |
|------------------|

<b>Others Responsibility Components</b>
---

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

- |   |
|---|
| • Detention Basin, East of Lantern Drive <sup>1</sup> |
|---|

<sup>1</sup> Neighboring Association's Responsibility
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### 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

#### 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

Briar Lake  
Unit Owners' Association  
Lebanon, Pennsylvania

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.  
3) 2055+ indicates a component which is considered long-lived

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)
Exterior Clubhouse Elements																											
1.040	600	600	Square Feet	Deck, Composite, Replacement (Incl. Vinyl Railings)	2030	20 to 25	6	60.00	36,000	36,000	3.6%						42,986										
1.180	1	1	Each	Doors, Wood, Entrance	2032	to 30	8	14,400.00	14,400	14,400	0.5%								18,241								
1.280	20	20	Squares	Roof Assembly, Asphalt Shingles (Incl. Gutters and Downspouts)	2027	15 to 20	3	660.00	13,200	13,200	1.1%			14,424													
1.860	2,300	2,300	Square Feet	Walls, Siding, Vinyl (Incl. Soffit and Facia)	2042	to 40	18	11.00	25,300	25,300	1.2%																
1.980	560	560	Square Feet	Windows and Doors (Excl. Entrance Doors)	2042	to 40	18	77.00	43,120	43,120	2.1%																
Interior Clubhouse Elements																											
2.160	3	1	Allowance	Exercise Equipment, Phased	2029	5 to 15	5 to 15	2,700.00	2,700	8,100	0.8%					3,130					3,629					4,207	
2.200	150	150	Square Yards	Floor Coverings, Carpet	2029	8 to 12	5	67.00	10,050	10,050	1.4%					11,651										15,658	
2.300	55	55	Square Yards	Floor Coverings, Vinyl and Tile	2034	to 20	10	85.00	4,675	4,675	0.5%										6,283						
2.450	2	1	Allowance	Furnishings, Phased	2029	to 20	5 to 15	10,000.00	10,000	20,000	1.3%					11,593										15,580	
2.520	1	1	Allowance	Kitchen, Renovation	2034	to 25	10	18,000.00	18,000	18,000	0.7%										24,190						
2.800	6,800	6,800	Square Feet	Paint Finishes	2029	8 to 12	5	2.10	14,280	14,280	1.9%					16,554										22,248	
2.900	1	1	Allowance	Rest Rooms, Renovation	2034	to 25	10	11,000.00	11,000	11,000	0.4%										14,783						
Clubhouse Services Elements																											
3.070	2	1	Each	Air Handling and Condensing Units, Split Systems, Phased	2026	to 20	2 to 18	8,500.00	8,500	17,000	1.1%			9,018													
Property Site Elements																											
4.020	26,150	26,150	Square Yards	Asphalt Pavement, Crack Repair and Patch (Incl. Seal Coat and Striping at Parking Area)	2025	3 to 5	1	0.90	23,535	23,535	6.8%		24,241			27,284				30,708			15,553				
4.040	14,600	14,600	Square Yards	Asphalt Pavement, Mill and Overlay, Streets, 2020 Repaved	2038	15 to 20	14	18.00	262,800	262,800	11.1%														397,509		
4.041	2,800	2,800	Square Yards	Asphalt Pavement, Mill and Overlay, Streets, 2022 Repaved	2040	15 to 20	16	18.00	50,400	50,400	2.3%																
4.042	4,800	4,800	Square Yards	Asphalt Pavement, Mill and Overlay, Streets, Remaining	2031	15 to 20	7	18.00	86,400	86,400	8.0%								106,261								
4.045	450	450	Square Yards	Asphalt Pavement, Total Replacement, Parking Area	2031	15 to 20	7	38.00	17,100	17,100	1.7%								21,031								
4.046	14,600	14,600	Square Yards	Asphalt Pavement, Total Replacement, Streets, 2020 Repaved	2056	15 to 20	32	38.00	554,800	554,800	0.0%																
4.047	2,800	2,800	Square Yards	Asphalt Pavement, Total Replacement, Streets, 2022 Repaved	2058	15 to 20	34	38.00	106,400	106,400	0.0%																
4.080	3,500	1,167	Square Yards	Asphalt Pavement, Walking Paths, Total Replacement, Phased	2030	15 to 20	6 to 18	31.50	36,750	110,250	9.0%						43,882					52,397					
4.100	50	25	Each	Catch Basins, Inspections and Capital Repairs (2024 is Anticipated Repairs), Phased	2024	15 to 20	0 to 7	1,100.00	27,500	55,000	4.0%	10,000							33,822						41,596		
4.110	9,800	650	Linear Feet	Concrete Curbs, Partial	2031	to 65	7 to 30+	27.00	17,550	264,600	2.4%								21,584								
4.125	1,100	150	Square Feet	Concrete Flatwork, Patios, Sidewalks and Stairs, Partial	2031	to 65	7 to 30+	17.00	2,550	18,700	0.4%								3,136								
4.150	1	1	Allowance	Dam, Manual Control Valve, Brass	2028	to 50	4	30,000.00	30,000	30,000	0.9%					33,765											
4.200	350	350	Square Feet	Dock, Wood, Replacement	2029	20 to 25	5	90.00	31,500	31,500	3.0%						36,517										
4.260	60	60	Linear Feet	Fence, Vinyl	2029	15 to 20	5	58.00	3,480	3,480	0.3%						4,034										
4.500	1	1	Allowance	Landscape, Partial Replacements	2026	to 3	2	5,000.00	5,000	5,000	2.3%			5,305			5,796		6,334			6,921			7,563		
4.560	30	10	Each	Light Poles and Fixtures, Phased	2030	to 25	6 to 8	3,400.00	34,000	102,000	3.5%						40,598	41,816	43,070								
4.600	3	3	Each	Mailbox Stations	2034	to 25	10	2,100.00	6,300	6,300	0.2%										8,467						
4.700	4	2	Each	Ponds, Aerators, Phased	2029	10 to 15	5 to 12	4,900.00	9,800	19,600	1.8%						11,361					13,972					
4.710	750	115	Linear Feet	Pond, Erosion Control, Farm Pond, Partial	2041	to 15	17	29.00	3,335	21,750	0.2%																
4.711	2,800	420	Linear Feet	Pond, Erosion Control, Main Pond, Partial	2039	to 15	15	29.00	12,180	81,200	1.4%															18,976	
4.712	1,100	165	Linear Feet	Pond, Erosion Control, Upper Pond, Partial	2028	to 15	4	29.00	4,785	31,900	0.4%				5,386												
4.730	4,000	1,000	Square Yards	Pond, Sediment Removal, Farm Pond, Partial	2026	to 30	2	34.00	34,000	136,000	1.0%			36,071													
4.731	30,500	4,575	Square Yards	Pond, Sediment Removal, Main Pond, Partial	2035	to 30	11	34.00	155,550	1,037,000	6.0%										215,318						
4.732	7,700	1,925	Square Yards	Pond, Sediment Removal, Upper Pond, Partial	2035	to 30	11	34.00	65,450	261,800	2.5%										90,598						

RESERVE EXPENDITURES

Briar Lake Unit Owners' Association Lebanon, Pennsylvania				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
Line Item	Total Quantity	Per Phase Quantity	Units		Useful	Remaining	Unit (2024)	Per Phase (2024)	Total (2024)																
Reserve Component Inventory																									
Exterior Clubhouse Elements																									
1.040	600	600	Square Feet	Deck, Composite, Replacement (Incl. Vinyl Railings)	2030	20 to 25	6	60.00	36,000	36,000	3.6%														84,836
1.180	1	1	Each	Doors, Wood, Entrance	2032	to 30	8	14,400.00	14,400	14,400	0.5%														
1.280	20	20	Squares	Roof Assembly, Asphalt Shingles (Incl. Gutters and Downspouts)	2027	15 to 20	3	660.00	13,200	13,200	1.1%					24,556									
1.860	2,300	2,300	Square Feet	Walls, Siding, Vinyl (Incl. Soffit and Facia)	2042	to 40	18	11.00	25,300	25,300	1.2%			43,072											
1.980	560	560	Square Feet	Windows and Doors (Excl. Entrance Doors)	2042	to 40	18	77.00	43,120	43,120	2.1%			73,409											
Interior Clubhouse Elements																									
2.160	3	1	Allowance	Exercise Equipment, Phased	2029	5 to 15	5 to 15	2,700.00	2,700	8,100	0.8%				4,877					5,653					6,554
2.200	150	150	Square Yards	Floor Coverings, Carpet	2029	8 to 12	5	67.00	10,050	10,050	1.4%									21,042					
2.300	55	55	Square Yards	Floor Coverings, Vinyl and Tile	2034	to 20	10	85.00	4,675	4,675	0.5%														11,347
2.450	2	1	Allowance	Furnishings, Phased	2029	to 20	5 to 15	10,000.00	10,000	20,000	1.3%									20,938					
2.520	1	1	Allowance	Kitchen, Renovation	2034	to 25	10	18,000.00	18,000	18,000	0.7%														
2.800	6,800	6,800	Square Feet	Paint Finishes	2029	8 to 12	5	2.10	14,280	14,280	1.9%									29,899					
2.900	1	1	Allowance	Rest Rooms, Renovation	2034	to 25	10	11,000.00	11,000	11,000	0.4%														
Clubhouse Services Elements																									
3.070	2	1	Each	Air Handling and Condensing Units, Split Systems, Phased	2026	to 20	2 to 18	8,500.00	8,500	17,000	1.1%			14,471			16,287								
Property Site Elements																									
4.020	26,150	26,150	Square Yards	Asphalt Pavement, Crack Repair and Patch (Incl. Seal Coat and Striping at Parking Area)	2025	3 to 5	1	0.90	23,535	23,535	6.8%		35,010			43,782				39,914				24,958	
4.040	14,600	14,600	Square Yards	Asphalt Pavement, Mill and Overlay, Streets, 2020 Repaved	2038	15 to 20	14	18.00	262,800	262,800	11.1%														
4.041	2,800	2,800	Square Yards	Asphalt Pavement, Mill and Overlay, Streets, 2022 Repaved	2040	15 to 20	16	18.00	50,400	50,400	2.3%	80,877													
4.042	4,800	4,800	Square Yards	Asphalt Pavement, Mill and Overlay, Streets, Remaining	2031	15 to 20	7	18.00	86,400	86,400	8.0%									180,902					
4.045	450	450	Square Yards	Asphalt Pavement, Total Replacement, Parking Area	2031	15 to 20	7	38.00	17,100	17,100	1.7%											37,984			
4.046	14,600	14,600	Square Yards	Asphalt Pavement, Total Replacement, Streets, 2020 Repaved	2056	15 to 20	32	38.00	554,800	554,800	0.0%														
4.047	2,800	2,800	Square Yards	Asphalt Pavement, Total Replacement, Streets, 2022 Repaved	2058	15 to 20	34	38.00	106,400	106,400	0.0%														
4.080	3,500	1,167	Square Yards	Asphalt Pavement, Walking Paths, Total Replacement, Phased	2030	15 to 20	6 to 18	31.50	36,750	110,250	9.0%			62,565				74,705							89,202
4.100	50	25	Each	Catch Basins, Inspections and Capital Repairs (2024 is Anticipated Repairs), Phased	2024	15 to 20	0 to 7	1,100.00	27,500	55,000	4.0%									57,579					
4.110	9,800	650	Linear Feet	Concrete Curbs, Partial	2031	to 65	7 to 30+	27.00	17,550	264,600	2.4%	28,163								36,746					
4.125	1,100	150	Square Feet	Concrete Flatwork, Patios, Sidewalks and Stairs, Partial	2031	to 65	7 to 30+	17.00	2,550	18,700	0.4%		4,215								5,664				
4.150	1	1	Allowance	Dam, Manual Control Valve, Brass	2028	to 50	4	30,000.00	30,000	30,000	0.9%														
4.200	350	350	Square Feet	Dock, Wood, Replacement	2029	20 to 25	5	90.00	31,500	31,500	3.0%											72,070			
4.260	60	60	Linear Feet	Fence, Vinyl	2029	15 to 20	5	58.00	3,480	3,480	0.3%									7,286					
4.500	1	1	Allowance	Landscape, Partial Replacements	2026	to 3	2	5,000.00	5,000	5,000	2.3%		8,264		9,031		9,868				10,783			11,783	
4.560	30	10	Each	Light Poles and Fixtures, Phased	2030	to 25	6 to 8	3,400.00	34,000	102,000	3.5%														
4.600	3	3	Each	Mailbox Stations	2034	to 25	10	2,100.00	6,300	6,300	0.2%														
4.700	4	2	Each	Ponds, Aerators, Phased	2029	10 to 15	5 to 12	4,900.00	9,800	19,600	1.8%				17,184					21,135					
4.710	750	115	Linear Feet	Pond, Erosion Control, Farm Pond, Partial	2041	to 15	17	29.00	3,335	21,750	0.2%		5,512												
4.711	2,800	420	Linear Feet	Pond, Erosion Control, Main Pond, Partial	2039	to 15	15	29.00	12,180	81,200	1.4%														29,564
4.712	1,100	165	Linear Feet	Pond, Erosion Control, Upper Pond, Partial	2028	to 15	4	29.00	4,785	31,900	0.4%			8,391											
4.730	4,000	1,000	Square Yards	Pond, Sediment Removal, Farm Pond, Partial	2026	to 30	2	34.00	34,000	136,000	1.0%														
4.731	30,500	4,575	Square Yards	Pond, Sediment Removal, Main Pond, Partial	2035	to 30	11	34.00	155,550	1,037,000	6.0%														
4.732	7,700	1,925	Square Yards	Pond, Sediment Removal, Upper Pond, Partial	2035	to 30	11	34.00	65,450	261,800	2.5%														

RESERVE EXPENDITURES

Briar Lake  
Unit Owners' Association  
Lebanon, Pennsylvania

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.
- 3) 2055+ indicates a component which is considered long-lived

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)
4.800	1	1	Allowance	Signage, Entrance Monument, Renovation	2027	15 to 20	3	6,500.00	6,500	6,500	0.6%			7,103													
4.900	1	1	Allowance	Walking Path, Asphalt Pavement and Wood Deck, Renovation, Phase One (2024 is Planned)	2024	N/A	0	121,200.00	121,200	121,200	3.4%	121,200															
4.901	110	110	Square Yards	Walking Path, Asphalt Pavement, Repaving, Subsequent	2042	15 to 20	18	30.00	3,300	3,300	0.2%																
4.902	1,300	1,300	Square Feet	Walking Path, Composite Deck, Deck Boards and Repairs, Subsequent	2049	to 25	25	45.00	58,500	58,500	3.4%																
4.903	1	1	Allowance	Walking Path, Wood Deck, Replacement, Phase Two (Replace with Composite)	2026	N/A	2	220,000.00	220,000	220,000	6.5%		233,398														
Anticipated Expenditures, By Year (\$3,567,753 over 30 years)												131,200	24,241	283,791	21,527	39,151	127,920	127,465	227,650	67,646	30,708	57,352	312,837	66,369	15,553	446,668	76,668



RESERVE EXPENDITURES

Briar Lake Unit Owners' Association Lebanon, Pennsylvania				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
Line Item	Total Quantity	Per Phase Quantity	Units		Useful	Remaining	Unit (2024)	Per Phase (2024)	Total (2024)																
Reserve Component Inventory																									
4.800	1	1	Allowance	Signage, Entrance Monument, Renovation	2027	15 to 20	3	6,500.00	6,500	6,500	0.6%							12,828							
4.900	1	1	Allowance	Walking Path, Asphalt Pavement and Wood Deck, Renovation, Phase One (2024 is Planned)	2024	N/A	0	121,200.00	121,200	121,200	3.4%														
4.901	110	110	Square Yards	Walking Path, Asphalt Pavement, Repaving, Subsequent	2042	15 to 20	18	30.00	3,300	3,300	0.2%			5,618											
4.902	1,300	1,300	Square Feet	Walking Path, Composite Deck, Deck Boards and Repairs, Subsequent	2049	to 25	25	45.00	58,500	58,500	3.4%								122,486						
4.903	1	1	Allowance	Walking Path, Wood Deck, Replacement, Phase Two (Replace with Composite)	2026	N/A	2	220,000.00	220,000	220,000	6.5%														
Anticipated Expenditures, By Year (\$3,567,753 over 30 years)											109,040	53,001	199,134	25,575	13,907	68,338	16,287	22,696	74,705	522,446	31,918	43,648	72,070	121,577	136,667

RESERVE FUNDING PLAN

CASH FLOW ANALYSIS		Individual Reserve Budgets & Cash Flows for the Next 30 Years															
Briar Lake																	
Unit Owners' Association																	
Lebanon, Pennsylvania		FY2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
Reserves at Beginning of Year	(Note 1)	459,284	344,205	366,299	144,566	201,162	258,967	246,148	236,865	129,644	185,418	283,250	359,865	183,812	257,108	387,336	88,985
Total Recommended Reserve Contributions	(Note 2)	10,800	39,300	57,000	74,700	92,400	110,100	113,400	116,800	120,300	123,900	127,600	131,400	135,300	139,400	143,600	143,600
Estimated Interest Earned, During Year	(Note 3)	5,321	7,035	5,058	3,423	4,556	5,001	4,782	3,629	3,119	4,640	6,367	5,383	4,366	6,381	4,716	2,449
Anticipated Expenditures, By Year		(131,200)	(24,241)	(283,791)	(21,527)	(39,151)	(127,920)	(127,465)	(227,650)	(67,646)	(30,708)	(57,352)	(312,837)	(66,369)	(15,553)	(446,668)	(76,668)
Anticipated Reserves at Year End		<u>\$344,205</u>	<u>\$366,299</u>	<u>\$144,566</u>	<u>\$201,162</u>	<u>\$258,967</u>	<u>\$246,148</u>	<u>\$236,865</u>	<u>\$129,644</u>	<u>\$185,418</u>	<u>\$283,250</u>	<u>\$359,865</u>	<u>\$183,812</u>	<u>\$257,108</u>	<u>\$387,336</u>	<u>\$88,985</u>	<u>\$158,366</u>
Predicted Reserves based on 2024 funding level of:	\$21,600	344,205	348,422	90,578	92,463	76,586	(29,265)	(136,774)								(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		158,366	196,439	291,873	245,964	378,877	530,876	635,689	800,017	966,207	1,088,344	766,058	938,315	1,107,826	1,257,879	1,366,991	
Total Recommended Reserve Contributions		143,600	143,600	147,900	152,300	156,900	161,600	166,400	171,400	176,500	181,800	187,300	192,900	198,700	204,700	210,800	
Estimated Interest Earned, During Year		3,513	4,835	5,325	6,187	9,007	11,550	14,215	17,487	20,342	18,360	16,875	20,259	23,423	25,989	28,081	
Anticipated Expenditures, By Year		(109,040)	(53,001)	(199,134)	(25,575)	(13,907)	(68,338)	(16,287)	(22,696)	(74,705)	(522,446)	(31,918)	(43,648)	(72,070)	(121,577)	(136,667)	
Anticipated Reserves at Year End		<u>\$196,439</u>	<u>\$291,873</u>	<u>\$245,964</u>	<u>\$378,877</u>	<u>\$530,876</u>	<u>\$635,689</u>	<u>\$800,017</u>	<u>\$966,207</u>	<u>\$1,088,344</u>	<u>\$766,058</u>	<u>\$938,315</u>	<u>\$1,107,826</u>	<u>\$1,257,879</u>	<u>\$1,366,991</u>	<u>\$1,469,205</u>	(NOTE 4)

Explanatory Notes:

- 1) Year 2024 starting reserves are as of April 30, 2024; FY2024 starts January 1, 2024 and ends December 31, 2024.
- 2) Reserve Contributions for 2024 are the remaining budgeted 2 quarters; 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 need to fund for repaving of the streets paved in 2020 shortly after 2054, and the age, size, overall condition and complexity of the property.
- 5) Threshold Funding Year (reserve balance at critical point).

**FIVE-YEAR OUTLOOK****Briar Lake  
Unit Owners' Association  
Lebanon, Pennsylvania**

Line Item	Reserve Component Inventory	RUL = 0 FY2024	1 2025	2 2026	3 2027	4 2028	5 2029
<b><u>Exterior Clubhouse Elements</u></b>							
1.280	Roof Assembly, Asphalt Shingles (Incl. Gutters and Downspouts)				14,424		
<b><u>Interior Clubhouse Elements</u></b>							
2.160	Exercise Equipment, Phased						3,130
2.200	Floor Coverings, Carpet						11,651
2.450	Furnishings, Phased						11,593
2.800	Paint Finishes						16,554
<b><u>Clubhouse Services Elements</u></b>							
3.070	Air Handling and Condensing Units, Split Systems, Phased			9,018			
<b><u>Property Site Elements</u></b>							
4.020	Asphalt Pavement, Crack Repair and Patch (Incl. Seal Coat and Striping at Parking Area)		24,241				27,284
4.100	Catch Basins, Inspections and Capital Repairs (2024 is Anticipated Repairs), Phased	10,000					
4.150	Dam, Manual Control Valve, Brass					33,765	
4.200	Dock, Wood, Replacement						36,517
4.260	Fence, Vinyl						4,034
4.500	Landscape, Partial Replacements			5,305			5,796
4.700	Ponds, Aerators, Phased						11,361
4.712	Pond, Erosion Control, Upper Pond, Partial					5,386	
4.730	Pond, Sediment Removal, Farm Pond, Partial			36,071			
4.800	Signage, Entrance Monument, Renovation				7,103		
4.900	Walking Path, Asphalt Pavement and Wood Deck, Renovation, Phase One (2024 is Planned)	121,200					
4.903	Walking Path, Wood Deck, Replacement, Phase Two (Replace with Composite)			233,398			
<b>Anticipated Expenditures, By Year (\$3,567,753 over 30 years)</b>		131,200	24,241	283,791	21,527	39,151	127,920

## 4. RESERVE COMPONENT DETAIL

The Reserve Component Detail of this *Full 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.*

### Exterior Clubhouse Elements



Clubhouse front elevation overview



Clubhouse rear elevation overview



Clubhouse side elevation overview



## Deck, Composite

---

**Line Item:** 1.040

**Quantity:** One deck with composite deck boards and a wood frame which comprise a total of approximately 600 square feet. Approximately 125 linear feet of vinyl railings line this deck and adjacent stairs.

**History:** Original

**Condition:** Fair overall with finish deterioration noted at the composite decking and vinyl railings.



Deck overview



Deck overview



Structure detail



Composite decking - Note surface deterioration and organic growth





**Composite decking surface deterioration**



**Vinyl railings overview**



**Vinyl railings overview**



**Finish deterioration**

**Useful Life:** 20- to 25-years

**Component Detail Notes:** Deck construction includes the following:

- Composite deck boards
- Vinyl railings with vertical pickets
- Wood column supported frames
- Columns in contact with patio (This condition results in accelerated deterioration at the column bases and may cause premature cracking of the patio.)
- Metal joist hanger fasteners

The composition of composite materials used in the construction of decks typically includes a combination of wood waste material, plastic and recycled materials. These composite materials are low maintenance and do not split, cup or splinter. Composite materials do not require periodic stain or sealer applications.

Composite deck materials are not structural components and therefore require traditional framing members, such as wood or metal. In addition, some manufacturers require closer

spacing of framing components to minimize sagging. In addition to the added cost of framing, composite balcony deck materials can cost up to twice as much as natural wood.

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

- Annually:
  - Inspect to identify and correct any unsafe conditions
  - Secure loose fasteners and replace deteriorated fasteners
  - Check railing stability and fasteners
  - Clean as necessary

**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.

## Doors, Wood, Entrance

---

**Line Item:** 1.180

**Quantity:** One pair of wood doors

**History:** Original

**Condition:** Good to fair overall



**Entrance doors**

**Useful Life:** Up to 30 years

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

- Annually:



- Inspect and repair any damage, base corrosion or alignment issues
- Replace deteriorated hardware and loose weather stripping
- Periodic touch-up paint finish applications as needed

**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.

## Roof Assembly, Asphalt Shingles

---

**Line Item:** 1.280

**Quantity:** Approximately 20 *squares*<sup>1</sup> of asphalt shingles and approximately 150 linear feet of gutters and downspouts

**History:** Original

**Condition:** Fair overall with isolated shingle lift evident from our visual inspection from the ground. The Board informs us that there is an isolated leak at the roof. Fastener rust and finish deterioration is evident at the gutters and downspouts.



Asphalt shingle roof overview



Half weaved valley

<sup>1</sup> We quantify the roof area in squares where one square is equal to 100 square feet of surface area.





**Ridge vent**



**Isolated shingle lift**



**Roof penetration**



**Roof assembly overview**



**Aluminum gutters and downspouts**



**Aluminum gutter and downspout**

**Useful Life:** 15- to 20-years

**Component Detail Notes:** The existing roof assembly comprises the following:

- Laminate architectural shingles
- Boston style ridge caps
- Soffit and ridge vents
- Metal drip edge
- Enclosed half weaved valleys
- Aluminum five-inch seamless gutters and two-inch by three-inch downspouts

Insulation and ventilation are two major components of a sloped roof system. Together, proper insulation and ventilation help to control attic moisture and maintain an energy efficient building. Both insulation and ventilation prevent moisture buildup which can cause wood rot, mold and mildew growth, warp sheathing, deteriorate shingles, and eventually damage building interiors. Sufficient insulation helps to minimize the quantity of moisture that enters the attic spaces and adequate ventilation helps to remove any moisture that enters the attic spaces. These two roof system components also help to reduce the amount of energy that is required to heat and cool a building. Proper attic insulation minimizes heat gain and heat loss between the residential living spaces and attic spaces. This reduces energy consumption year-round. Proper attic ventilation removes excessive heat from attic spaces that can radiate into residential living spaces and cause air conditioners to work harder. Properly installed attic insulation and ventilation work together to maximize the useful life of sloped roof systems.

The vents should be clear of debris and not blocked from above by attic insulation. If the soffit vents are blocked from above, installation of polystyrene vent spaces or baffles between the roof joists at these locations can ensure proper ventilation.

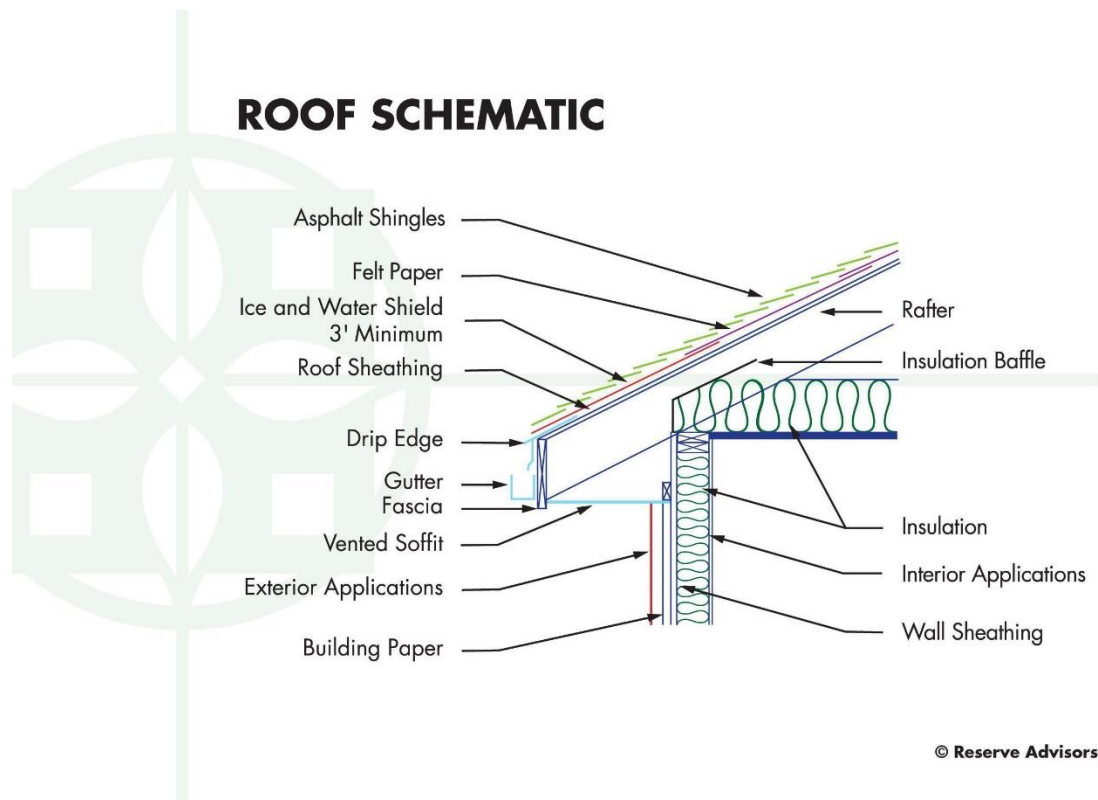
Certain characteristics of condition govern the times of replacement. Replacement of an asphalt shingle roof becomes necessary when there are multiple or recurring leaks and when the shingles begin to cup, curl and lift. These conditions are indications that the asphalt shingle roof is near the end of its useful life. Even if the shingles are largely watertight, the infiltration of water in one area can lead to permanent damage to the underlying roof sheathing. This type of deterioration requires replacement of saturated sections of sheathing and greatly increases the cost of roof replacement. Roof leaks may occur from interrelated roof system components, i.e., flashings. Therefore, the warranty period, if any, on the asphalt shingles, may exceed the useful life of the roof system.

Warranties are an indication of product quality and are not a product guarantee. Asphalt shingle product warranties vary from 20- to 50-years and beyond. However, the scope is usually limited to only the material cost of the shingles as caused by manufacturing defects. Warranties may cover defects such as thermal splitting, granule loss, cupping, and curling. Labor cost is rarely included in the remedy so if roof materials fail, the labor to tear off and install new shingles is extra. Other limitations of warranties are exclusions for "incidental and consequential" damages resulting from age, hurricanes, hail storms, ice dams, severe winds, tornadoes, earthquakes, etc. There are some warranties which offer no dollar limit for replacement at an additional cost (effectively an insurance policy) but again these warranties also have limits and may not cover all damages other than a



product defect. We recommend a review of the manufacturers' warranties as part of the evaluation of competing proposals to replace a roof system. This evaluation should identify the current costs of remedy if the roof were to fail in the near future. A comparison of the costs of remedy to the total replacement cost will assist in judging the merits of the warranties.

The following cross-sectional schematic illustrates a typical asphalt shingle roof system although it may not reflect the actual configuration at Briar Lake:



Contractors use one of two methods for replacement of sloped roofs, either an overlayment or a tear-off. Overlayment is the application of new shingles over an existing roof. However, there are many disadvantages to overlayment including hidden defects of the underlying roof system, absorption of more heat resulting in accelerated deterioration of the new and old shingles, and an uneven visual appearance. Therefore, we recommend only the tear-off method of replacement. The tear-off method of replacement includes removal of the existing shingles, flashings if required and underlayments.

The Association should plan to coordinate the replacement of gutters and downspouts with the adjacent roofs. This will result in the most economical unit price and minimize the possibility of damage to other roof components as compared to separate replacements.

**Preventative Maintenance Notes:** We recommend the Association maintain a service and inspection contract with a qualified professional and record all documentation of



repairs conducted. We note the following select recommended preventative maintenance activities to maximize the remaining useful life of the roof:

- Annually:
  - Record any areas of water infiltration, flashing deterioration, damage or loose shingles
  - Implement repairs as needed if issues are reoccurring
  - Trim tree branches that are near or in contact with roof
- As-needed:
  - Ensure proper ventilation and verify vents are clear of debris and not blocked from attic insulation

For the gutters and downspouts, we note the following select recommended preventative maintenance activities to maximize the remaining useful life:

- Semi-annually:
  - Clean out debris and leaves that collect in the gutters
  - Repair and refasten any loose gutter fasteners
  - Repair and seal any leaking seams or end caps
  - Verify downspouts discharge away from foundations

**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.

## Walls, Siding, Vinyl

---

**Line Item:** 1.860

**Quantity:** Approximately 2,300 square feet of clapboard, double 4" vinyl siding comprises the exterior walls and approximately 250 square feet of vinyl soffit and fascia is located along the roofline.

**History:** Original

**Condition:** Good to fair overall with isolated organic growth, bulged siding and finish deterioration



**Vinyl siding overview**



**Bulged siding**



**Vinyl siding overview**



**Organic growth**

**Useful Life:** Up to 40 years

**Component Detail Notes:** The siding at Briar Lake consists of the following:

- Clapboard, double 4"
- J-channel trim at window and door perimeters, and other penetrations
- Water-vapor permeable building paper protects the buildings

The following diagram details the use of building wrap in a vinyl siding system:

## VINYL SIDING DETAIL



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The Association should install new vinyl siding as recommended by the *Vinyl Institute, Inc.* The vinyl siding should be installed over a continuous weather resistant barrier and properly integrated flashing around all penetrations. Fasteners used should include aluminum, galvanized steel or other corrosion-resistant fasteners. Siding panels should overlap by approximately one inch. Joints should be staggered so that no two courses are aligned vertically, unless separated by at least three courses. The siding should not be caulked where the siding meets trim accessories, such as J-channel, or at overlap joints. J-channel should be installed a minimum of ½ inch off of roof lines.

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

- Annually:
  - Inspect and repair loose siding, warping or damage from wind driven objects or lawn care equipment
  - Periodically clean siding as necessary at areas of organic growth. A non-abrasive household cleaner or manufacturer specified vinyl siding cleaner will remove more intense stains. We do not recommend pressure cleaning at vinyl siding due to the siding's brittle nature.

**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.



## Windows and Doors

---

**Line Item:** 1.980

**Quantity:** Approximately 560 square feet windows and sliding glass doors. This quantity excluded the entrance door.

**History:** Original

**Condition:** Good to fair overall with isolated fogged glass evident



**Sliding glass door**



**Common windows**



**Common windows**



**Fogged glass**

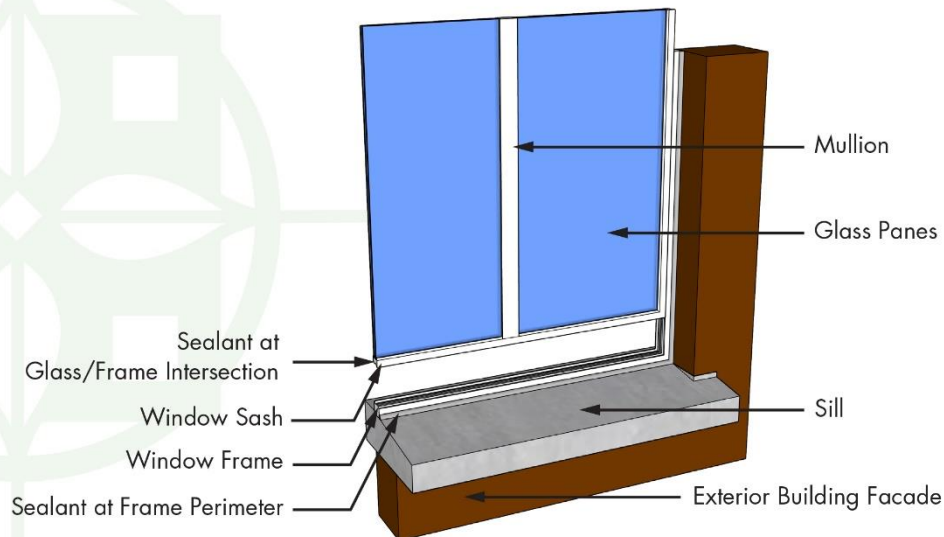
**Useful Life:** Up to 40 years

**Component Detail Notes:** Construction includes the following:

- Vinyl frames
- Dual pane glass
- Single hung

The following schematic depicts the typical components of a window system although it may not reflect the actual configuration at Briar Lake:

## WINDOW DETAIL



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Properly designed window and door assemblies anticipate the penetration of some storm water beyond the gaskets. This infiltrated storm water collects in an internal drainage system and drains, or exits, the frames through weep holes. These weep holes can become clogged with dirt or if a sealant is applied, resulting in trapped storm water. However, as window frames, gaskets and sealants deteriorate, leaks into the interior can result. The windows will eventually need replacement or major capital repairs to prevent water infiltration and damage from wind driven rain.

The thermal efficiencies of the window and door assemblies are affected by their design and construction components. These components include glazings, thickness of air space between glazings, low-conductivity gas, tinted coatings, low-e coatings and thermal barriers. The Association should thoroughly investigate these component options at the time of replacement. Some manufacturers may include these components as part of the standard product and other manufacturers may consider these components as options for an additional cost. Briar Lake should review the specifications provided by the manufacturers to understand the thermal design and construction components of the proposed assemblies.

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

- Annually:



- Inspect and repair loose weather stripping and/or lock damage
  - Inspect for broken glass and damaged screens
  - Record instances of water infiltration, trapped moisture or leaks
- As-needed:
  - Verify weep holes are unobstructed and not blocked with dirt or sealant, if applicable
  - Replace damaged or deteriorated sliding glass rollers, if applicable

**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.

## Interior Clubhouse Elements

### Exercise Equipment

---

**Line Item:** 2.160

**Quantity:** The exercise area contains the following types of cardiovascular aerobic training equipment:

- Stationary cycles (2)
- Treadmill

The exercise area contains the following types of strength training equipment:

- Bench
- Dumbbells

**History:** Varying unknown ages

**Conditions:** Good to fair overall. The Board did not report operational deficiencies.



**Exercise equipment**

**Useful Life:** The useful life of cardiovascular equipment is up to five years. The useful life of strength training equipment is up to 15 years.

**Priority/Criticality:** Per Board discretion

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

## **Floor Coverings, Carpet**

---

**Line Item:** 2.200

**Quantity:** Approximately 150 square yards at the main level, staircase and lower level of the clubhouse (Contractor measurements will vary from the actual floor area due to standard roll lengths, patterns and installation waste.)

**History:** Original

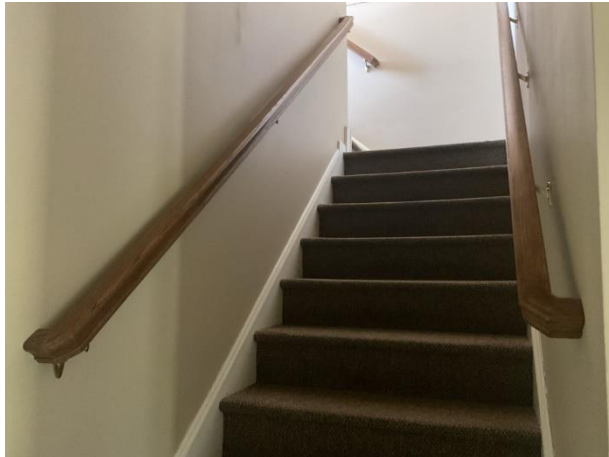
**Condition:** Good to fair overall with periodic frayed carpet at the edges. We have deferred the replacement of the carpet past our stated useful life due to the carpet's good overall condition.



**Carpet floor coverings overview**



**Carpet floor coverings**



**Carpet floor coverings**



**Carpet fray**

**Useful Life:** 8- to 12-years

**Priority/Criticality:** Per Board discretion

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

## **Floor Coverings, Vinyl and Tile**

---

**Line Item:** 2.300

**Quantity:** Approximately 55 square yards at the clubhouse interior

**History:** Original

**Condition:** Good overall



**Vinyl floor coverings**

**Useful Life:** Up to 20 years

**Priority/Criticality:** Per Board discretion

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

## **Furnishings**

---

**Line Item:** 2.450

**Quantity:** Furnishings and components in the clubhouse include but are not limited to the following elements:

- Billiard table
- Ping-Pong table
- Chairs
- Sofa
- Tables
- Television

**History:** Varying unknown ages

**Condition:** Good to fair overall



**Clubhouse furnishings**



**Clubhouse furnishings**

**Useful Life:** Varies significantly up to 20 years

**Priority/Criticality:** Per Board discretion

**Expenditure Detail Notes:** Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. Due to varied uses, ages and useful lives, we recommend the Association budget \$10,000 plus inflation for phased replacements of up to fifty percent (50%) of the furnishings per event.

## Kitchen

---

**Line Item:** 2.520

**Quantity:** Components of the kitchen include:

- Vinyl floor coverings
- Paint finishes at the walls and ceiling
- Appliances
- Cabinets and countertops
- Light fixtures

**History:** Original

**Condition:** Good to fair overall. We have deferred the renovation of the kitchen past our stated useful life due to its good overall condition.





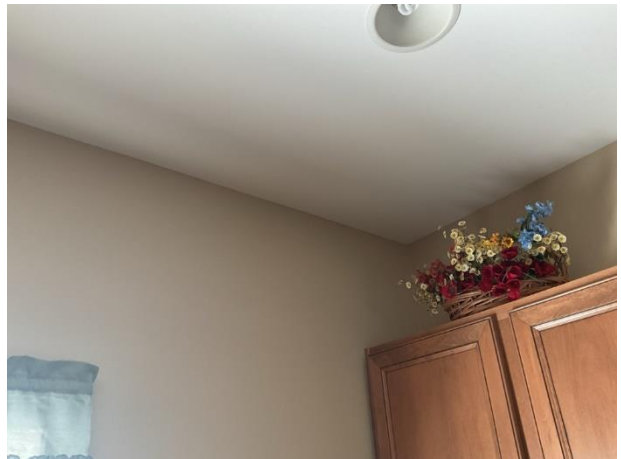
**Kitchen overview**



**Kitchen overview**



**Vinyl floor coverings**



**Paint finishes**

**Useful Life:** Renovation up to every 25 years

**Priority/Criticality:** Per Board discretion

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

## Paint Finishes

---

**Line Item:** 2.800

**Quantity:** Approximately 6,800 square feet on the walls and ceilings at the clubhouse

**History:** Original

**Condition:** Good to fair overall with isolated damaged paint evident. We have deferred the repainting of the walls and ceilings at the clubhouse interior due to their good overall condition.





**Paint finishes overview**



**Damaged paint finishes**



**Damaged paint finishes**



**Paint finishes overview**



**Damaged paint finishes**

***Useful Life:*** 8- to 12-years

***Priority/Criticality:*** Per Board discretion

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

## Rest Rooms

---

**Line Item:** 2.900

**Quantity:** The three rest rooms at the clubhouse each include the following components:

- Tile floor coverings
- Paint finishes at the walls and ceilings
- Light fixtures
- Plumbing fixtures
- Sink and/or Vanity

**History:** Original

**Condition:** Good to fair overall. We have deferred the renovation of the restrooms past our stated useful life due to their good overall condition.



Rest room overview



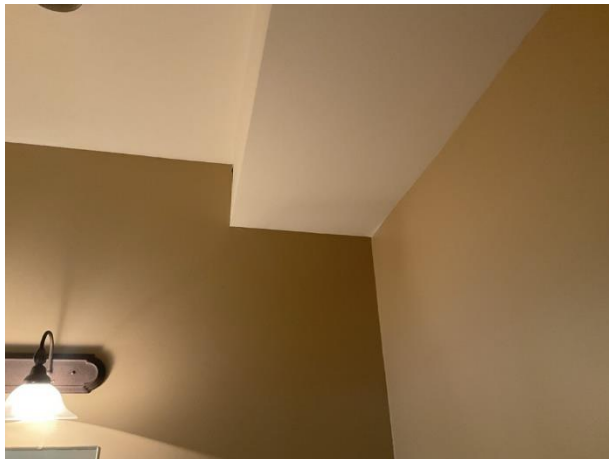
Rest room overview



**Light fixtures**



**Tile floor coverings**



**Paint finishes**



**Plumbing fixture**

**Useful Life:** Renovation up to every 25 years

**Priority/Criticality:** Per Board discretion

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

## Clubhouse Services Elements

### Air Handling and Condensing Units, Split Systems

**Line Item:** 3.070

**Quantity:** Two *Lennox* split systems

**History:** The Board informs us that one of the systems was replaced in recent years. The remaining system is reported to be original.



**Condition:** Reported satisfactory without operational deficiencies



**Split system air handling unit**



**Split system condensing units**

**Useful Life:** Up to 20 years

**Component Detail Notes:** A split system air conditioner consists of an outside condensing unit, an interior evaporator coil, refrigerant lines and an interior air handling unit. The condensing units have cooling capacities that range from 2.5- to 5-tons. The split systems use R-22 refrigerant.

**Preventative Maintenance Notes:** We recommend the Association obtain and adhere to the manufacturer's recommended maintenance plan. We also recommend the Association maintain a maintenance contract with a qualified professional. The required preventative maintenance may vary in frequency and scope based on the unit's age, operational condition, or changes in technology. We note the following select recommended preventative maintenance activities to maximize the remaining useful life:

- Semi-annually:
  - Lubricate motors and bearings
  - Change or clean air filters as needed
  - Inspect condenser base and piping insulation
  - Inspect base pan, coil, cabinet and clear obstructions as necessary
- Annually:
  - Clean coils and drain pans, clean fan assembly, check refrigerant charge, inspect fan drive system and controls
  - Inspect and clean accessible ductwork as needed
  - Clean debris from inside cabinet, inspect condenser compressor and associated tubing for damage

**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. The condensing unit may require replacement prior to replacement of the related interior forced air unit. For purposes of this Reserve Study,





we assume coordination of replacement of the interior forced air unit, evaporator coil, refrigerant lines and exterior condensing unit.

## Property Site Elements

### Asphalt Pavement, Repaving

---

**Line Items:** 4.020, 4.040 through 4.042 and 4.045 through 4.047

**Quantity and History:**

- Approximately 14,600 square yards comprised of Walnut Crest Drive, Shore Landing Drive and Water Edge Court were repaved in 2020 and do not have an apparent history of repairs
- Approximately 2,800 square yards comprised of Academy Drive were repaved in 2022 and do not have an apparent history of repairs. The Board reports that this street is within the community's property line, but that the neighboring church funded the 2022 repaving.
- Approximately 4,800 square yards comprised of Lantern Drive and Briar Edge Court have not been repaved and are estimated to have received a topcoat of asphalt in 2013. We noted previous crack repairs and patching at these streets.
- Approximately 450 square yards of asphalt pavement comprises the clubhouse parking area and is original to community construction. A history of crack repairs, seal coat applications and striping were reported by the Board.
- Details regarding the asphalt walking path's history, quantity and condition will be address in the following section

**Condition:**

- Streets paved in 2020: Good to fair overall condition
- Streets paved in 2022: Good overall condition
- Original streets: Good to fair overall condition with periodic cracks and patches evident
- Parking Area: Good to fair overall condition with periodic cracks evident. We have deferred the total replacement of the parking area due to its good overall condition



**Pavement overview – 2022 Repaved**



**Pavement overview – 2020 Repaved**



**Pavement overview – 2020 Repaved**



**Pavement overview – 2020 Repaved**



**Pavement overview - Remaining**



**Pavement overview - Remaining**





**Pavement patch – Lantern Drive**



**Previously repaired cracks – Lantern Drive**



**Pavement overview – Parking area**



**Pavement cracks – Parking area**

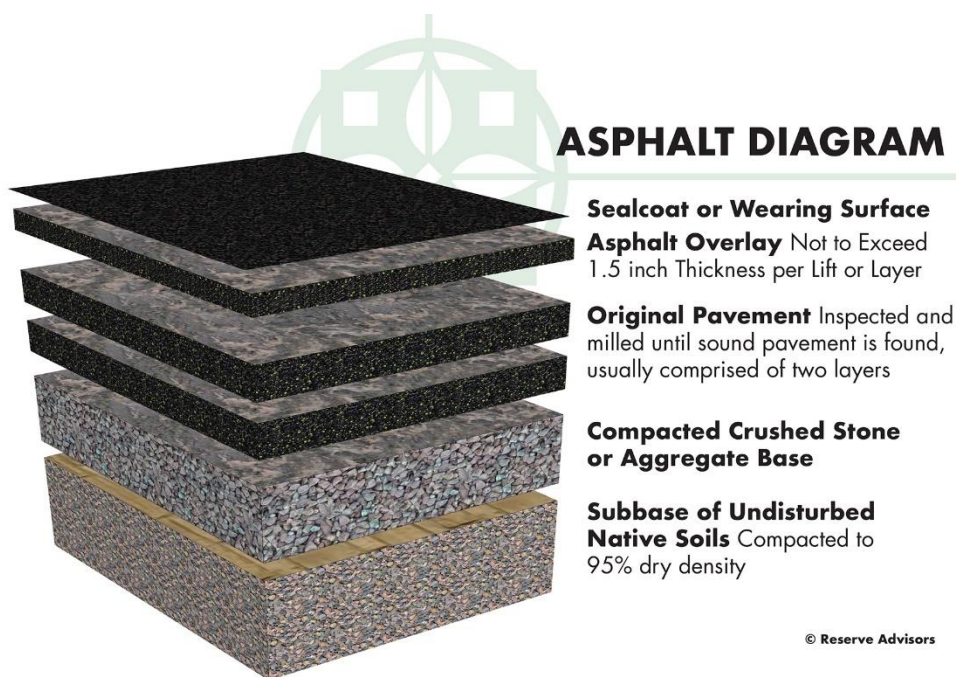


**Pavement cracks – Parking area**

***Useful Life:*** 15- to 20-years with the benefit of crack repair and patching every three- to five-years.

**Component Detail Notes:** Proposals should include mechanically routing and filling all cracks with hot emulsion. Repairs should also include patching at areas exhibiting settlement, potholes, or excessive cracking. The contractor should only apply seal coat applications at the parking area after repairs are completed. A seal coat does not bridge or close cracks, therefore, unrepaired cracks render the seal coat applications useless. These activities minimize the damaging effects of vehicle fluids, maintain a uniform and positive appearance, and maximize the useful life of the pavement.

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 Briar Lake:



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 for initial repaving followed by the total replacement method for subsequent repaving at the streets at Briar Lake. We recommend the total replacement method for the parking area.





**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 and sealcoat and striping application at the parking area. Our cost for milling and overlayment includes area patching of up to ten percent (10%).

## **Asphalt Pavement, Repaving, Walking Paths**

---

**Line Items:** 4.080 and 4.901

**Quantity:** Approximately 3,500 square yards of existing asphalt pavement walking paths. An additional 110 square yards of pavement are estimated to be added during the near-term walking path renovation project.

**History:** Original; The Board reports seal coat application approximately 3 years ago and minor repairs completed as needed

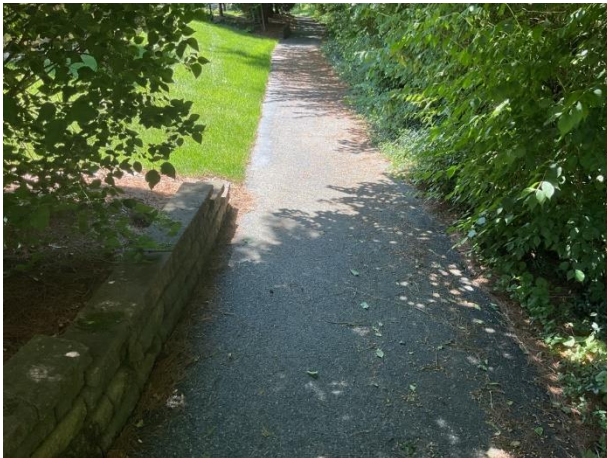
**Condition:** Good to fair overall with periodic cracks, settlement, patches and previous repairs evident. In isolated areas, we also noted sunken/settled areas that have resulted in standing water atop the walking paths.



**Asphalt pavement walking path - Note seal coat deterioration**



**Previous settlement repairs**



**Asphalt pavement walking path**



**Walking path cracks**



**Asphalt pavement walking path**



**Tree root intrusion**

***Useful Life:*** 15- to 20-years with the benefit of timely crack repairs and patching, and the need to maintain a safe pedestrian surface



**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.

## Catch Basins

---

**Line Item:** 4.100

**Quantity:** Approximately 50 catch basins<sup>2</sup>

**History:** Original; Board is planning on inspecting and repairing the catch basins. The most recent bid was for approximately \$10,000. The Board informs us that there is a buildup of settlement at the catch basins that has been draining into the lake.

**Condition:** Good to fair overall with periodic collar damage evident.



Catch basin - Note settlement surrounding collar



Concrete spalls

**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

<sup>2</sup> We utilize the terminology catch basin to refer to all storm water collection structures including curb inlets.

- 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. Our cost and timing for the near-term inspections and capital repairs is based on conversations with the Board.

## Concrete Curbs

---

**Line Item:** 4.110

**Quantity:** Approximately 9,800 linear feet

**History and Condition:** Good to fair overall with isolated cracks and spalled concrete evident. The Board does not report a history of repairs or replacements



Concrete curb overview



Concrete spall





**Concrete cracks**



**Concrete crack**

**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 1,950 linear feet of curbs, or twenty percent (19.9%) of the total, will require replacement during the next 30 years.

## **Concrete Flatwork, Patios, Sidewalks and Stairs**

---

**Line Item:** 4.125

**Quantity:** Approximately 1,100 square feet. We include the flatwork at the clubhouse patios, sidewalks and stairs.

**Condition:** Good to fair overall



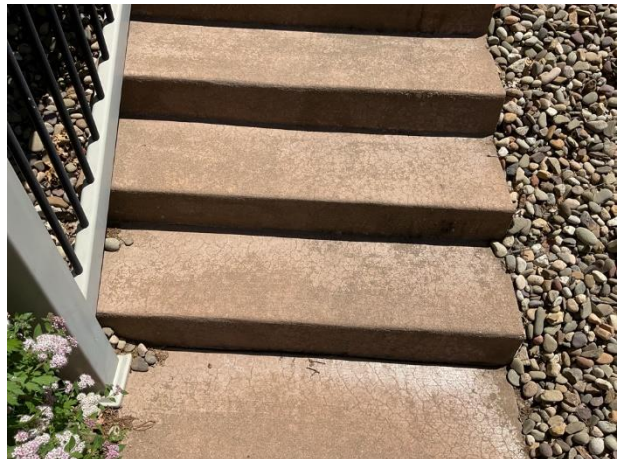
**Concrete patio - Note organic growth**



**Concrete patio**



**Concrete stairs**



**Concrete stairs – Note finish deterioration**



**Concrete sidewalk**

**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 450 square feet of concrete flatwork, or forty-one percent (40.9%) of the total, will require replacement during the next 30 years.

## **Dam, Manual Control Valve, Brass**

---

**Line Item:** 4.150

**Quantity:** One valve is located at the drainpipe of the main lake

**History:** Original to the lake's construction in the 1950's

**Condition:** Unknown; The Board does not report a history of inspections or testing of the valve

**Useful Life:** Up to 50 years

**Component Detail Notes:** The dam spillway utilizes a manual control valve which allows for the controlled release of the impounded lake water

**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 will consider the need for updated costs and/or timing based on future information provided by the Association.

## **Dock, Wood**

---

**Line Item:** 4.200

**Quantity:** Approximately 350 square feet of wood decking and 150 linear feet of wood railings comprise the wood dock adjacent to the clubhouse

**History:** Original

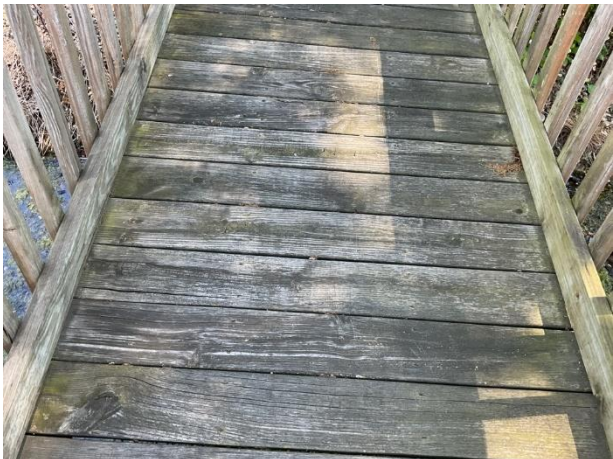
**Condition:** Fair overall with wood deterioration and organic growth evident



**Dock overview**



**Organic growth and wood deterioration**



**Weathered wood decking and organic growth**



**Done overview**

**Useful Life:** 20 to 25 years. The rates and types of deterioration are not uniform due to the nature of wood. Replacement is normally an ongoing process which eventually leads to a complete replacement for economic or aesthetic reasons.

**Component Detail Notes:** Dock construction includes the following:

- Wood railings with vertical pickets
- Wood deck boards

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

- Annually:
  - Inspect to identify and correct any unsafe conditions
  - Secure loose fasteners and replace deteriorated fasteners
  - Replace deteriorated wood components
  - Check railing stability and fasteners
- Every three years:



- Power wash with algaecide and application of sealer/stain if applicable

**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.

## Fence, Vinyl

---

**Line Item:** 4.260

**Quantity:** Approximately 60 linear feet located at the sunset garden at the intersection of Walnut Crest Drive and Water's Edge Court.

**History:** Original with no reported history of repairs

**Condition:** Fair overall with finish deterioration and isolated damage evident



Common vinyl fence



Fence finish deterioration



**Organic growth and finish deterioration**



**Cracked vinyl**

**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 panels, and damage
  - Repair leaning sections and clear vegetation from fence areas which could cause damage
  - Periodically clean vinyl fence as needed

**Priority/Criticality:** Per Board discretion

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

## **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.

**Useful Life:** At the request of the Board, we include a landscape allowance for tree removal and partial replacements every three years.

**Priority/Criticality:** Per Board discretion

**Expenditure Detail Notes:** Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. The Board informs us that in 2023, the community contracted with *Good's Tree and Lawn Care* to remove and prune several trees. Following this event, they requested *Good's Tree and Lawn Care* to inventory and inspect all remaining trees at Briar Lake to which multiple trees were reported to be infected with various diseases. These diseased trees have not been addressed as of the time of the Study. The Board has requested an allowance to address future tree inspections, pruning and removal at the community. Our cost and timing for this allowance is partially based on conversations with the Board. We recommend that renovations to the pond shoreline be conducted through the Erosion Control events.

## Light Poles and Fixtures

---

**Line Item:** 4.560

**Quantity:** 30 fiberglass poles with LED light fixtures

**History:** The light poles are original; it is unknown when the fixtures were upgraded to LEDs

**Condition:** Fair overall with frequent leaning poles evident.



Light pole and fixture - note leaning pole



Light pole and fixture



**Light pole and fixture - Note leaning pole**

**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 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.

## **Mailbox Stations**

---

**Line Item:** 4.600

**Quantity:** Three stations

**History:** Original; Estimated to date to 2009

**Condition:** Good to fair overall with fastener rust and finish deterioration evident.





**Mailbox stations**



**Mailbox stations**



**Mailbox station fastener rust**



**Mailbox station finish deterioration**

**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.

## Ponds, Aerators

---

**Line Item:** 4.700

**Quantity:** Four aerators

**History:** Varying unknown ages

**Condition:** Reported satisfactory without operational deficiencies



**Aerator pump and solar panels**

**Useful Life:** 10- to 15-years

**Component Detail Notes:** The use of small pumps, motors and aerators circulates pond water and increases the amount of entrained oxygen in the water, increasing water quality and reducing algae growths.

**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.

## **Ponds, Sediment Removal and Erosion Control**

---

**Line Items:** 4.710 through 4.712 and 4.730 through 4.732

**Quantity:** The three ponds at the community comprise approximately:

- Farm pond: 4,000 square yards of surface area and 750 linear feet of shoreline
- Main pond: 30,500 square yards of surface area and 2,800 linear feet of shoreline
- Upper pond: 7,700 square yards of surface area and 1,100 linear feet of shoreline

**History:** Based on a 2013 interview with Ralph Sanger (original owner of Briar Lake and its lake/ponds) conducted by Ted Holcombe and Bob Kaskiel, we know the following history:

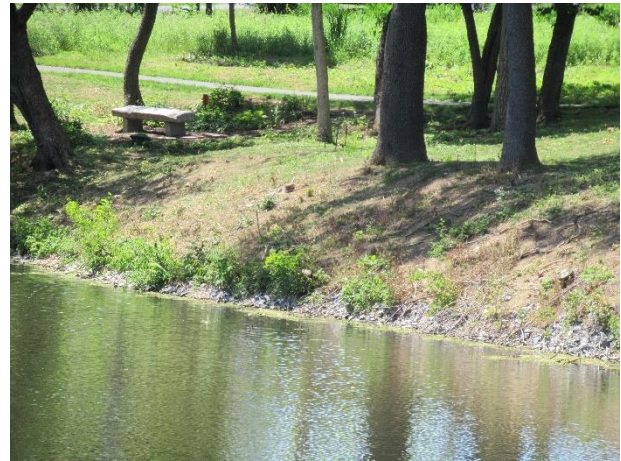


- Farm pond: Built in the 1940's with no history of dredging or sediment removal. The Board informs us that rip-rap was added by the Association, the exact timing of this is unknown.
- Main lake and upper pond: Built in 1957-58 with rip-rap installed to a depth of 10 feet at the 8<sup>th</sup> Avenue end of the lake as well as both sides of the dam between the upper pond and the main lake. Additional rip-rap was added by the Association from 2013 to 2016. The lake was lowered and the silt was dredged every 4-5 years until the late 60's. It is not known if any sediment removal or dredging has occurred since then. There is a mechanical brass valve that controls the drain of the pond that is original to the pond's creation. The Board does not report a history of inspections or repairs to the dam or the valve.

**Condition:** The main Lake is in good to fair overall condition. The Farm pond and upper pond are in fair overall condition with algae bloom and shoreline overgrowth noted.



**Main lake overview**



**Main lake shoreline overview – Note algae bloom**



**Upper pond overview**



**Upper pond shoreline overview – Note overgrowth**



**Farm pond overview – Note algae bloom**



**Farm pond shoreline**

**Useful Life:** Based on the visual condition, construction and adjacent deciduous trees, we recommend the Association anticipate the need to remove pond sediment up to every 30 years.

Shorelines are subject to fluctuations in water levels, increased plant growth and migrating storm and ground water resulting in the need for erosion control measures up to every 15 years.

**Component Detail Notes:** The gradual build-up of natural debris, including tree leaves, branches and silt, may eventually change the topography of areas of the pond. Silt typically accumulates at inlets, outlets and areas of shoreline erosion. Sediment removal of ponds becomes necessary if this accumulation alters the quality of pond water or the functionality of the ponds as storm water management structures. Sediment removal is the optimal but also the most capital intensive method of pond management. Excavation equipment used for sediment removal includes clamshells, draglines and suction pipe lines. Sediment removal can also include shoreline regrading. Regrading includes removal of collapsed and eroded soil, and redefining the shoreline.



The steep shoreline embankments are likely to exacerbate soil movement and erosion. The use and maintenance of landscape, natural vegetation and/or stone rip rap along the pond shoreline will help maintain an attractive appearance and prevent soil erosion.

Shoreline plantings are referred to as buffer zones. Buffer zones provide the following advantages:

- Control insects naturally
- Create an aesthetically pleasing shoreline
- Enhance water infiltration and storage
- Filter nutrients and pollutants
- Increase fish and wildlife habitat
- Reduce lawn maintenance
- Stabilize shoreline and reduce erosion
- Trap sediments

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

- Annually:
  - Inspect and remediate shoreline erosion and areas of sediment accumulation
  - Clear and remove debris and vegetation overgrowth at pond edges, and inlet and outlet structures
  - Inspect for algae blooms and remedy as needed through a chemical treatment program or aeration

**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 to install a combination of plantings and rip rap around the ponds along 115 linear feet of the Farm pond, 420 linear feet around the Main Pond and 165 linear feet around the upper pond, or approximately fifteen percent (15%), of each pond's shoreline per event.

For reserve budgeting purposes, we estimate the need to remove an average depth of one yard from approximately twenty-five percent (25%) of the surface area at the Upper Pond and the Farm Pond and from fifteen percent (15%) of the surface area at the main pond. However, the actual volume of material to remove may vary dependent upon an invasive analysis at the time of removal. A visual inspection of a body of water cannot reveal the amount of accumulated silt. This is especially true on larger bodies of water. It is therefore inaccurate to assume an entire body of water will require sediment removal. It is more cost effective to spot remove in areas of intense silt accumulation as noted through bathymetric surveys. The amount or depth of silt is determined through prodding into the silt until a relatively solid base is found or through bathymetric surveys. A bathymetric survey establishes a base of data about the depth of the body of water over many locations against which the data of future surveys is compared. These invasive procedures are beyond the scope of a Reserve Study and require multiple visits to the site. We recommend Briar Lake contract with a local engineer for periodic bathymetric

surveys. Future updates of the Reserve Study can incorporate future anticipated expenditures based on the results of the bathymetric surveys.

Unit costs per cubic yard to remove can vary significantly based on the type of equipment used, quantity of removed material and disposal of removed material. Sediment removal costs must also include mobilization, or getting the equipment to and from the site. Also, the portion of the overall cost to remove associated with mobilization varies based on the volume removed. Costs for sediment disposal also vary depending on the site. Compact sites will require hauling and in some cases disposal fees.

## Signage, Entrance Monument

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**Line Item:** 4.800

**Quantity:** The property identification signage includes the following elements:

- Light Fixtures
- Wood Fences
- Signage
- Landscape
- Masonry

**History:** Original with no reported history of repairs

**Condition:** Fair overall deterioration noted at the sign and wood fencing



Entrance monument overview



Entrance monument overview





**Masonry overview**



**Finish deterioration**



**Sign deterioration**



**Sign deterioration**



**Finish deterioration**

**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 and replacement of the remaining components listed above.

## Walking Path, Asphalt Pavement and Wood Deck, Renovation, Phase One

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**Line Item:** 4.900

**History:** Original; The Board informs us that they have received bids from *Woodland Contractors* to renovate approximately 200 linear feet of wood deck and asphalt pavement walking path at the northeast corner of the main lake, remediate a depression in the asphalt walking path along North Eight Avenue and replace the boat ramp. These renovations are reported to take place in 2024.

**Condition:** Fair to poor overall with wood deterioration, loose deck boards, and deterioration evident



Wood decking (replace with asphalt)



Asphalt walking path





**Boat ramp**



**Lifted deck board**



**Wood deterioration**



**Wood deterioration**



**Wetlands – Culvert to be added**

***Useful Life:*** We anticipate a useful life of 15 to 20 years for asphalt walking paths and an indeterminate UL for the proposed culvert and surrounding subbase material

***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, timing and project scope are based on conversations with, and bids provided by the Board. The Board informs us that projects included within Phase One of the walking path renovation include:

- Removal of approximately 100 linear feet of the wood deck walking path at the Northeast corner of the main lake
- Installation of asphalt walking path (Including subbase, riprap and a culvert)
- Installation of railings
- Replacement of the Boat ramp
- Repair of the depression along North Eighth Avenue

## **Walking Path, Wood Deck, Renovation, Phase Two**

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**Line Items:** 4.902 and 4.903

**Quantity:** Approximately 1,300 square feet of wood decking and approximately 480 linear feet of wood railings comprise the walking path along the northeastern side of the main lake.

**History:** Original with periodic deck board replacements evident

**Condition:** Fair to poor overall with wood deterioration, wood rot, loose deck boards, railing lean and organic growth evident



**Wood deck walking path**



**Wood rot**





**Wood deck walking path**



**Previous repairs, wood rot and organic growth**



**Railing lean**



**Wood deteriorating**

**Useful Life:** We recommend subsequent replacement of the composite deck board and repairs and partial replacements to the wood structure up to every 25 years

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

- Annually:
  - Inspect to identify and correct any unsafe conditions
  - Secure loose fasteners and replace deteriorated fasteners
  - Replace deteriorated wood components
  - Check railing stability and fasteners
- Every three years:
  - Power wash with algaecide and application of sealer/stain if applicable

**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 timing for replacement of the wood deck walking

path is partially based on conversations with the Board. Our cost and scope of work for the Phase Two renovation is based on a bid produced by *Woodland Contractors Inc.* and provided to us by the Board. This bid includes costs associated with:

- Removing the original wood deck
- Installation of a new wood structure and composite deck boards
- Installation of aluminum railings with horizontal cable rail along two sides of the board walk
- Preparation and pouring of a concrete transition pad
- Engineering of the board walk structure by others

Our costs for subsequent renovation of the composite deck walking path includes costs associated with:

- Replacement of the composite decking
- Replacement of up to fifty percent (50%) of the wood structure
- Partial replacement and repairs to the railings as needed

## **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.

Briar Lake 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 quarterly 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 standards<sup>1</sup> set forth by the Association of Professional Reserve Analysts (APRA) fulfilling the requirements of a "Level I Full Reserve Study." 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
- Local<sup>2</sup> 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 Lebanon,

<sup>1</sup> Identified in the APRA "Standards - Terms and Definitions" and the CAI "Terms and Definitions".

<sup>2</sup> See Credentials for additional information on our use of published sources of cost data.



Pennsylvania at an annual inflation rate<sup>3</sup>. Isolated or regional markets of greater construction (development) activity may experience slightly greater rates of inflation for both construction materials and labor.

- The past and current maintenance practices of Briar Lake 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.

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

## 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.

**Christopher J. Quinlan**  
**Responsible Advisor**

**CURRENT CLIENT SERVICES**

Christopher J. Quinlan is an Advisor for Reserve Advisors. Mr. Quinlan is responsible for the inspection and analysis of the condition of clients' properties, 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 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 Chris Quinlan demonstrating the breadth of experiential knowledge of community associations in construction and related systems.



**Ovations at Elkview Homeowners Association** is a 281 home community located in West Grove, Pennsylvania that was constructed from 2005 to 2012. This community features at large clubhouse, complete with a kitchen, spa, banquet room, sauna and more. Surrounding the clubhouse are amenities such as a pool, tennis courts and bocce ball courts.

**Independence Homeowners Association** is a 455 home community located in Millsboro, Delaware that was constructed in 2007. This large community consisted of streets, asphalt walking paths, concrete sidewalks and stormwater management systems.

**Silver Ridge Condominiums** – Built from 1987 to 1997, Silver Ridge is located in Baltimore Maryland and consists of 8 buildings that stand at four stories tall. Units are accessed by unit owners via hydraulic elevators. These buildings' exteriors featured masonry walls and asphalt shingle roofs. At the property site of this community, there were large timber retaining walls, concrete sidewalks and asphalt pavement.

**Terrace Lofts Condominiums** – Located in Arlington, Virginia, this four-story midrise was built in 2004 and has 34 units. The mid-rise features a blend of stone masonry and fiber cement siding at the exterior. Private balconies constructed with wood or concrete are also featured at the building's exterior. An asphalt drive leads under the building to a parking garage utilized by owners.

**Worcester House Condominium Association** is an oceanfront community that was built in 1981 and is located in Ocean City, Maryland. The community consists of two midrise buildings that contain various unique elements including elevated breezeways, a hydraulic elevator, balconies and stairwells

**Arlington Village Courtyards** is a townhome style condominium association that dates to 1933. This building's exterior features sloped slate roofs, flat TPO roofs and brick masonry. Other elements relating to the building services include boilers, gas supply lines, subsurface utility pipes and common electrical systems.

**PRIOR RELEVANT EXPERIENCE**

Before joining Reserve Advisors, Mr. Quinlan attended The College of New Jersey in Ewing, New Jersey where he attained his Bachelor of Science degree in Mechanical Engineering. His studies largely focused on application of the principles of science and mathematics to develop cost-effective solutions to technical problems.

**EDUCATION**

The College of New Jersey – B.S. Mechanical Engineering





**JON R. WALKER, RS**  
**Regional Engineering Manager, Northeast Region**  
**Responsible Advisor**

**CURRENT CLIENT SERVICES**

Jon R. Walker, an Engineer, is an Advisor and Northeast Regional Engineering Manager for Reserve Advisors. Mr. Walker is responsible for the inspection and analysis of the condition of clients' properties, 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 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 Jon Walker demonstrating the breadth of experiential knowledge of community associations in construction and related systems.

**Jefferson Chase Condominium** is a four-building condominium-style community located in Frederick Maryland that features construction elements that date back to 1955. Jefferson Chase utilizes a variety of unique amenities including a fitness center, outdoor picnic and grilling area, and playground. The community also features a wide-ranging collection of exterior building elements including modified bitumen and EPDM flat roofs, concrete balconies, and masonry.

**The Ponds at Chesterbrook** are located in the Northwest suburbs of Philadelphia, Pennsylvania. The community is home to 48 units across 15 buildings that range in styles from condominiums and townhomes to lofts and single family homes. Constructed in 1983, The Ponds contain a variety of stone masonry chimneys in addition to two ponds.

**Parker House** – Located in downtown Washington, D.C., this well-known six-story midrise dates back to 1928. Converted to condominiums in 1978, Parker House now services 55 units and lay in the heart of the Wakefield neighborhood. The mid-rise features a unique blend of masonry and limestone exteriors and decorative terrazzo interior lobby floor coverings.

**Quaker Hill Condominium** – Built in 1991, Quaker Hill is located within the Taylor Run neighborhood in Alexandria, Virginia. The large midrise contains various unique elements including elevated and on-grade breezeways, hydraulic elevators, balconies, terraces, and large concrete retaining walls.

**King James Landing** is a waterfront community built in 1987 and located in Annapolis, Maryland. Residents enjoy a marina that backs up to Back Creek Harbor, a service waterway to the Chesapeake Bay. King James Landing represents a wide range of exterior styles and time periods within the attached-home style community. Features of King James Landing include a gate entry system, retaining walls, wood decks, bulkheads, and docks.

**PRIOR RELEVANT EXPERIENCE**

Before joining Reserve Advisors, Mr. Walker attended Virginia Tech University in Blacksburg, Virginia where he attained his Bachelor of Science degree in Aerospace Engineering. His studies largely focused on application of the principles of science and mathematics to develop cost-effective solutions to technical problems.

**EDUCATION**

Virginia Tech University – B.S. Aerospace Engineering

**PROFESSIONAL AFFILIATIONS**

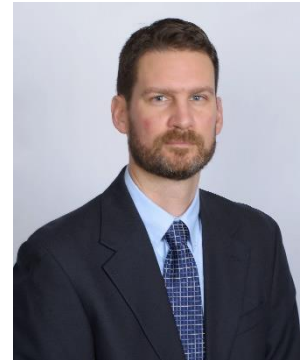
*Reserve Specialist (RS) – Community Association Institute*

**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](http://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](http://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](http://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](http://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 Briar Lake 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) Briar Lake 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.