Stratford Green Condominium Association

Willowbrook, IL • December 20, 2022

FULL RESERVE STUDY

RESERVE™ ADVISORS

Long-term thinking. Everyday commitment.

RESERVE ADVISORS
Long-term thinking. Everyday commitment.

Corporate Office
Reserve Advisors, LLC
735 N. Water Street, Suite 175
Milwaukee, WI 53202

Stratford Green Condominium Association
Willowbrook, Illinois

Dear Board of Directors of Stratford Green Condominium Association:

At the direction of the Board that recognizes the need for proper reserve planning, we have conducted a *Full Reserve Study* of Stratford Green Condominium Association in Willowbrook, Illinois and submit our findings in this report. The effective date of this study is the date of our visual, noninvasive inspection, December 20, 2022.

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 Stratford Green Condominium 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 February 6, 2023 by

Reserve Advisors, LLC

Visual Inspection and Report by: Reid M. Nelson, RS[1]
Review by: Nicole L. Lowery, RS, PRA[2], Associate Director of Quality Assurance

[1] RS (Reserve Specialist) is the reserve provider professional designation of the Community Associations Institute (CAI) representing America's more than 300,000 condominium, cooperative and homeowners associations.
[2] PRA (Professional Reserve Analyst) is the professional designation of the Association of Professional Reserve Analysts. Learn more about APRA at http://www.apra-usa.com.

Table of Contents

1. RESERVE STUDY EXECUTIVE SUMMARY

Client: Stratford Green Condominium Association (Stratford Green)
Location: Willowbrook, Illinois
Reference: 030036

Property Basics: Stratford Green Condominium Association is a condominium style development which consists of 488 units in 28 buildings. The buildings were built in 1969. The community contains a clubhouse and pool.

Reserve Components Identified: 57 Reserve Components.

Inspection Date: December 20, 2022.

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 multiple threshold funding years:

- 2026 and 2027 due to replacement of roofs and
- 2048 and 2051 due to replacement of pipes.

In addition, the Reserve Funding Plan recommends 2053 year end accumulated reserves of approximately $2,495,100. We judge this amount of accumulated reserves in 2053 necessary to fund the likely continued pipe replacement and subsequent roof replacement and repaving after 2053. Future replacement costs beyond the next 30 years for the continued pipe replacement and subsequent roof replacement and repaving are likely to more than double the current cost of replacement. These future needs, although beyond the limit of the Cash Flow Analysis of this Reserve Study, are reflected in the amount of accumulated 2053 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
- 1.3% anticipated annual rate of return on invested reserves
- 3.5% 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:

- $377,529 as of November 30, 2022[1]
- 2023 budgeted Reserve Contributions of $161,690
- A potential deficit in reserves might occur by 2024 based upon continuation of the most recent annual reserve contribution of $161,690 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:

- Replacement of the roofs as deferral may result in increased water infiltration and cost

[1] The Fiscal Year (FY 2023) for Stratford Green begins May 1, 2022 and ends April 30, 2023. For brevity, we refer to the Fiscal Year by its ending year, i.e. Fiscal Year 2022-23 is FY 2023 or simply 2023.

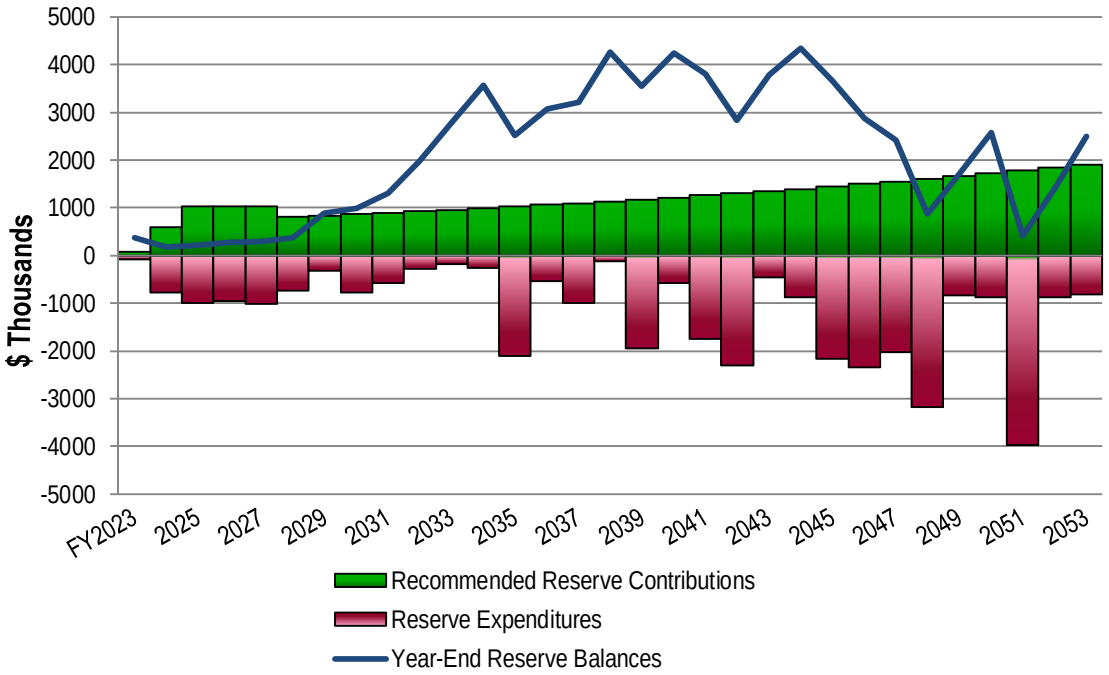
- Paint finish applications and partial replacement to limit water infiltration into the units, and to maintain a uniformly clean and consistent appearance of the buildings
- Replacement of the balconies due to noted conditions
- Repaving due to noted deterioration

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

- Phased increases of approximately $430,000 from 2024 through 2025
- Stable contributions of $1,021,700 from 2025 through 2027
- Decrease to $805,000 by 2028 due to fully funding for replacement of the roofs
- Inflationary increases thereafter through 2053, the limit of this study's Cash Flow Analysis
- Initial adjustment in Reserve Contributions of $430,010 represents an average monthly increase of $73.43 per unit owner and about a nineteen percent (18.6%) adjustment in the 2023 total Operating Budget of $2,307,009.
- The Association may ascribe the actual contributions and assessments per owner based upon percent ownership, as defined by the Association's governing documents.

Stratford Green
Recommended Reserve Funding Table and Graph

Year	Reserve Contributions ($)	Reserve Balances ($)	Year	Reserve Contributions ($)	Reserve Balances ($)	Year	Reserve Contributions ($)	Reserve Balances ($)
2024	591,700	184,384	2034	989,600	3,556,899	2044	1,395,800	4,344,986
2025	1,021,700	207,793	2035	1,024,200	2,511,137	2045	1,444,700	3,675,482
2026	1,021,700	277,073	2036	1,060,000	3,061,980	2046	1,495,300	2,865,154
2027	1,021,700	292,197	2037	1,097,100	3,210,727	2047	1,547,600	2,416,102
2028	805,000	362,446	2038	1,135,500	4,265,574	2048	1,601,800	867,849
2029	833,200	889,658	2039	1,175,200	3,547,433	2049	1,657,900	1,715,946
2030	862,400	985,853	2040	1,216,300	4,244,639	2050	1,715,900	2,575,791
2031	892,600	1,307,428	2041	1,258,900	3,804,418	2051	1,776,000	408,900
2032	923,800	1,979,145	2042	1,303,000	2,839,478	2052	1,838,200	1,390,915
2033	956,100	2,786,638	2043	1,348,600	3,779,341	2053	1,902,500	2,495,059



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

Stratford Green Condominium Association

Willowbrook, Illinois

and submit our findings in this report. The effective date of this study is the date of our visual, noninvasive inspection, December 20, 2022.

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. 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 Unit Owners fund certain replacements and assists in preparation of the annual budget. We derive these segregated classes of property from our review of the information provided by the Association and through conversations with Management. These classes of property include:

- Reserve Components
- Long-Lived Property Elements
- Operating Budget Funded Repairs and Replacements
- Property Maintained by Unit 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. The Reserve Study identifies Reserve Components as set forth in your Declaration or which were identified as part of your request for proposed services. Reserve Components are defined by CAI as property elements with:

- Stratford Green responsibility
- Limited useful life expectancies
- Predictable remaining useful life expectancies
- Replacement cost above a minimum threshold

Long-Lived Property Elements may not have predictable Remaining Useful Lives or their replacement may occur beyond the 30-year scope of the 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. We identify the following Long-Lived Property Elements as excluded from the 30-year Reserve Expenditures at this time.

- Concrete Culverts, Pond
- Electrical Systems, Common
- Foundations
- Pipes, Interior Building, Sprinkler, Common
- Structural Frames

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. For purposes of calculating appropriate Reserve Contributions, we identify the following list of Operating Budget Funded Repairs and Replacements:

- General Maintenance to the Common Elements
- Expenditures less than $10,000 (These relatively minor expenditures have a limited effect on the recommended Reserve Contributions.)
- Basketball Goals

- Catch Basins, Landscape
- Doors, Interior and Miscellaneous Exterior
- Flag Poles
- Floors, Concrete, Basements
- Floor Coverings, Rubber, Exercise Room
- Horseshoe Area
- HVAC, Clubhouse
- Kitchen Appliances, Interim Replacements
- Landscape
- Light Fixtures, Clubhouse Interior
- Loan Repayments (Per historical practices and based on conversations with Management. Future updates of this Reserve Study will consider the need for changes.)
- Paint Finishes, Touch Up
- Pipes, Common, Interim Repairs and Waste Rodding
- Pool Cover
- Pool Furniture
- Pool Mechanical Equipment
- Pool Shade Structure, Canvas and PVC
- Railings, Wood and Steel, Site
- Retaining Walls, Stone
- Signage
- Staff and Storage Areas
- Valves (We assume replacement as needed in lieu of aggregate replacement.)
- Whirlpool, Abandoned (Per Management. Future updates will consider the need for additional reserve funds,)
- Other Repairs normally funded through the Operating Budget

Horseshoe area overview

Pool furniture

Pool filters

Canvas and PVC shade structure at pool

Signage

Basketball goal

Whirlpool (inactive)

Certain items have been designated as the responsibility of the unit owners to repair or replace at their cost. Property Maintained by Unit Owners, including items billed back to Unit Owners, relates to unit:

- Electrical Systems (Including Circuit Protection Panels)
- Heating, Ventilating and Air Conditioning (HVAC) Units
- Interiors
- Pipes (Within Units)
- Windows and Doors, At Units

Certain items have been designated as the responsibility of others to repair or replace. Property Maintained by Others relates to:

- Laundry Equipment (Leased)
- Snow Removal Equipment (Snow Removal Company)

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
- 2023 local cost of replacement
  - Per unit
  - Per phase
  - Replacement of total quantity
- Percentage of future expenditures anticipated during the next 30 years
- Schedule of estimated future costs for each reserve component including inflation

Reserve Funding Plan

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

Five-Year Outlook

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

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

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

Years 2023 to 2038

RESERVE EXPENDITURES

Stratford Green
Condominium Association
Willowbrook, Illinois

Explanatory Notes:

1) 3.5% is the estimated Inflation Rate for estimating Future Replacement Costs.

2) FY2023 is Fiscal Year beginning May 1, 2022 and ending April 30, 2023.

Line Item	Total Quantity	Per Phase Quantity	Units	Reserve Component Inventory	Estimated 1st Year of Event	Life Analysis, Years Useful	Remaining	Unit (2023)	Costs, $ Per Phase (2023)	Total (2023)	Percentage of Future Expenditures	RUL = 0 FY2023	1 2024	2 2025	3 2026	4 2027	5 2028	6 2029	7 2030	8 2031	9 2032	10 2033	11 2034	12 2035	13 2036	14 2037	15 2038
				Exterior Building Elements																							
1.100	5,400	5,400	Linear Feet	Balconies, Railings, Steel, Paint Finishes and Capital Repairs	2030	6 to 8	7	18.50	99,900	99,900	2.1%								127,101						161,708	
1.105	5,400	5,400	Linear Feet	Balconies, Railings, Steel, Replacement (2023 is Adjusted)	2024	to 35	1	60.00	324,000	324,000	0.2%		83,835														
1.115	14,650	3,663	Square Feet	Balconies, Wood, Deck Boards and Interim Repairs, Phased	2041	12 to 18	18 to 21	22.00	80,575	322,300	1.8%																
1.120	14,650	3,663	Square Feet	Balconies, Wood, Replacement, Buildings, Phased	2024	to 35	1 to 4	48.00	175,800	703,200	2.1%		181,953	188,321	194,913	201,735											
1.121	450	450	Square Feet	Balconies, Wood, Clubhouse, Replacement (Incl. Membrane)	2025	to 25	2	58.00	26,100	26,100	0.3%			27,959													
1.240	21,050	21,050	Linear Feet	Gutters and Downspouts, Aluminum	2035	to 25	12	10.00	210,500	210,500	0.9%													318,080			
1.260	530	530	Each	Light Fixtures	2031	to 25	8	100.00	53,000	53,000	0.2%									69,791							
1.280	1,230	410	Squares	Roofs, Asphalt Shingles, Recently Replaced, Phased	2040	15 to 20	17 to 19	480.00	196,800	590,400	3.1%																
1.281	1,660	415	Squares	Roofs, Asphalt Shingles, Remaining, Phased	2024	15 to 20	1 to 4	480.00	199,200	796,800	7.3%		206,172	213,388	220,857	228,587											
1.282	55	55	Squares	Roofs, Flat and Sloped, Clubhouse and Garages	2031	15 to 20	8	2,100.00	115,500	115,500	1.3%									152,091							
1.820	150,600	75,300	Square Feet	Walls, Masonry, Inspections and Repairs, Phased	2025	8 to 12	2 to 7	1.60	120,480	240,960	3.5%			129,061					153,284					182,054			
1.830	68,500	68,500	Square Feet	Walls, Siding and Trim, Paint Finishes and Partial Replacements	2024	6 to 8	1	4.00	274,000	274,000	6.3%		283,590						348,605						428,524		
1.980	6,430	1,608	Square Feet	Windows and Doors, Common Entrances and Clubhouse, Phased	2029	to 40	6 to 24	80.00	128,600	514,400	2.5%							158,082					194,323			
				Interior Building Elements																							
2.060	1,200	1,200	Square Feet	Ceilings, Acoustical Tiles, Grid and Lighting, Clubhouse	2025	to 30	2	12.00	14,400	14,400	0.0%			15,426													
2.160	2	1	Allowance	Exercise Equipment, Phased	2028	5 to 15	5 to 10	10,500.00	10,500	20,000	0.2%						12,471					14,811					
2.200	1,830	1,830	Square Yards	Floor Coverings, Carpet, Building Hallways	2025	8 to 12	2	60.00	109,800	109,800	1.6%			117,621											177,733		
2.240	1,240	1,240	Square Yards	Floor Coverings, Tile, Building Hallways and Clubhouse	2035	to 30	12	150.00	186,000	186,000	0.8%													281,059			
2.300	270	270	Square Yards	Floor Coverings, Vinyl Tile, Gymnasium	2029	10 to 15	6	55.00	14,850	14,850	0.1%							18,254									
2.400	500	500	Square Yards	Floor Coverings, Wood, Laminate, Clubhouse and Laundry Rooms	2027	18 to 25	4	180.00	90,000	90,000	1.0%					103,277											
2.450	2	1	Allowance	Furnishings, Clubhouse, Phased	2026	to 20	3 to 13	14,000.00	14,000	28,000	0.2%				15,522										21,895		
2.517	1	1	Allowance	Kitchen, Equipment	2030	to 25	7	15,000.00	15,000	15,000	0.1%								19,084								
2.560	366	366	Each	Light Fixtures, Building Hallways	2031	to 30	8	100.00	36,600	36,600	0.4%									48,195							
2.680	1	1	Allowance	Locker Rooms, Renovation	2028	to 35	5	55,000.00	55,000	55,000	0.2%						65,323										
2.700	488	488	Each	Mailboxes	2032	to 35	9	130.00	63,440	63,440	0.2%										86,462						
2.800	197,900	197,900	Square Feet	Paint Finishes, Building Hallways and Clubhouse	2025	8 to 12	2	1.00	197,900	197,900	2.8%			211,995											320,340		
				Building Services Elements																							
3.105	33	7	Each	Boilers, Building Heat, 270-MBH, Phased	2025	18 to 25	2 to 14	10,500.00	69,300	346,500	2.8%			74,236			82,307			91,255			101,176			112,176	
3.300	5	1	Allowance	Electrical Systems, Main Panels, Phased	2039	to 70+	16 to 24	52,000.00	52,000	260,000	1.5%																
3.470	61	15	Each	Intercom Panels, Phased	2026	15 to 20	3 to 9	1,500.00	22,875	91,500	0.9%				25,362		27,168		29,103		31,176						
3.560	5	1	Allowance	Life Safety Systems, Control Panels and Emergency Devices, Phased	2029	to 25	6 to 14	60,000.00	60,000	300,000	1.2%							73,755		79,009		84,636		90,664		97,122	
3.600	488	61	Units	Pipes, Building Heating, Phased, Partial	2041	to 80+	18 to 30+	7,000.00	427,000	3,416,000	8.0%																
3.605	488	61	Units	Pipes, Domestic Hot and Cold Water, Waste and Vent, Phased, Partial	2035	to 80+	12 to 30+	10,000.00	610,000	4,880,000	21.0%													921,752			
3.700	33	7	Each	Pumps, Sump, Phased	2026	to 15	3 to 11	2,000.00	13,200	66,000	0.6%				14,635		15,677		16,794		17,990		19,272				
3.820	2	1	Allowance	Security System, Phased	2026	10 to 15	3 to 10	10,500.00	10,500	21,000	0.2%				11,642							14,811					
3.940	34	5	Each	Water Heaters, Phased	2030	15 to 20	7 to 13	9,500.00	46,170	323,000	2.7%								58,741	60,797	62,925	65,127	67,407	69,766	72,208		
3.997	1	1	Allowance	Water Meters (2023 is Planned)	2023	N/A	0	81,124.00	81,124	81,124	0.7%	81,124															
				Property Site Elements																							
4.020	28,750	28,750	Square Yards	Asphalt Pavement, Crack Repair and Patch	2030	3 to 5	7	0.70	20,125	20,125	0.6%								25,605				29,382				33,716
4.040	28,750	9,583	Square Yards	Asphalt Pavement, Mill and Overlay, Phased	2026	15 to 20	3 to 5	22.00	210,833	632,500	2.0%				233,755	241,936	250,404										

RESERVE EXPENDITURES

Stratford Green
Condominium Association
Willowbrook, Illinois

Line Item	Total Quantity	Per Phase Quantity	Units	Reserve Component Inventory	Estimated 1st Year of Event	Life Analysis, Years Useful	Remaining	Unit (2023)	Costs, $ Per Phase (2023)	Total (2023)	Percentage of Future Expenditures	16 2039	17 2040	18 2041	19 2042	20 2043	21 2044	22 2045	23 2046	24 2047	25 2048	26 2049	27 2050	28 2051	29 2052	30 2053
				Exterior Building Elements																						
1.100	5,400	5,400	Linear Feet	Balconies, Railings, Steel, Paint Finishes and Capital Repairs	2030	6 to 8	7	18.50	99,900	99,900	2.1%						205,737							261,755		
1.105	5,400	5,400	Linear Feet	Balconies, Railings, Steel, Replacement (2023 is Adjusted)	2024	to 35	1	60.00	324,000	324,000	0.2%															
1.115	14,650	3,663	Square Feet	Balconies, Wood, Deck Boards and Interim Repairs, Phased	2041	12 to 18	18 to 21	22.00	80,575	322,300	1.8%			149,667	154,906	160,327	165,939									
1.120	14,650	3,663	Square Feet	Balconies, Wood, Replacement, Buildings, Phased	2024	to 35	1 to 4	48.00	175,800	703,200	2.1%															
1.121	450	450	Square Feet	Balconies, Wood, Clubhouse, Replacement (Incl. Membrane)	2025	to 25	2	58.00	26,100	26,100	0.3%												66,074			
1.240	21,050	21,050	Linear Feet	Gutters and Downspouts, Aluminum	2035	to 25	12	10.00	210,500	210,500	0.9%															
1.260	530	530	Each	Light Fixtures	2031	to 25	8	100.00	53,000	53,000	0.2%															
1.280	1,230	410	Squares	Roofs, Asphalt Shingles, Recently Replaced, Phased	2040	15 to 20	17 to 19	480.00	196,800	590,400	3.1%		353,192	365,554	378,348											
1.281	1,660	415	Squares	Roofs, Asphalt Shingles, Remaining, Phased	2024	15 to 20	1 to 4	480.00	199,200	796,800	7.3%						410,239	424,597	439,458	454,839						
1.282	55	55	Squares	Roofs, Flat and Sloped, Clubhouse and Garages	2031	15 to 20	8	2,100.00	115,500	115,500	1.3%													302,630		
1.820	150,600	75,300	Square Feet	Walls, Masonry, Inspections and Repairs, Phased	2025	8 to 12	2 to 7	1.60	120,480	240,960	3.5%		216,223					256,805					305,003			
1.830	68,500	68,500	Square Feet	Walls, Siding and Trim, Paint Finishes and Partial Replacements	2024	6 to 8	1	4.00	274,000	274,000	6.3%				526,765						647,529					
1.980	6,430	1,608	Square Feet	Windows and Doors, Common Entrances and Clubhouse, Phased	2029	to 40	6 to 24	80.00	128,600	514,400	2.5%			238,873						293,636							
				Interior Building Elements																						
2.060	1,200	1,200	Square Feet	Ceilings, Acoustical Tiles, Grid and Lighting, Clubhouse	2025	to 30	2	12.00	14,400	14,400	0.0%															
2.160	2	1	Allowance	Exercise Equipment, Phased	2028	5 to 15	5 to 10	10,500.00	10,500	20,000	0.2%				20,186					23,975						
2.200	1,830	1,830	Square Yards	Floor Coverings, Carpet, Building Hallways	2025	8 to 12	2	60.00	109,800	109,800	1.6%											268,566				
2.240	1,240	1,240	Square Yards	Floor Coverings, Tile, Building Hallways and Clubhouse	2035	to 30	12	150.00	186,000	186,000	0.8%															
2.300	270	270	Square Yards	Floor Coverings, Vinyl Tile, Gymnasium	2029	10 to 15	6	55.00	14,850	14,850	0.1%						30,583									
2.400	500	500	Square Yards	Floor Coverings, Wood, Laminate, Clubhouse and Laundry Rooms	2027	18 to 25	4	180.00	90,000	90,000	1.0%													244,069		
2.450	2	1	Allowance	Furnishings, Clubhouse, Phased	2026	to 20	3 to 13	14,000.00	14,000	28,000	0.2%								30,886							
2.517	1	1	Allowance	Kitchen, Equipment	2030	to 25	7	15,000.00	15,000	15,000	0.1%															
2.560	366	366	Each	Light Fixtures, Building Hallways	2031	to 30	8	100.00	36,600	36,600	0.4%													95,898		
2.680	1	1	Allowance	Locker Rooms, Renovation	2028	to 35	5	55,000.00	55,000	55,000	0.2%															
2.700	488	488	Each	Mailboxes	2032	to 35	9	130.00	63,440	63,440	0.2%															
2.800	197,900	197,900	Square Feet	Paint Finishes, Building Hallways and Clubhouse	2025	8 to 12	2	1.00	197,900	197,900	2.8%											484,055				
				Building Services Elements																						
3.105	33	7	Each	Boilers, Building Heat, 270-MBH, Phased	2025	18 to 25	2 to 14	10,500.00	69,300	346,500	2.8%									158,235			175,438			194,511
3.300	5	1	Allowance	Electrical Systems, Main Panels, Phased	2039	to 70+	16 to 24	52,000.00	52,000	260,000	1.5%	90,167		96,589		103,469		110,839		118,733						
3.470	61	15	Each	Intercom Panels, Phased	2026	15 to 20	3 to 9	1,500.00	22,875	91,500	0.9%								50,465		54,059		57,910		62,034	
3.560	5	1	Allowance	Life Safety Systems, Control Panels and Emergency Devices, Phased	2029	to 25	6 to 14	60,000.00	60,000	300,000	1.2%															
3.600	488	61	Units	Pipes, Building Heating, Phased, Partial	2041	to 80+	18 to 30+	7,000.00	427,000	3,416,000	8.0%			793,148					942,011					1,118,813		
3.605	488	61	Units	Pipes, Domestic Hot and Cold Water, Waste and Vent, Phased, Partial	2035	to 80+	12 to 30+	10,000.00	610,000	4,880,000	21.0%	1,057,731			1,172,726			1,300,222			1,441,579			1,598,305		
3.700	33	7	Each	Pumps, Sump, Phased	2026	to 15	3 to 11	2,000.00	13,200	66,000	0.6%			24,519		26,265		28,136		30,140		32,287				
3.820	2	1	Allowance	Security System, Phased	2026	10 to 15	3 to 10	10,500.00	10,500	21,000	0.2%			19,504							24,814					
3.940	34	5	Each	Water Heaters, Phased	2030	15 to 20	7 to 13	9,500.00	46,170	323,000	2.7%												116,882	120,973	125,207	129,590
3.997	1	1	Allowance	Water Meters (2023 is Planned)	2023	N/A	0	81,124.00	81,124	81,124	0.7%					161,420										
				Property Site Elements																						
4.020	28,750	28,750	Square Yards	Asphalt Pavement, Crack Repair and Patch	2030	3 to 5	7	0.70	20,125	20,125	0.6%				38,690				44,398				50,948			
4.040	28,750	9,583	Square Yards	Asphalt Pavement, Mill and Overlay, Phased	2026	15 to 20	3 to 5	22.00	210,833	632,500	2.0%															

RESERVE EXPENDITURES

Stratford Green
Condominium Association
Willowbrook, Illinois

Explanatory Notes:

1) 3.5% is the estimated Inflation Rate for estimating Future Replacement Costs.

2) FY2023 is Fiscal Year beginning May 1, 2022 and ending April 30, 2023.

Line Item	Total Quantity	Per Phase Quantity	Units	Reserve Component Inventory	Estimated 1st Year of Event	Life Analysis, Years Useful	Remaining	Unit (2023)	Costs, $ Per Phase (2023)	Total (2023)	Percentage of Future Expenditures	RUL = 0 FY2023	1 2024	2 2025	3 2026	4 2027	5 2028	6 2029	7 2030	8 2031	9 2032	10 2033	11 2034	12 2035	13 2036	14 2037	15 2038
4.045	28,750	9,583	Square Yards	Asphalt Pavement, Total Replacement, Phased	2046	15 to 20	23 to 25	36.00	345,000	1,035,000	6.6%																
4.100	15	5	Each	Catch Basins, Inspections and Capital Repairs, Phased	2026	15 to 20	3 to 5	950.00	4,750	14,250	0.1%				5,266	5,451	5,642											
4.110	12,200	490	Linear Feet	Concrete Curbs and Gutters, Partial	2026	to 65	3 to 30+	46.50	22,785	567,300	0.8%				25,262	26,146	27,061										38,173
4.125	45,400	2,270	Square Feet	Concrete Flatwork, Partial	2026	to 65	3 to 30+	15.00	34,050	681,000	1.8%				37,752			41,856			46,407			51,452			57,046
4.560	166	55	Each	Light Poles and Fixtures, Phased	2026	to 25	3 to 5	2,600.00	143,858	431,600	4.7%				159,498	165,080	170,858										
4.561	18	18	Each	Light Fixtures, Bollards	2029	to 25	6	1,000.00	18,000	18,000	0.1%							22,127									
4.650	1	1	Allowance	Pipes, Subsurface Utilities, Partial	2026	to 85+	3	10,000.00	10,000	10,000	0.3%				11,087								14,600				
4.660	1	1	Allowance	Playground Equipment	2037	15 to 20	14	74,000.00	74,000	74,000	0.3%															119,783	
4.710	1,180	355	Linear Feet	Pond, Erosion Control, Partial	2031	to 15	8	24.00	8,520	28,320	0.1%									11,219							
4.730	7,200	1,800	Square Yards	Pond, Sediment Removal, Partial	2031	to 30	8	31.00	55,800	223,200	0.2%									73,478							
4.745	390	390	Square Feet	Retaining Walls, Masonry	2034	to 35	11	50.00	19,500	19,500	0.1%												28,469				
4.760	520	520	Square Feet	Retaining Walls, Timber (Replace with Masonry)	2032	15 to 20	9	40.00	20,800	20,800	0.1%										28,348						
4.820	1	1	Allowance	Site Furniture	2025	15 to 25	2	21,300.00	21,300	21,300	0.2%			22,817													
4.951	1	1	Each	Vehicle, Maintenance Truck	2028	to 15	5	40,000.00	40,000	40,000	0.4%						47,507										
4.952	1	1	Each	Vehicle, Utility	2028	to 15	5	12,000.00	12,000	12,000	0.1%						14,252										
				Pool Elements																							
6.200	11,400	11,400	Square Feet	Concrete Deck, Inspections, Partial Replacements and Repairs	2028	8 to 12	5	1.50	17,100	17,100	0.2%						20,309										
6.400	680	680	Linear Feet	Fence, Chain Link	2024	to 25	1	25.00	17,000	17,000	0.2%		17,595														
6.800	1,700	1,700	Square Feet	Pool Finishes, Plaster	2027	8 to 12	4	19.50	33,150	33,150	0.3%					38,040											
6.870	1	1	Each	Shade Structure	2036	to 25	13	14,400.00	14,400	14,400	0.1%														22,521		
6.900	1,700	1,700	Square Feet	Structures and Deck, Total Replacement	2039	to 60	16	270.00	459,000	459,000	2.2%																
		1	Allowance	2023 Reserve Study (Remaining Payment)	2023	N/A	0	3,475	3,475	3,475	0.0%	3,475															
				Anticipated Expenditures, By Year ($35,715,507 over 30 years)								84,599	773,145	1,000,824	955,551	1,010,252	738,979	314,074	778,317	585,835	273,308	179,385	260,306	2,109,150	545,148	988,862	128,935

RESERVE EXPENDITURES

Stratford Green
Condominium Association
Willowbrook, Illinois

Line Item	Total Quantity	Per Phase Quantity	Units	Reserve Component Inventory	Estimated 1st Year of Event	Life Analysis, Years Useful	Life Analysis, Years Remaining	Costs, $ Unit (2023)	Costs, $ Per Phase (2023)	Costs, $ Total (2023)	Percentage of Future Expenditures	16 2039	17 2040	18 2041	19 2042	20 2043	21 2044	22 2045	23 2046	24 2047	25 2048	26 2049	27 2050	28 2051	29 2052	30 2053
4.045	28,750	9,583	Square Yards	Asphalt Pavement, Total Replacement, Phased	2046	15 to 20	23 to 25	36.00	345,000	1,035,000	6.6%								761,109	787,748	815,319					
4.100	15	5	Each	Catch Basins, Inspections and Capital Repairs, Phased	2026	15 to 20	3 to 5	950.00	4,750	14,250	0.1%								10,479	10,846	11,225					
4.110	12,200	490	Linear Feet	Concrete Curbs and Gutters, Partial	2026	to 65	3 to 30+	46.50	22,785	567,300	0.8%								50,266	52,026	53,847					
4.125	45,400	2,270	Square Feet	Concrete Flatwork, Partial	2026	to 65	3 to 30+	15.00	34,050	681,000	1.8%			63,248			70,124			77,747		86,200			95,571
4.560	166	55	Each	Light Poles and Fixtures, Phased	2026	to 25	3 to 5	2,600.00	143,858	431,600	4.7%												376,933	390,125	403,780
4.561	18	18	Each	Light Fixtures, Bollards	2029	to 25	6	1,000.00	18,000	18,000	0.1%														
4.650	1	1	Allowance	Pipes, Subsurface Utilities, Partial	2026	to 85+	3	10,000.00	10,000	10,000	0.3%				19,225					22,833		25,316			
4.660	1	1	Allowance	Playground Equipment	2037	15 to 20	14	74,000.00	74,000	74,000	0.3%														
4.710	1,180	355	Linear Feet	Pond, Erosion Control, Partial	2031	to 15	8	24.00	8,520	28,320	0.1%								18,796						
4.730	7,200	1,800	Square Yards	Pond, Sediment Removal, Partial	2031	to 30	8	31.00	55,800	223,200	0.2%														
4.745	390	390	Square Feet	Retaining Walls, Masonry	2034	to 35	11	50.00	19,500	19,500	0.1%														
4.760	520	520	Square Feet	Retaining Walls, Timber (Replace with Masonry)	2032	15 to 20	9	40.00	20,800	20,800	0.1%														
4.820	1	1	Allowance	Site Furniture	2025	15 to 25	2	21,300.00	21,300	21,300	0.2%							45,401							
4.951	1	1	Each	Vehicle, Maintenance Truck	2028	to 15	5	40,000.00	40,000	40,000	0.4%										94,530				
4.952	1	1	Each	Vehicle, Utility	2028	to 15	5	12,000.00	12,000	12,000	0.1%										28,359				
				Pool Elements																					
6.200	11,400	11,400	Square Feet	Concrete Deck, Inspections, Partial Replacements and Repairs	2028	8 to 12	5	1.50	17,100	17,100	0.2%													46,373	
6.400	680	680	Linear Feet	Fence, Chain Link	2024	to 25	1	25.00	17,000	17,000	0.2%											41,581			
6.800	1,700	1,700	Square Feet	Pool Finishes, Plaster	2027	8 to 12	4	19.50	33,150	33,150	0.3%													86,859	
6.870	1	1	Each	Shade Structure	2036	to 25	13	14,400.00	14,400	14,400	0.1%														
6.900	1,700	1,700	Square Feet	Structures and Deck, Total Replacement	2039	to 60	16	270.00	459,000	459,000	2.2%	795,900													
		1	Allowance	2023 Reserve Study (Remaining Payment)	2023	N/A	0	3,475	3,475	3,475	0.0%														
				Anticipated Expenditures, By Year ($35,715,507 over 30 years)								1,943,798	569,415	1,751,102	2,310,846	451,481	882,622	2,166,000	2,347,868	2,030,758	3,171,261	826,489	883,771	3,962,166	867,808	823,452

RESERVE FUNDING PLAN

CASH FLOW ANALYSIS
Stratford Green
Condominium Association
Willowbrook, Illinois

Individual Reserve Budgets & Cash Flows for the Next 30 Years

		FY2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
Reserves at Beginning of Year	*(Note 1)*	377,529	362,299	184,384	207,793	277,073	292,197	362,446	889,658	985,853	1,307,428	1,979,145	2,786,638	3,556,899	2,511,137	3,061,980	3,210,727
Total Recommended Reserve Contributions	*(Note 2)*	67,371	591,700	1,021,700	1,021,700	1,021,700	805,000	833,200	862,400	892,600	923,800	956,100	989,600	1,024,200	1,060,000	1,097,100	1,135,500
Estimated Interest Earned, During Year	*(Note 3)*	1,998	3,530	2,533	3,131	3,676	4,228	8,086	12,112	14,810	21,225	30,778	40,967	39,188	35,991	40,509	48,282
Anticipated Expenditures, By Year		(84,599)	(773,145)	(1,000,824)	(955,551)	(1,010,252)	(738,979)	(314,074)	(778,317)	(585,835)	(273,308)	(179,385)	(260,306)	(2,109,150)	(545,148)	(988,862)	(128,935)
Anticipated Reserves at Year End		$362,299	$184,384	$207,793	$277,073	$292,197	$362,446	$889,658	$985,853	$1,307,428	$1,979,145	$2,786,638	$3,556,899	$2,511,137	$3,061,980	$3,210,727	$4,265,574
					(NOTE 5)	*(NOTE 5)*											
Predicted Reserves based on 2023 funding level of:	$161,690	362,299	(248,421)														

(continued)

Individual Reserve Budgets & Cash Flows for the Next 30 Years, Continued

	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053
Reserves at Beginning of Year	4,265,574	3,547,433	4,244,639	3,804,418	2,839,478	3,779,341	4,344,986	3,675,482	2,865,154	2,416,102	867,849	1,715,946	2,575,791	408,900	1,390,915
Total Recommended Reserve Contributions	1,175,200	1,216,300	1,258,900	1,303,000	1,348,600	1,395,800	1,444,700	1,495,300	1,547,600	1,601,800	1,657,900	1,715,900	1,776,000	1,838,200	1,902,500
Estimated Interest Earned, During Year	50,457	50,321	51,981	42,906	42,744	52,467	51,796	42,240	34,106	21,208	16,686	27,716	19,275	11,623	25,096
Anticipated Expenditures, By Year	(1,943,798)	(569,415)	(1,751,102)	(2,310,846)	(451,481)	(882,622)	(2,166,000)	(2,347,868)	(2,030,758)	(3,171,261)	(826,489)	(883,771)	(3,962,166)	(867,808)	(823,452)
Anticipated Reserves at Year End	$3,547,433	$4,244,639	$3,804,418	$2,839,478	$3,779,341	$4,344,986	$3,675,482	$2,865,154	$2,416,102	$867,849	$1,715,946	$2,575,791	$408,900	$1,390,915	$2,495,059
										(NOTE 5)			*(NOTE 5)*		*(NOTE 4)*

Explanatory Notes:

1) Year 2023 starting reserves are as of November 30, 2022; FY2023 starts May 1, 2022 and ends April 30, 2023.
2) Reserve Contributions for 2023 are the remaining budgeted 5 months; 2024 is the first year of recommended contributions.
3) 1.3% is the estimated annual rate of return on invested reserves; 2023 is a partial year of interest earned.
4) Accumulated year 2053 ending reserves consider the need to fund for continued pipe replacement and subesquent roof replacement and repaving shortly after 2053, and the age, size, overall condition and complexity of the property.
5) Threshold Funding Years (reserve balance at critical point).

*Refer to the Reserve Expenditures pages for the full list of reserve elements

FIVE-YEAR OUTLOOK

Stratford Green
Condominium Association
Willowbrook, Illinois

Line Item	Reserve Component Inventory	RUL = 0 FY2023	1 2024	2 2025	3 2026	4 2027	5 2028
	Exterior Building Elements						
1.105	Balconies, Railings, Steel, Replacement (2023 is Adjusted)		83,835				
1.120	Balconies, Wood, Replacement, Buildings, Phased		181,953	188,321	194,913	201,735	
1.121	Balconies, Wood, Clubhouse, Replacement (Incl. Membrane)			27,959			
1.281	Roofs, Asphalt Shingles, Remaining, Phased		206,172	213,388	220,857	228,587	
1.820	Walls, Masonry, Inspections and Repairs, Phased			129,061			
1.830	Walls, Siding and Trim, Paint Finishes and Partial Replacements		283,590				
	Interior Building Elements						
2.060	Ceilings, Acoustical Tiles, Grid and Lighting, Clubhouse			15,426			
2.160	Exercise Equipment, Phased						12,471
2.200	Floor Coverings, Carpet, Building Hallways			117,621			
2.400	Floor Coverings, Wood, Laminate, Clubhouse and Laundry Rooms					103,277	
2.450	Furnishings, Clubhouse, Phased				15,522		
2.680	Locker Rooms, Renovation						65,323
2.800	Paint Finishes, Building Hallways and Clubhouse			211,995			
	Building Services Elements						
3.105	Boilers, Building Heat, 270-MBH, Phased			74,236			82,307
3.470	Intercom Panels, Phased				25,362		27,168
3.700	Pumps, Sump, Phased				14,635		15,677
3.820	Security System, Phased				11,642		
3.997	Water Meters (2023 is Planned)	81,124					
	Property Site Elements						
4.040	Asphalt Pavement, Mill and Overlay, Phased				233,755	241,936	250,404
4.100	Catch Basins, Inspections and Capital Repairs, Phased				5,266	5,451	5,642
4.110	Concrete Curbs and Gutters, Partial				25,262	26,146	27,061
4.125	Concrete Flatwork, Partial				37,752		
4.560	Light Poles and Fixtures, Phased				159,498	165,080	170,858
4.650	Pipes, Subsurface Utilities, Partial				11,087		
4.820	Site Furniture			22,817			
4.951	Vehicle, Maintenance Truck						47,507
4.952	Vehicle, Utility						14,252

*Refer to the Reserve Expenditures pages for the full list of reserve elements

FIVE-YEAR OUTLOOK

Stratford Green
Condominium Association
Willowbrook, Illinois

Line Item	Reserve Component Inventory	RUL = 0 FY2023	1 2024	2 2025	3 2026	4 2027	5 2028
	Pool Elements						
6.200	Concrete Deck, Inspections, Partial Replacements and Repairs						20,309
6.400	Fence, Chain Link		17,595				
6.800	Pool Finishes, Plaster					38,040	
	2023 Reserve Study (Remaining Payment)	3,475					
	Anticipated Expenditures, By Year ($35,715,507 over 30 years)	84,599	773,145	1,000,824	955,551	1,010,252	738,979

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 Building Elements

Front elevation

Rear elevation

Balconies, Railings, Steel

Line Items: 1.100 and 1.105

Quantity: Approximately 5,400 linear feet of steel railings at the balconies

History:

- *Railings:* We note most of the railings at the balconies have been replaced and that the Association has balcony railings stored at the pool area that we assume are for replacement of the existing original railings.
- *Paint finishes:* The age of the paint finishes varies.

Conditions: The replaced railings are in good overall condition but the original railings are in poor overall condition with excessive rust evident.

Replacement railings for balconies at pool area

Replaced railings

Railing rust

Railing rust

Railing rust

Replaced railings

Railing rust

Useful Life: Railings of this type have a useful life of up to 35 years with the benefit of periodic maintenance. Periodic maintenance should include applications of a protective paint finish and partial replacement of deteriorated steel every six- to eight-years.

Component Detail Notes: Preparation of the steel before application of the paint finish is critical to maximize the useful life of the finish. The painting contractor should remove all soil, dirt, oil, grease and other foreign materials before application of the paint finish to maximize its useful life. The contractor should also remove paint blisters and rust prior to the paint finish application. We recommend the use of a power wire brush, scraper and/or sander as effective means of removal. The Association should require the application of a primer on bare material. The primer for material surfaces should include a rust inhibitor for added protection.

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 in 2023 is adjusted for replacement of the remaining original railings. Future updates of this Reserve Study will consider the need for changes in scope based on actual replacement costs.

Balconies, Wood

Line Items: 1.115 through 1.121

Quantity: The Association maintains the following approximate quantities of wood balconies:

- *Buildings:* 14,650 square feet of deck boards
- *Clubhouse:* 450 square feet of deck boards and 80 linear feet of wood railings. We assume a waterproof membrane is below the deck based on construction.

History: The age of the balconies was unavailable at the time of our inspection. We note isolated repairs and replaced components at the building balconies.

Condition: Fair to poor overall with periodic wood rot, damage, finish deterioration, support torsion, and bowed deck boards and supports. We recommend the Association engage a local engineer to inspect the balconies to determine the need for near term replacement and repairs.

Fascia board damage

Wood deck boards

Fascia rot

Support torsion

Replaced support

Deck board finish deterioration and organic growth

Deck board and fascia wood rot – note finish deterioration

Support rot and wood split

Bowed support

Fascia wood rot

Replaced deck boards

Wood rot and organic growth

Support torsion

Clubhouse balcony stairs

Stair damage at clubhouse balcony

Bowing deck boards

Bowing deck boards (clubhouse balcony shown)

Finish deterioration

Railings overview

Wood rot and damage

Deck board rot

Useful Life: Up to 35 years with proper maintenance and interim replacement of the deck boards every 12- to 18-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: Balcony construction includes the following:

- Deck boards fastened with screws
- Steel 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.)
- Wood frames fastened with screws
- Cross bracing does not exist to stabilize the frames

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 cost for interim repairs includes replacement of the deck boards and partial replacement of deteriorated wood components. Our cost for replacement of the clubhouse balcony includes replacement of the waterproof membrane below. We assume replacement of the balconies at the buildings in the near term based on the conditions identified. Future updates of this Reserve Study will incorporate additional findings and observations from available inspection reports provided by the Association.

Gutters and Downspouts, Aluminum

Line Item: 1.240

Quantity: Approximately 21,050 linear feet of aluminum small and large capacity seamless gutters and small and large capacity downspouts. We note limited quantities of small capacity gutters and downspouts.

History: The majority of the gutters and downspouts have reportedly been replaced in the last 10 years but the exact age of the gutters and downspouts was unavailable at the time of our inspection.

Condition: Good to fair overall with isolated disconnected sections, fastener rust and dented sections evident.

Downspout dents

Large capacity gutters and downspouts

Downspout damage – note small capacity at building 13

Typical gutters and downspouts

Downspout dents

Disconnected downspout

Downspout dents

Useful Life: Up to 25 years

Component Detail Notes: The size of the gutter is determined by the roof's watershed area, a roof pitch factor and the rainfall intensity number of the Association's region. We recommend sloping gutters 1/16 inch per linear foot and providing fasteners a maximum of every three feet.

Downspouts can drain 100 square feet of roof area per one square inch of downspout cross sectional area. We recommend the use of downspout extensions and splash blocks at the downspout discharge to direct storm water away from the foundations. The useful life of gutters and downspouts coincides with that of the sloped roofs. Coordinated replacement 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 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. We assume the Association will conduct interim repairs and partial replacements through the operating budget.

Light Fixtures

Line Item: 1.260

Quantity: Approximately 530 exterior metal light fixtures accent the front entries and patios

History: The age of the light fixtures was unavailable at the time of our inspection but are likely not original.

Condition: Fair overall with periodic finish deterioration, loose fixtures and mismatched fixtures evident.

Clubhouse fixture rust

Mismatch light fixture

Typical light fixture

Fixture 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:

- Replace burned out bulbs at common fixtures as needed
- Inspect and repair broken or dislodged fixtures
- Ensure a waterproof seal between the fixture and building exists

Priority/Criticality: Per Board discretion

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

Roofs, Asphalt Shingles

Line Items: 1.280 and 1.281

Quantity, History and Condition: The Association maintains the following approximate quantiles of asphalt shingle roofs:

- *Recently Replaced:* 1,230 *squares*[1] replaced from 2020 to 2022 in good overall condition with no significant deterioration evident at the time of our inspection.
- *Remaining:* 1,660 squares at varying ages, though most are near 20 years in age, in fair to poor overall condition with periodic shingle lift and isolated sheathing deflection evident.

The Association conducted a roof inspection in the fall of 2021. The inspection reported systemic issues with granular loss, loose nails, damaged shingles and damaged plywood at the remaining roofs. The roofs that were recently replaced were reported in excellent condition at the time of their inspection. We note a few of the roofs that were reported in poor condition were replaced in 2022. We recommend the Association conduct semiannual inspections of the roofs and fund this activity through the operating budget.

The following table displays which roofs are included in each line item:

Category (Line Item)	Building
Recently Replaced (1.280)	2, 3, 4, 5, 7, 8, 9, 15, 17, 19, 20C, 21B, 22, 23, 25B
Remaining (1.281)	1, 6, 10, 11, 12 ,13, 14, 16, 18, 20A, 20B, 21A, 21C, 24, 26, 27, 28

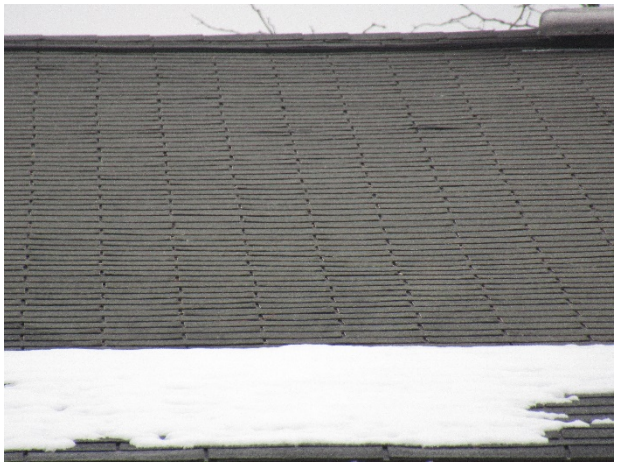
[1] We quantify the roof area in squares where one square is equal to 100 square feet of surface area.

Building 4 roof overview

Building 5 roof overview

New flashing at roof parapet (recently replaced shown)

Shingle lift – note dimensional shingles (building 10 shown)



Shingle lift (building 18 shown)

Recently replaced roof overview

Shingle lift (building 26 shown)

Shingle lift and shingle lift (building 16 shown)

Building 19 overview (recently replaced shown)

Three tab shingles – note shingle lift (remaining roof shown)

Useful Life: 15- to 20-years

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

- Laminate and three tab shingles
- Boston style ridge caps
- Gable, ridge and square hood box vents
- Metal drip edge

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.

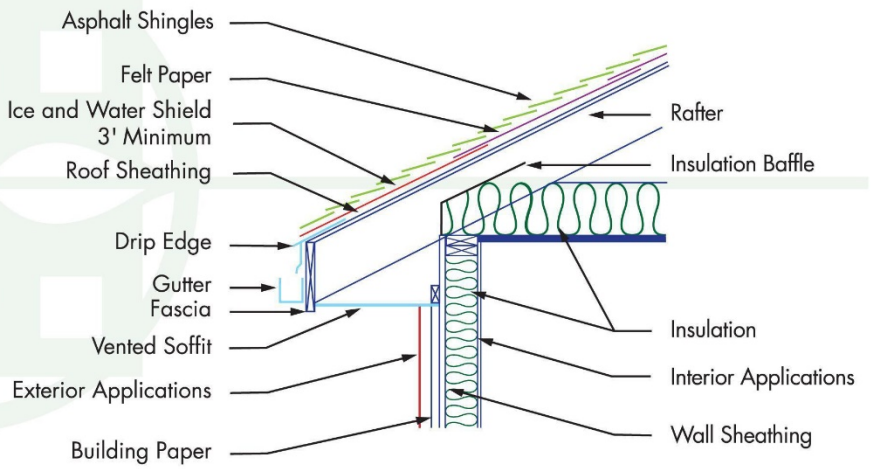
The vents should be clear of debris and not blocked from above by attic insulation. If the soffit vents are blocked from above, installation of polystyrene vent spaces or baffles between the roof joists at these locations can ensure proper ventilation.

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 Stratford Green:

ROOF SCHEMATIC



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.

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:

- 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

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 is based in part on historical information provided by the Association. We include replacement of the remaining roofs in the near term based on the condition from our visual inspection from the ground. Future updates of this Reserve Study will consider the need for changes in scope and timing

Roof, Flat and Sloped, Clubhouse and Garages

Line Item: 1.282

Quantity: Approximately 55 squares of flat roofs and sloped asphalt shingle roofs at the clubhouse and the garages. This quantity includes the mansard shingles at the clubhouse.

History: Replaced in 2011. We recommend the Association conduct semiannual roof inspections and fund these inspections through the operating budget.

Condition: Visually in fair overall condition with isolated organic growth and shingle lift evident. We note we were unable to access the flat roof at the clubhouse at the time of our inspection. The Association does not report any issues with leaks at the clubhouse and garage roofs at this time.

Mansard roof at clubhouse overview

Organic growth at mansard shingles clubhouse

Garage roof overview

Useful Life: 15- to 20-years

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:

- Semi-annually:
  - Note drainage issues with water ponding after 48 hours of rainfall event. Verify scuppers and drains are free of debris. Replace damaged or missing drain covers.
  - Inspect perimeter flashing for loose fasteners, deflections, and sealant damage
  - Verify membrane surface is free of ruptures or damage, and areas of extensive blistering or bubbling
  - Remove oil spills or contaminants from mechanical equipment
  - In areas of possible foot traffic, remove any sharp debris or trash and note areas of crushed insulation
  - If frequency of leaks increase or location of water infiltration is unknown, we recommend the consideration of a thermal image inspection

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. Updates of this Reserve Study will consider the need for changes in scope and timing based on future conditions.

Walls, Masonry

Line Item: 1.820

Quantity: Approximately 150,600 square feet of masonry comprises the exterior walls

History: Original with previous repairs.

Condition: Fair overall with periodic mortar deterioration, cracks, organic growth and efflorescence evident at the time of our inspection. We note that efflorescence is not a safety concern. However, it can be an indication of water infiltration, masonry saturation, improper drainage behind the façade or another underlying issue. We also note isolated sealant deterioration.

Masonry cracks

Masonry efflorescence

Mortar deterioration

Step crack and efflorescence

Masonry step crack

Masonry efflorescence

Masonry cracks

Organic growth

Typical chimney cap

Fire wall overview

Sealant deterioration

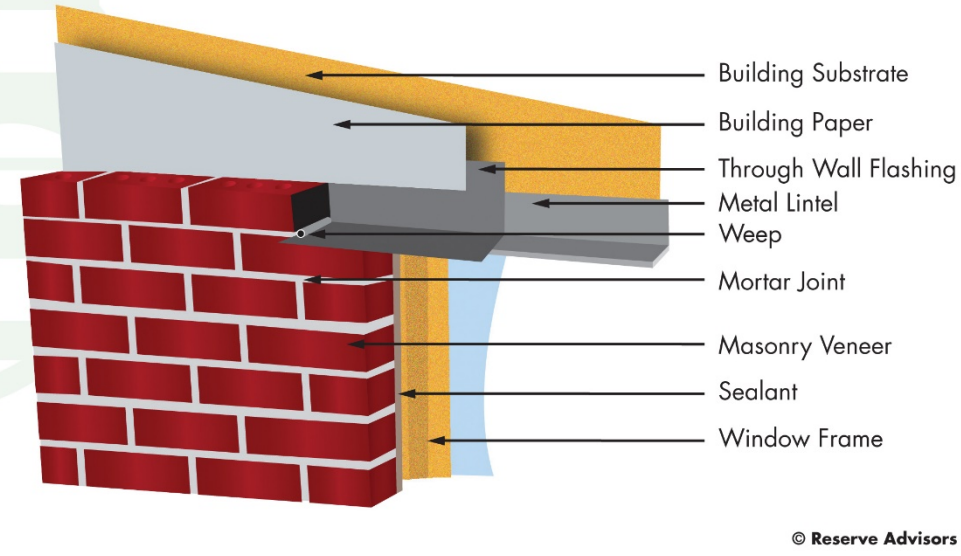
Sealant deterioration

Useful Life: We advise a complete inspection of the masonry and related masonry repairs every 8- to 12-years to forestall deterioration.

Component Detail Notes: Common types of masonry deterioration include efflorescence, spalling, joint deterioration and cracking. The primary cause of efflorescence, cracks and face spall is water infiltration, therefore prevention of water infiltration is the principal concern for the maintenance of masonry applications.

Repointing is a process of raking and cutting out defective mortar to a depth of not less than ½ inch nor more than ¾ inch and replacing it with new mortar. Face grouting is the process of placing mortar over top of the existing mortar. We advise against face grouting because the existing, often deteriorated mortar does not provide a solid base for the new mortar. New mortar spalls at face grouted areas will likely occur. One purpose of a mortar joint is to protect the masonry by relieving stresses within the wall caused by expansion, contraction, moisture migration and settlement. Repointed mortar joints are more effective if the mortar is softer and more permeable than the masonry units, and no harder or less permeable than the existing mortar. The masonry contractor should address these issues within the proposed scope of work.

The following diagram details a typical masonry façade system and may not reflect the actual configuration at the Association:



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 the following activities:

- Complete inspection of the masonry
- Repointing of up to three percent (3%) of the masonry
- Replacement of a limited amount of the masonry (The exact amount of area in need of replacement will be discretionary based on the actual future conditions and the desired appearance.)
- Rebuilding of up to two chimneys per event
- Replacement of up to twenty-five percent (25%) of the sealants per event

Walls, Siding, Paint Finishes and Partial Replacements

Line Item: 1.830

Quantity: Approximately 68,500 square feet of hardboard siding and trim throughout the property. This quantity includes a small quantity of EIFS at the clubhouse.

History: The age of the hardboard siding varies and the age of the last paint finish application was unavailable at the time of our inspection. Based on the conditions noted below, we opine the Association has conducted replacements on an as-needed basis.

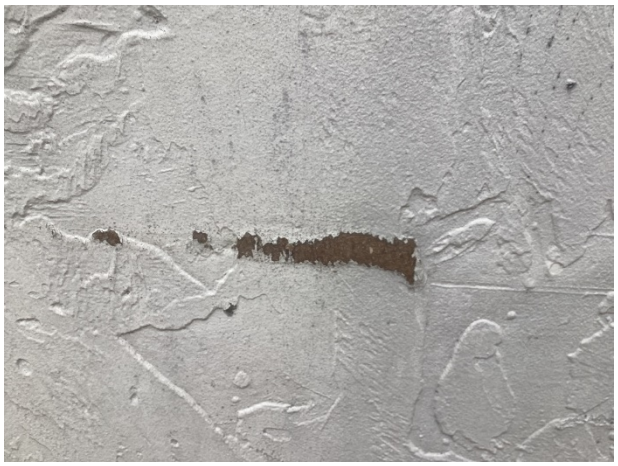
Condition: The condition of the hardboard siding and trim varies though mostly in fair overall condition. We note the property comprises multiple materials: fiber cement panels, composite hardboard and plywood with mostly wood trim. We note periodic finish deterioration and isolated areas of deterioration, rot, damage and organic growth.

Trim finish deterioration

Fiber cement panel overview – note good condition

Plywood siding deterioration

Trim finish deterioration



Composite hardboard deterioration at garage

Finish deterioration and organic growth

Composite hardboard siding

Plywood damage

Plywood rot and finish deterioration

Trim finish deterioration

Fascia trim deterioration

Wood soffit deterioration

Wood soffits and fascia – note finish deterioration

EIFS damage at the clubhouse

EIFS damage (clubhouse shown)

EIFS overview (clubhouse shown)

Useful Life: The age of the siding varies but typically siding has a useful life of between 35- and 50-years with the benefit of timely paint finish applications every six- to eight-years. However, failure to conduct paint applications and repairs in a timely manner will reduce the remaining useful life of the siding.

Component Detail Notes: Composite siding consists of compressed wood chips held together with a glue binder and finished with a factory applied color coated hard wax surface that resists the penetration of water. Delamination and rotting of this type of siding are common problems as the siding ages, but generally are not uniform.

Fiber cement siding is made from a combination of cement, sand and cellulose fiber. Manufacturing of the siding utilizes a steam curing process to increase strength and dimensional stability. The siding is also manufactured in layers forming a sheet of desired thickness. A wood grain imprint is typically applied to the exposed surface. Fiber cement siding offers many advantages over other types of siding. These advantages include:

- Capable of withstanding salt spray and ultraviolet rays
- Dimensional stability (will not buckle or warp as easily as other materials)
- Paint applications last longer compared to wood siding
- Resistant to insects, birds and fire

Wood siding is not watertight and is especially prone to water penetration at joints and knots. Therefore, wood siding should be installed over a continuous weather resistant barrier. The weather resistant barrier should include water-vapor permeable building paper and properly integrated flashing around all penetrations.

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

- Annually:
    - Inspect and repair damage, loose boards and finish stains
    - Periodic pressure cleaning at areas with organic growth
    - Touch-up paint finish applications as needed and sealing of butt joints and field cut end joints

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 anticipate the following during each paint application cycle:

- Paint finish applications
- Replacement of up to fifteen percent (15%), of the siding and trim (The exact amount of material in need of replacement will depend on the actual future conditions and desired appearance. We recommend replacement wherever cracks, delamination and deterioration impair the ability of the material to prevent water infiltration.)

Windows and Doors, Common Entrances and Clubhouse

Line Item: 1.980

Quantity: Approximately 6,430 square feet of common windows and doors at the common entrances and the clubhouse

History: The ages of the windows and doors is unknown and likely varies but they have likely been replaced since construction.

Condition: The condition of the windows and doors varies but are primarily good to fair overall with isolated damage and rust evident at the time of our inspection.

Clubhouse windows at balcony

Clubhouse windows

Common entrance door rust

Common entrance door rust

Common window likely replaced

Clubhouse entrance doors and windows

Common entrance door damage

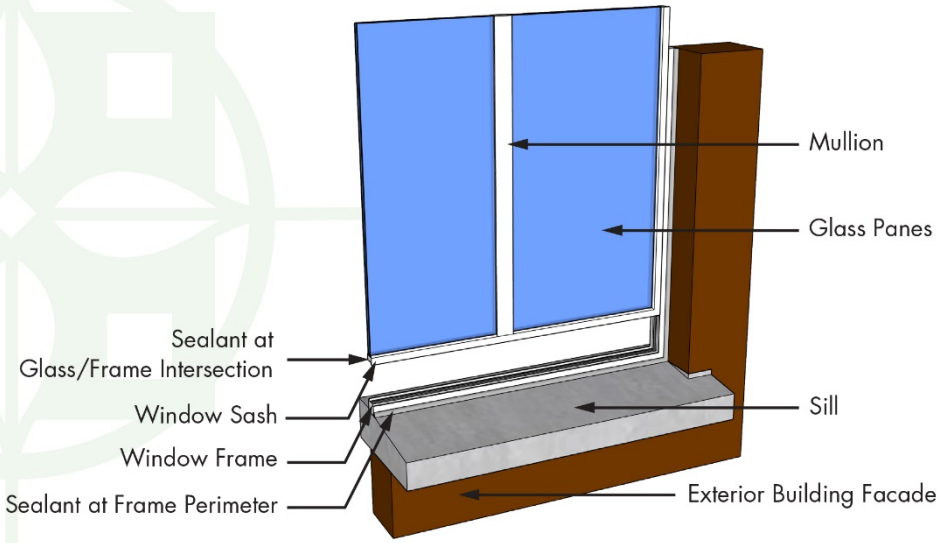
Useful Life: Up to 40 years

Component Detail Notes: Construction includes the following:

- Aluminum, vinyl and wood frames
- Single hung and fixed windows
- Hinged doors

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

WINDOW DETAIL



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 and doors 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. Stratford Green 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. We assume phased replacements in conjunction with paint finish applications and partial siding replacement due to their interrelated nature. Future updates of this Reserve Study will consider the need for changes in scope and timing.

Interior Building Elements

Ceilings, Acoustical Tiles, Grid and Lighting

Line Item: 2.060

Quantity: Approximately 1,200 square feet at the clubhouse

History: The age of the ceiling acoustical tiles was unavailable at the time of our inspection.

Condition: Fair overall with isolated damage evident at the time of our inspection.

Acoustical ceiling tiles

Ceiling tile damage

Useful Life: Up to 30 years

Priority/Criticality: Per Board discretion

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

Exercise Equipment

Line Item: 2.160

Quantity: The exercise room contains the following types of cardiovascular aerobic and strength training equipment:

- Elliptical
- Treadmills
- Bench
- Weight training machines

History: The age of the exercise equipment varies.

Conditions: Fair overall with isolated rust evident. Management does not report any operational deficiencies at this time.

Strength training equipment

Exercise equipment rust

Treadmills overview

Useful Life: The useful life of cardiovascular and strength training equipment varies from 5- 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, Building Hallways

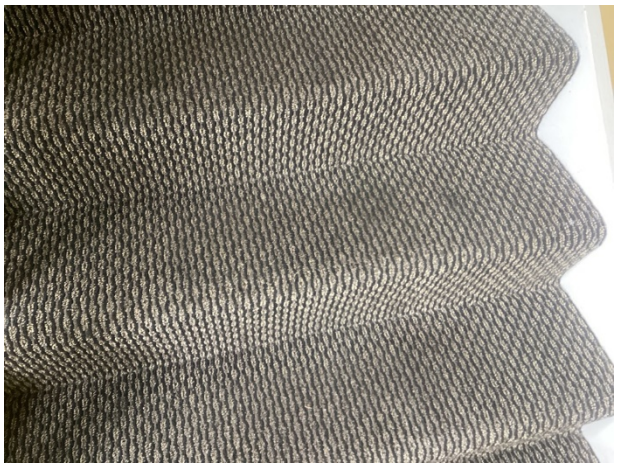
Line Item: 2.200

Quantity: Approximately 1,830 square yards at the hallways (Contractor measurements will vary from the actual floor area due to standard roll lengths, patterns and installation waste.)

History: The age of the carpet was unavailable at the time of our inspection.

Condition: Fair to poor overall with periodic stains and wear evident at the time of our inspection.

Carpet overview – note stains



Carpet stains

Carpet wear and stains

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, Tile, Building Hallways and Clubhouse

Line Item: 2.240

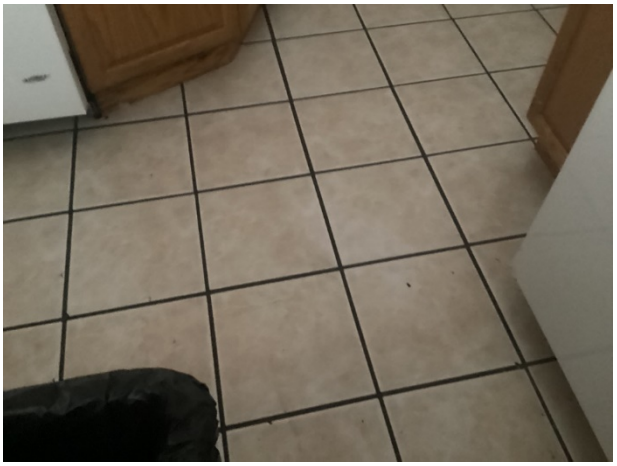
Quantity: Approximately 1,240 square yards at the building hallways and clubhouse

History: The age of the tile was unavailable at the time of our inspection.

Condition: Good overall with no significant deterioration evident.

Tile floor coverings overview

Tile floor overview



Kitchen tile overview

Typical tile shared entrance

Useful Life: Up to 30 years although replacement of tile is often based on discretionary redecorating prior to the tile reaching the end of its useful life.

Priority/Criticality: Per Board discretion

Expenditure Detail Notes: Expenditure timing and costs are depicted in the ***Reserve Expenditures*** table in Section 3. The Association should fund regrouting of the tiles through the operating budget if necessary.

Floor Coverings, Vinyl Tile, Gymnasium

Line Item: 2.300

Quantity: Approximately 270 square yards at the gymnasium

History: The age of the vinyl tile floor coverings are unavailable at the time of our inspection.

Condition: Fair overall with periodic damage evident.

Gym overview

Vinyl tile damage

Useful Life: 10- 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, Wood, Laminate, Clubhouse and Laundry Rooms

Line Item: 2.400

Quantity: Approximately 500 square yards at the clubhouse and laundry rooms

History: The age of the wood laminate floor coverings was unavailable at the time of our inspection.

Condition: Fair overall with isolated damage evident.

Wood laminate floor coverings (laundry room shown)

Wood laminate floor coverings (clubhouse office shown)

Laminate floor damage

Wood laminate floor overview

Useful Life: 18- to 25-years

Priority/Criticality: Per Board discretion

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

Furnishings, Clubhouse

Line Item: 2.450

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

- Chairs
- Computers
- Folding chairs
- Folding tables
- Pictures/decorations
- Rugs
- Sofas
- Tables
- Televisions

History: The age of the furnishings varies.

Condition: The furnishings are in varying condition with isolated damage evident.

Missing banister and damage

Television overview

Cabinets in party room

Table and chairs overview

Furnishings overview

Typical decorations

Printer overview

Chair stains

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 $14,000 plus inflation for phased replacements of up to fifty percent (50%) of the furnishings per event.

Kitchen, Equipment

Line Item: 2.517

Quantity: Kitchen equipment includes but is not limited to the following elements:

- Cabinets
- Countertops
- Appliances

- Sink

History: The age of the kitchen components was unavailable at the time of our inspection.

Condition: Fair overall with isolated damage.

Kitchen overview

Countertop damage

Useful Life: Up to 25 years

Priority/Criticality: Per Board discretion

Expenditure Detail Notes: Expenditure timing and costs are depicted in the ***Reserve Expenditures*** table in Section 3. Our cost assumes replacement of the cabinets, countertops, appliances and the sink. We recommend the Association fund interim replacement of the appliances through the operating budget.

Light Fixtures, Building Hallways

Line Item: 2.560

Quantity: 366 interior light fixtures

History: The age of the light fixtures was unavailable at the time of our inspection.

Condition: Reported satisfactory overall and visually in good to fair overall condition with no significant deterioration evident.

Typical light fixture

Typical light fixture

Useful Life: Up to 30 years

Priority/Criticality: Per Board discretion

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

Locker Rooms

Line Item: 2.680

Quantity: Two locker rooms each. The locker room components include:

- Epoxy floor coatings
- Paint finishes at the walls and ceilings
- Tile coverings at the showers and sauna area
- Lockers
- Light fixtures
- Plumbing fixtures

History: The age of the locker room components likely varies. We note components appear aged.

Condition: Fair overall with isolated tile cracks, bench damage and finish deterioration evident.

Sinks overview

Shower tile crack

Benches – note damage and finish deterioration

Metal lockers overview

Toilet and stalls overview

Epoxy floor coating overview

Useful Life: Renovation up to every 35 years

Priority/Criticality: Per Board discretion

Expenditure Detail Notes: Expenditure timing and costs are depicted in the ***Reserve Expenditures*** table in Section 3. Our cost includes replacement of the components listed, paint finish and epoxy floor coating applications and replacement of the tile coverings.

Mailboxes

Line Item: 2.700

Quantity: 488 unit mailboxes

History: The age of the mailboxes was unavailable at the time of our inspection.

Condition: Reported satisfactory and visually in fair overall with no significant deterioration evident at the time of our inspection.

Mailboxes

Useful Life: Up to 35 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, Buildings Hallways and Clubhouse

Line Item: 2.800

Quantity: Approximately 197,900 square feet at the walls and ceilings at the building hallways and the clubhouse. This quantity includes the gymnasium.

History: The age of the paint finishes was unavailable at the time of our inspection.

Condition: Fair overall with periodic wall scuffs and inconsistent paint finishes evident.

Wall scuff

Wall scuffs

Wall scuff

Wall scuffs

Wall scuffs and inconsistent paint finishes

Finish deterioration (gymnasium shown)

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.

Building Services Elements

Boilers, Building Heat

Line Item: 3.105

Quantity: 33 gas-fired boilers at the buildings

History: The age of the boilers varies greatly. The Association replaced two boilers in 2022 and conducted repairs as necessary and funded this project through an assessment.

Condition: Reported satisfactory without operational deficiencies.

Building heat boiler

Useful Life: 18- to 25-years

Component Detail Notes: The boilers have an *input* capacity of 270-MBH (thousand British Thermal Units per hour) each and an efficiency of eighty percent (80%). The lack of replacement parts, increased efficiencies of new units, increased maintenance costs and corrosion of components will eventually justify complete replacement.

Preventative Maintenance Notes: We recommend the Association obtain and adhere to the manufacturer's recommended maintenance plan. The Association has a current preventative maintenance contract in place. 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:

- Weekly:
  - Inspect for leaking water around boilers
  - Check temperature readings
  - Verify vent is unobstructed
  - Conduct boiler blowdown to minimize corrosion and remove suspended solids in system
  - Clean pilot and burner assemblies
- Monthly:
  - Check water and pressure levels
  - Check controls and switches for proper operating
  - Check and inspect condensate drain
  - Check all gaskets for tight sealing
- Annually:
  - Conduct full inspection of burners and flues
  - Clean and inspect tubes to reduce scaling
  - Inspect any pressure relief valves
  - Clean and recondition feed water pumps
  - Inspect electrical terminals and controls
  - Seal doors/access panels
  - Adjust air/fuel ratios 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. Our estimate of cost includes an allowance for replacement of the controls.

Electrical Systems, Main Panels

Line Item: 3.300

History: Primarily original to construction

Condition: Reported satisfactory without operational deficiencies.

Useful Life: Up to and sometimes beyond 70 years

Component Detail Notes: We give a brief overview of electrical system components in the following sections of this narrative:

Primary Switchgear - The primary switchgear is located where the electric supply comes into the building. Switchgear can include associated controls, regulating, metering and protective devices, and is used for the transmission, distribution and conversion of electric power for use within the building. Switchgear components have a useful life of up to and sometimes beyond 70 years. Replacement is often determined by a desired upgrade of the entire electrical system.

Transformer - A transformer is an electric device with two or more coupled windings used to convert a power supply from one voltage to another voltage. Transformers within a building lower the supplied electrical voltage to a level that can be utilized by the building's equipment and unit owners. Transformers do not utilize mechanical components and therefore have a long useful life. However, the Association should anticipate periodic replacement of a limited quantity of transformers.

Distribution Panel - The distribution panel is an electric switchboard or panel used to control, energize or turn off electricity in total or for individual circuits. The panel also distributes electricity to individual and controllable circuits. One or more distribution panels may exist and further distribute electricity to individual panel boards for each unit. The distribution panel is enclosed in a box and contains circuit breakers, fuses and switches. Distribution panels have a useful life of up to and sometimes beyond 70 years.

Circuit Protection - Once electricity is distributed throughout the building and is at a usable voltage level, the electricity is divided into circuits. Each circuit requires circuit protection. Circuit protection is necessary to prevent injury and fires, and minimize damage to electrical components and disturbances to the electrical system. Abnormalities in the circuit can include overloads, short circuits and surges. Circuit protection devices are commonly referred to as circuit breakers and fuses. For the protection of the circuits in the units and common areas, we recommend the use of only circuit breakers as they are safer than fuses. However, the use of fuses is common for equipment like emergency systems and individual items of equipment. Fuses with a low capacity rating can easily be replaced with fuses of a higher rating resulting in an unprotected, overloaded and unsafe circuit. The circuit protection panels have a useful life of up to and sometimes beyond 70 years.

Conductors - Conductors are the electrical wires that convey electricity to the units, light fixtures, receptacles and appliances.

Conductor Insulation and Conduit - Conductor insulation provides protection against the transfer of electricity. Conductor insulation can eventually become brittle and damaged from rodents or heat from many years of service. Conductor conduit is a pipe or tube used to enclose insulated electric wires to protect them from damage. Steel conductor conduit, although galvanized, will eventually rust if used in damp conditions. The useful life of conductor insulation and conduit is indeterminate.

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:

- Annually:

- Inspect system for signs of electrical overheating, deterioration, and/or panel corrosion
- Clean and vacuum exterior and interior switchboards

- Five-Year Cycles:
  - Check power meters, lamps, indicators, and transformers for deficiencies
  - Inspect wiring, relays, power supply units, and timers
  - Verify surge protection is intact
- As-needed:
  - Test outlets and ground-fault circuit interrupters (GFCI's) for faulty components
  - Examine the insulation at switchgears for signs of deterioration or cracking
  - Ensure all conductors are clean and dry with no moisture build-up
  - Check and inspect for loose wire connections
  - Clean and clear dust and debris away from system components
  - Check for flickering or dimming light fixtures as these could indicate a short in the wiring, arcing, or an over-extension of the electrical system
  - Conduct thermal image scanning if system experiences numerous or consistent outages
  - Keep an accurate record of all repairs to the electrical system

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 budget to replace the main switchgear, distribution and circuit protection panels. Updates of this Reserve Study will consider possible changes in the scope and times of component replacements based on the conditions, including the need for replacement of the wires.

We recommend the Association conduct thermoscans of the distribution panels and circuit protection panels, and inspections of the transformers for any indications of arcing, burning or overheating on a regular basis, funded through the operating budget. Verification of the integrity of all connection points minimizes the potential for arcing and fires.

Intercom Panels

Line Item: 3.470

Quantity: 61 each at the buildings

History: The age of the intercom panels varies.

Condition: Reported satisfactory without operational deficiencies. We note isolated rust at the control panels.

Intercom panel

Intercom panel – note rust

Useful Life: 15- to 20-years

Preventative Maintenance Notes: We recommend the Association obtain and adhere to the manufacturer's recommended maintenance plan. 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:

- Monthly:
  - Inspect panel for damage and ensure the panel is mounted securely, tighten or replace any loose or damaged fasteners.
  - Inspect panel for proper operation of buttons, displays, microphone and speaker.
- Annually:
  - Check power connections, and if applicable, functionality of battery power supply systems

Priority/Criticality: Per Board discretion

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

Life Safety Systems

Line Item: 3.560

Quantity: The life safety system at Stratford Green includes the following components:

- Audio/visual fixtures
- Control Panels
- Detectors
- Emergency light fixtures
- Exit light fixtures
- Pull stations

- Wiring

History: The age of components reportedly varies.

Conditions: Reported satisfactory without operational deficiencies. We note some of the components appear aged.

Exit signage – note finish deterioration (clubhouse shown)

Pull station (clubhouse shown)

Replaced exit sign

Emergency devices

Control panel (clubhouse shown)

Typical building control panel

Useful Life: Up to 25 years for the devices and control panels

Preventative Maintenance Notes: We recommend the Association obtain and adhere to the manufacturer's recommended maintenance plan. In accordance with *NFPA 72* (National Fire Alarm and Signaling Code) 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 age of the components, operational condition, or changes in technology. We note the following select recommended preventative maintenance activities to maximize the remaining useful life:

- Semi-annually:
  - Inspect and test all components and devices, including, but not limited to, annunciators, detectors, audio/visual fixtures, signal transmitters and magnetic door holders
  - Test backup batteries
- As-needed:
  - Ensure clear line of access to components such as pull stations
  - Ensure detectors are properly positioned and clean of debris

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 assume phased replacement of the life safety systems in lieu of aggregate replacement. Future updates of this Reserve Study will consider the need for changes in scope and timing. Changes in technology or building codes may make a replacement desirable prior to the end of the functional life. Our estimate of future cost considers only that amount necessary to duplicate the same functionality. Local codes or ordinances at the actual time of replacement may require a betterment as compared to the existing system. A betterment could result in a higher, but at this time unknown, cost of replacement.

Pipes

Line Items: 3.600 and 3.605

Quantity: Based on the layout and configuration of the units, we have estimated the quantity of the interior building plumbing. Future updates of this Reserve Study will incorporate additional information if it becomes available.

History:

- Building Heating – Original.
- Domestic Water – Original.
- Sanitary Waste Disposal and Vent – Original.

Condition:

- Building Heating – Reported satisfactory without operational deficiencies
- Domestic Water – Reported satisfactory without operational deficiencies
- Sanitary Waste Disposal and Vent – Reported satisfactory without operational deficiencies

Component Detail Notes:

Building Heating - The building heating pipes at Stratford Green have a useful life of up to and sometimes beyond 80 years.

Domestic Water - The useful life of domestic supply and return pipes is up to and sometimes beyond 70 years.

Sanitary Waste Disposal and Vent- The pipes typically deteriorate from the inside out as a result of sewer gases, condensation and rust.

Valves - The piping systems include various valves. Identification of a typical useful life and remaining useful life for individual valves is difficult. Associations typically replace valves on an as needed basis in our experience.

Pipes, Remaining - We anticipate a useful life of up to and sometimes beyond 100 years for the remaining pipes, which may include gas supply and interior sprinkler pipes, among others. Therefore, we do not foresee the need to budget for replacement of these pipes within the 30-year scope of this study. Future updates of this study will revisit the need to include partial replacement of these pipes.

Preventative Maintenance Notes: The required preventative maintenance may vary in frequency and scope based on the building's age and demands of the piping systems. We note the following select recommended preventative maintenance activities to maximize the remaining useful life:

- Quarterly:

- Inspect all visible piping for corrosion and leaks, including common areas or areas immediately surrounding pipes such as insulation, ceiling tiles or the floor for moisture, water accumulation, mold or mildew

- Annually:
  - Verify system pressure is sufficient (pressurized piping systems)
  - Check accessible valves for proper operation
  - Test backflow prevention devices
  - Inspect and obtain certification for pressure relief valves
  - Test drain line flow rates
  - Mechanically or chemically clean waste lines 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. Our cost for a single riser section assumes replacement of all pipes located within each wall opening, associated branch piping, fittings and minimal interior finishes. However, the cost does not include temporary housing for affected residents, pipes within the units or significant interior finishes.

We recommend the Association budget the following expenditures:

- Building heating - Our estimate provides funds to replace approximately thirty-eight percent (37.5%) of the riser sections during the next 30 years.
- Domestic Water, Waste and Vent - Our estimate provides funds to replace approximately seventy-five percent (75%) during the next 30 years.

An invasive analysis of the piping systems will provide various replacement options. Replacement of the systems as an aggregate event will likely require the use of special assessments or loans to fund the replacements.

Although it is likely that the times of replacement and extent of repair costs may vary from the budgetary allowance, Stratford Green could budget sufficient reserves for the beginning of these pipe replacements and have the opportunity to adjust its future reserves up or down to meet any changes to these budgetary estimates. Updates of this Reserve Study would incorporate changes to budgetary costs through a continued historical analysis of the rate of deterioration and actual pipe replacements to budget sufficient reserves.

We recommend the Association budget for replacement of the following items through the operating budget:

- Replacement of valves on an as-needed basis
- Minor pipe repairs and replacements
- Invasive investigation of the condition of the piping system prior to beginning more aggregate replacements
- Rodding of waste pipe systems

Pumps, Sump

Line Item: 3.700

Quantity: The age of the sump pumps varies.

History: Sump pumps have historically been replaced on an as-needed basis.

Condition: Reported satisfactory at the time of our inspection.

Typical sump pump

Useful Life: Up to 15 years

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 include phased replacement of the sump pumps based on historical practices. Future updates of this Reserve Study will consider the need for changes in scope and timing.

Security System

Line Item: 3.820

Quantity: Stratford Green utilizes the following security system components:

- Cameras
- Multiplexer
- Recorder

History: The age of the security system was unavailable at the time of our inspection.

Condition: Reported satisfactory without operational deficiencies.

Security system camera

Security system camera

Useful Life: 10- to 15-years

Preventative Maintenance Notes: We recommend the Association obtain and adhere to the manufacturer's recommended maintenance plan. 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:

- Monthly:
  - Check cameras for proper focus, fields of view are unobstructed and camera and lenses are clean and dust-free
  - Check recording equipment for proper operation
  - Verify monitors are free from distortion with correct brightness and contrast
- Annually:
  - Check exposed wiring and cables for wear, proper connections and signal transmission
  - Check power connections, and if applicable, functionality of battery power supply systems

Priority/Criticality: Per Board discretion

Expenditure Detail Notes: Expenditure timing and costs are depicted in the ***Reserve Expenditures*** table in Section 3. The Association should anticipate replacement of up to fifty percent (50%) of the security system components per event.

Water Heaters

Line Item: 3.940

Quantity: 34 gas-fired heaters at the buildings and clubhouse.

History: The age of the water heaters varies. The water heaters have been replaced on an as-needed basis.

Condition: Reported satisfactory without operational deficiencies.

Typical water heater

Typical water heater

Useful Life: 15- to 20-years

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:

- Weekly:
  - Inspect for leaking water around boilers
  - Check temperature readings
  - Verify vent is unobstructed
  - Conduct boiler blowdown to minimize corrosion and remove suspended solids in system
  - Clean pilot and burner assemblies
- Monthly:
  - Check water and pressure levels
  - Check controls and switches for proper operating
  - Check and inspect condensate drain
  - Check all gaskets for tight sealing
- Annually:
  - Conduct full inspection of burners and flues
  - Clean and inspect tubes to reduce scaling
  - Inspect any pressure relief valves
  - Inspect electrical terminals and controls

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 estimate of cost includes an allowance for replacement of controls. Future updates of this Reserve Study will consider the need for changes in scope and timing.

Water Meters

Line Item: 3.997

Quantity: 29 meters (one per building)

History: Planned for the 2023 fiscal year.

Useful Life: N/A

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 is based on information provided by the Association.

Property Site Elements

Asphalt Pavement, Repaving

Line Items: 4.020 through 4.045

Quantity: Approximately 28,750 square yards at the access drives and parking areas

History:

- Repaving: The age of the pavement was unavailable at the time of our inspection but is believed to be at least 12 years of age based on conversations with the Association and satellite imagery.
- Repairs: Planned for the 2023 fiscal year and will be funded through an assessment that is separate from reserves.

Condition: Fair to poor overall with periodic cracks, spalls, settlement and alligator cracks evident.

Alligator cracks

Pavement cracks

Asphalt pavement access drive overview – note alligator cracks

Pavement cracks

Pavement cracks

Pavement alligator cracks

Pavement spalls

Asphalt pavement access drive overview – note cracks

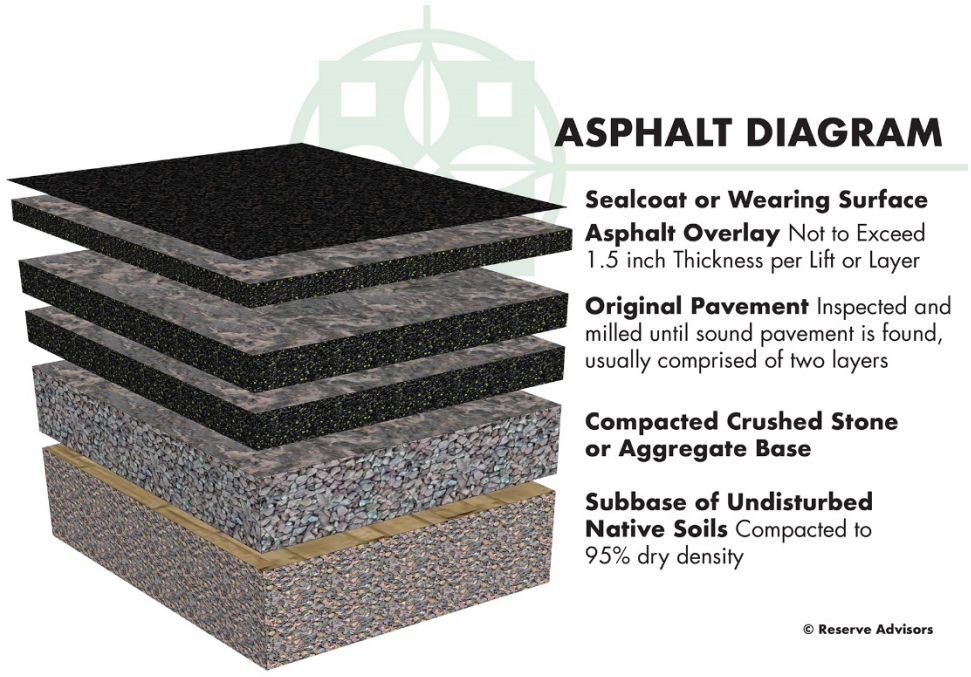
Pavement cracks

Damage and cracks

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

Component Detail Notes: Patch repairs are conducted at areas exhibiting settlement, potholes, or excessive cracking. These conditions typically occur near high traffic areas, catch basins, and pavement edges.

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 Stratford Green:



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 Stratford Green.

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 for repairs subsequent to 2023 includes an allowance for patching of up to two percent (2%) of the pavement. Our cost for milling and overlayment includes area patching of up to thirty percent (30%).

Catch Basins

Line Item: 4.100

Quantity: 15 catch basins[2]

History: Original

Condition: Fair overall with isolated settlement evident.

Catch basin settlement

Catch basin overview

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

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

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

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

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

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

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

Concrete Curbs and Gutters

Line Item: 4.110

Quantity: Approximately 12,200 linear feet throughout the property

Condition: Fair overall with isolated cracks and damage evident.

Concrete curb crack

Concrete curb and gutter crack

Curb settlement and damage

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

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

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

Priority/Criticality: Per Board discretion

Expenditure Detail Notes: Expenditure timing and costs are depicted in the ***Reserve Expenditures*** table in Section 3. We estimate that up to 3,430 linear feet of curbs and gutters, or twenty-eight percent (28.1%) of the total, will require replacement during the next 30 years.

Concrete, Flatwork

Line Item: 4.125

Quantity: Approximately 45,400 square feet at the sidewalks, patios, stoops and dumpster pads

Condition: Fair overall with isolated cracks, settlement and spalled concrete evident. We also note isolated patios with carpet coverings. The carpet coverings are prone to retain water and increase the rate of deterioration of the underlying components. Therefore, we do not recommend the use of carpet on patio surfaces.

Concrete sidewalk cracks

Carpet covering patio

Sidewalk cracks

Patio crack

Sidewalk crack

Trash pad crack

Sidewalk crack

Trip hazard

Dumpster pad overview

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 22,700 square feet of concrete flatwork, or fifty percent (50%) of the total, will require replacement during the next 30 years.

Light Poles and Fixtures

Line Item: 4.560

Quantity: The Association maintains the following quantities of light poles and fixtures:

- 166 poles with light fixtures
- *Bollards:* 18 fixtures

History: The age of the light poles and fixtures was unavailable at the time of our inspection. We note isolated replaced fixtures.

Condition: Fair overall with isolated finish deterioration, loose fixtures and replaced fixtures evident.

Light pole and fixture

Loose fixture

Finish deterioration

Replaced fixture

Bollard light fixture – note finish deterioration

Bollard light 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 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.

Pipes, Subsurface Utilities

Line Item: 4.650

Quantity: The Association maintains the subsurface utilities throughout the property.

History and Condition: Reported satisfactory with sewage repairs conducted in 2022.

Useful Life: Up to and likely beyond 85 years

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

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

- As-needed:
    - Video inspect waste pipes for breaks and damaged piping
    - Monitor for water and gas leaks through pressure losses and present odors
    - Partially replace damaged section of pipes

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

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

Playground Equipment

Line Item: 4.660

Quantity: Playground equipment includes the following elements:

- Playsets and swings
- Timber border
- Wood mulch safety surface

History: Replaced in 2017.

Condition: Good to fair overall with isolated rust at the swings.

Playground equipment overview

Wood mulch

Playground equipment overview

Swings – note finish deterioration

Useful Life: 15- to 20-years

Component Detail Notes: Safety is the major purpose for maintaining playground equipment. We recommend an annual inspection of the playground equipment to identify and repair as normal maintenance loose connections and fasteners or damaged

elements. We suggest the Association learn more about the specific requirements of playground equipment at PlaygroundSafety.org. We recommend the use of a specialist for the design or replacement of the playground equipment environment.

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

- Annually:
    - Inspect and repair loose connections and fasteners or damaged elements
    - Inspect for safety hazards and adequate coverage of ground surface cover

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 include an allowance in the unit cost for replacement of the safety surface and border.

Pond, Sediment Removal and Erosion Control

Line Items: 4.710 and 4.730

Quantity: Approximately 7,200 square yards of water surface area and approximately 1,180 linear feet of shorelines

Condition: Fair overall with isolated shoreline erosion evident.

Pond overview

Rock shoreline

Pond shoreline

Pond shoreline – note slight erosion

Useful Life: Based on the visual condition, construction, adjacent deciduous trees and visibly apparent erosion, 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 pond along 355 linear feet, or approximately thirty percent (30%), of the 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. 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 Stratford Green 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.

Retaining Walls, Masonry

Line Item: 4.745

Quantity: Approximately 390 square feet of masonry retaining walls.

History: The age of the masonry retaining walls was unavailable at the time of our inspection but are likely not original.

Condition: Good to fair overall with periodic organic growth.

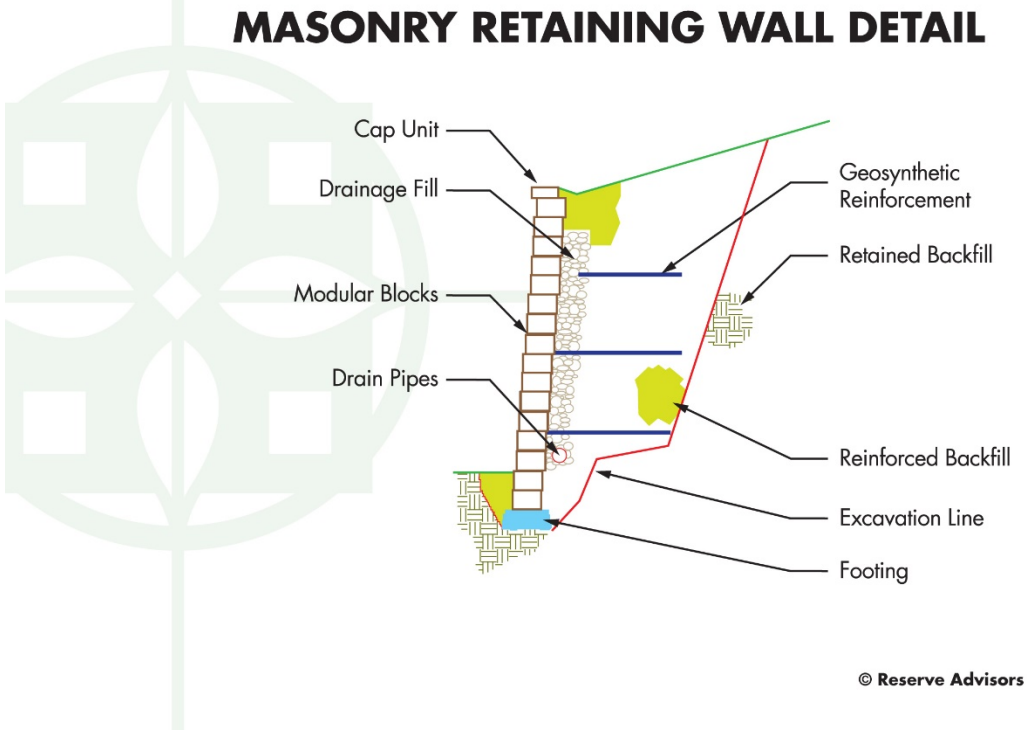
Masonry retaining wall

Retaining wall – note organic growth

Masonry retaining wall – note organic growth

Useful Life: Up to 35 years

Component Detail Notes: Properly constructed interlocking masonry retaining walls utilize geosynthetic reinforcement and a drainage system to stabilize the wall and prevent the buildup of hydrostatic pressure behind the wall. Water stains may indicate inadequate drainage or blocked drainage from behind the wall. The following schematic depicts the typical components of a retaining wall system although it may not reflect the actual configuration at Stratford Green:



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

- Annually:
  - Inspect and repair leaning sections or damaged areas
  - Water stains which may indicate possible blocked drainage should be investigated further
  - Inspect and repair erosion at the wall base and backside

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

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

Retaining Walls, Timber

Line Item: 4.760

Quantity: Approximately 520 square feet

History: The age of the retaining walls was unavailable at the time of our inspection.

Condition: Good to fair overall with isolated bulges, organic growth and wall rot evident.

Slight wall bulge

Organic growth

Retaining wall wood rot

Useful Life: 15- to 20-years for timber retaining walls

Component Detail Notes: We advise Stratford Green replace with a modular, interlocking dry-set masonry retaining wall system. The cost of dry-set masonry retaining walls is similar to the cost of timber walls. However, dry-set masonry retaining walls offer a longer useful life of up to 35 years and lower total maintenance costs.

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

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

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

Expenditure Detail Notes: Expenditure timing and costs are depicted in the ***Reserve Expenditures*** table in Section 3. Our cost assumes replacement with masonry in lieu of timber. Updates of this Reserve Study will consider the need for changes in material.

Site Furniture

Line Item: 4.820

Quantity: The Association maintains various site furniture throughout the property.

History: The age of the site furniture was unavailable at the time of our inspection.

Condition: Poor overall with periodic rust and damage evident. We note the site furniture appears aged.

Picnic table – note deterioration

Typical wood bench

Picnic table – note damage and rust

Bench rust and damage

Useful Life: 15- to 25-years

Priority/Criticality: Per Board discretion

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

Vehicles

Line Items: 4.951 and 4.952

Quantity: The Association maintains one maintenance truck and one utility vehicle.

History: The pickup truck is original to 2005 and the age of the utility vehicle was unavailable at the time of our inspection.

Condition: The vehicles are visually in fair condition with isolated rust evident at the maintenance truck. Representatives of the maintenance staff inform us the vehicles are in satisfactory operational condition.

Maintenance truck overview

Rust at wheel-well

Utility vehicle overview

Useful Life: 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.

Pool Elements

Concrete Deck

Line Item: 6.200

Quantity: Approximately 11,400 square feet of concrete pool deck

History: Original

Condition: Fair overall with isolated cracks and settlement evident.

Pool deck cracks

Pool deck crack

Useful Life: The useful life of a concrete pool deck is up to 60 years or more with timely repairs. We recommend the Association conduct inspections, partial replacements and repairs to the deck every 8- to 12-years.

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

- Semi-annually:
    - Inspect and repair large cracks, trip hazards, and possible safety hazards
    - Inspect and repair pool coping for cracks, settlement, heaves or sealant deterioration
    - Repair concrete spalling
    - Schedule periodic pressure cleanings 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. We recommend the Association budget for the following per event:

- Selective cut out and replacements of up to ten percent (10%) of concrete
- Crack repairs as needed
- Mortar joint repairs
- Caulk replacement

Fence, Chain Link

Line Item: 6.400

Quantity: Approximately 680 linear feet

History: Original

Condition: Poor overall with excessive leaning sections, post finish deterioration and warped webbing evident.

Fence warped webbing

Post finish deterioration

Fence warped webbing

Useful Life: Up to 25 years

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

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

Priority/Criticality: Not recommended to defer

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

Pool Finishes, Plaster

Line Item: 6.800

Quantity: 1,700 square feet of plaster based on the horizontal surface area

History:

- Plaster finish: The age of the pool finishes was unavailable at the time of our inspection.

Condition: Fair overall as reported to us by the Association. We were unable to fully inspect the pool finishes due to the pool covers. We assume the finish is plaster based on conversations with Management. Updates of this Reserve Study will consider the need for changes in material.

Pool overview

Pool overview

Kiddy pool area overview

Useful Life: 8- to 12-years for the plaster

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

- Semi-annually:
    - Inspect and patch areas of significant plaster delamination, coping damage and structure cracks
    - Inspect main drain connection and anti-entrapment covers, pressure test circulation piping and valves
    - Test handrails and safety features for proper operation

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. Removal and replacement of the finish provides the opportunity to inspect the pool structures and to allow for partial repairs of the underlying concrete surfaces as needed. To maintain the integrity of the pool structures, we recommend the Association budget for the following:

- Removal and replacement of the plaster finishes
- Partial replacements of the scuppers and coping as needed
- Replacement of tiles as needed
- Replacement of joint sealants as needed
- Concrete structure repairs as needed

Shade Structure

Line Item: 6.870

Quantity: One wooden structure with a metal roof at the pool

History: Installed in 2011.

Condition: Fair overall with isolated bowed supposed evident.

Shade structure overview

Underside overview

Bowed shade support

Useful Life: Up to 25 years

Priority/Criticality: Per Board discretion

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

Structures and Deck

Line Item: 6.900

Quantity: 1,700 square feet of horizontal surface area

History: Original

Conditions: Visually appear in fair condition and the Association does not report any issues or concerns. The concrete floors and walls have a plaster finish based on conversations with Management. This finish makes it difficult to thoroughly inspect the concrete structures during a noninvasive visual inspection.

Useful Life: Up to 60 years

Component Detail Notes: The need to replace a pool structure depends on the condition of the concrete structure, the condition of the embedded or concealed water circulation piping, possible long term uneven settlement of the structure, and the increasing cost of repair and maintenance. Deterioration of any one of these component systems could result in complete replacement of the pool. For example, deferral of a deteriorated piping system could result in settlement and cracks in the pool structure. This mode of failure is more common as the system ages and deterioration of the piping system goes undetected. For reserve budgeting purposes, we recommend Stratford Green plan to replace the following components:

- Concrete deck
- Pool structures
- Subsurface piping

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. Future updates of this Reserve Study will consider the need for changes in scope and timing.

2023 Reserve Study (Remaining Payment)

Line Item: Last

Component Detail Notes: Stratford Green will expend $3,475 in reserve expenditures in the 2023 fiscal year for the remaining payment of this Reserve Study.

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

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 in two- to 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.

Stratford Green can fund capital repairs and replacements in any combination of the following:

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

We do not advocate special assessments or loans unless near term circumstances dictate otherwise. Although loans provide a gradual method of funding a replacement, the costs are higher than if the Association were to accumulate reserves ahead of the actual replacement. Interest earnings on reserves also accumulate in this process of saving or reserving for future replacements, thereby defraying the amount of gradual reserve collections. We advocate the third method of *Level Monthly Reserve Assessments* with relatively minor annual adjustments. The method ensures that Unit 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[1] 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[2] 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 Willowbrook, Illinois at an annual inflation rate[3]. Isolated or regional markets of greater

[1] Identified in the APRA "Standards - Terms and Definitions" and the CAI "Terms and Definitions".
[2] See Credentials for additional information on our use of published sources of cost data.
[3] Derived from Marshall & Swift, historical costs and the Bureau of Labor Statistics.

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

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

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

6. CREDENTIALS

HISTORY AND DEPTH OF SERVICE

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

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

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

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

TOTAL STAFF INVOLVEMENT

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

OUR GOAL

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

VAST EXPERIENCE WITH A VARIETY OF BUILDINGS

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

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

OLD TO NEW

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

REID M. NELSON, RS
Engineer

CURRENT CLIENT SERVICES

Reid M. Nelson is a Mechanical Engineer and Advisor for ***Reserve Advisors, LLC.*** Mr. Nelson is responsible for the inspection and analysis of the condition of clients' property, recommending engineering solutions to prolong the lives of the components, forecasting capital expenditures for the repair and/or replacement of the property components, and preparation of technical reports on assignments. He is responsible for conducting Life Cycle Cost Analysis and Capital Replacement Forecast services and the preparation of Reserve Study Reports for midrise buildings, condominiums, townhomes and homeowner associations.

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

Adam's Place Townhome Condominium Association is a 43-unit community located in downtown Chicago, Illinois. The buildings are adorned with brick, vinyl, and EIFS. The Association maintains the flat roofs and steel catwalks that accent the rear elevations of these three-story buildings.

Edgewater Lofts Owners' Association is a community constructed in three phases on the shores of Lake Michigan in Traverse City, Michigan. Fiber cement siding and composite balconies highlight the front and rear elevations. Residents enjoy a community area that features a fire pit.

Ghent on the Square Condominium Association is a community in Norfolk, Virginia built in 1989. The three-story brick buildings feature concrete balconies accented with metal staircases. Residents enjoy various site elements such a clubhouse, pool, tennis court, and a playground.

Hillcrest Community Association, Inc. is a homeowners association located in Prospect, Kentucky consisting of 488 homes. The sprawling property features a pool, playground, and tennis courts near the clubhouse to provide residents various amenities for their leisure.

Park Place of Geneva Townhome Owners Association, Inc. is a small community of six buildings and 30 units. The three-story buildings are adorned with brick, fiber cement siding and balconies with waterproof membranes to create a variety of maintenance and replacement needs. Residents enjoy a central courtyard lined with brick pavers and a fire pit.

Weston Place Homeowners Association, Inc. is located in Carmel, Indiana. The Association maintains three ponds, several fences, and brick entrance monuments. The property includes multiple sport courts and a pool for the community to enjoy.

PRIOR RELEVANT EXPERIENCE

Before joining Reserve Advisors, Mr. Nelson attended Montana Technological University where he attained his Bachelor of Science degree in Mechanical Engineering with Minors in Business Administration and Mathematics.

EDUCATION

Montana Technological University– B.S. Mechanical Engineering

PROFESSIONAL AFFILIATIONS / DESIGNATIONS

Reserve Specialist (RS) - Community Associations 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

NICOLE L. LOWERY, PRA, RS
Associate Director of Quality Assurance

CURRENT CLIENT SERVICES

Nicole L. Lowery, a Civil Engineer, is an Associate Director of Quality Assurance for Reserve Advisors. Ms. Lowery is responsible for the management, review and quality assurance of reserve studies. In this role, she assumes the responsibility of stringent report review analysis to assure report accuracy and the best solution for Reserve Advisors' clients.

Ms. Lowery has been involved with hundreds of Reserve Study assignments. The following is a partial list of clients served by Nicole Lowery demonstrating her breadth of experiential knowledge of community associations in construction and related buildings systems.

Amelia Surf & Racquet Club This oceanfront condominium community comprises 156 units in three mid rise buildings. This Fernandina Beach, Florida development contains amenities such as clay tennis courts, two pools and boardwalks.

Ten Museum Park This boutique, luxury 50-story high rise building in downtown Miami, Florida consists of 200 condominium units. The amenities comprise six pools including resistance and plunge pools, a full-service spa and a state-of-the-art fitness center. The property also contains a multi-level parking garage.

3 Chisolm Street Homeowners Association This historic Charleston, South Carolina community was constructed in 1929 and 1960 and comprises brick and stucco construction with asphalt shingle and modified bitumen roofs. The unique buildings were originally the Murray Vocational School. The buildings were transformed in 2002 to 27 high-end condominiums. The property includes a courtyard and covered parking garage.

Lakes of Pine Run Condominium Association This condominium community comprises 112 units in 41 buildings of stucco construction with asphalt shingle roofs. Located in Ormond Beach, Florida, it has a domestic water treatment plant and wastewater treatment plant for the residents of the property.

Rivertowne on the Wando Homeowners Association This exclusive river front community is located on the Wando River in Mount Pleasant, South Carolina. This unique Association includes several private docks along the Wando River, a pool and tennis courts for use by its residents.

Biltmore Estates Homeowners Association This private gated community is located in Miramar, Florida, just northwest of Miami, Florida and consists of 128 single family homes. The lake front property maintains a pool, a pool house and private streets.

Bellavista at Miromar Lakes Condominium Association Located in the residential waterfront resort community of Miromar Lakes Beach & Golf Club in Fort Myers, Florida, this property comprises 60 units in 15 buildings. Amenities include a clubhouse and a pool.

PRIOR RELEVANT EXPERIENCE

Before joining Reserve Advisors, Ms. Lowery was a project manager with Kipcon in New Brunswick, New Jersey and the Washington, D.C. Metro area for eight years, where she was responsible for preparing reserve studies and transition studies for community associations. Ms. Lowery successfully completed the bachelors program in Civil Engineering from West Virginia University in Morgantown, West Virginia.

EDUCATION

West Virginia University - B.S. Civil Engineering

PROFESSIONAL AFFILIATIONS / DESIGNATIONS

Reserve Specialist (RS) - Community Associations Institute
Professional Reserves Analyst (PRA) - Association of Professional Reserve Analysts

RESOURCES

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

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

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

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

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

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

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

7. DEFINITIONS

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

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

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

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

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

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

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

Long-Lived Property Component - Property component of Stratford Green 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) Stratford Green 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 property.

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. The report is 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, and/or occupancy.

RA is not responsible for conditions that have changed between the time of inspection and the issuance of the Report. 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. You agree to indemnify and hold RA harmless against and from any and all losses, claims, actions, damages, expenses or liabilities, including reasonable attorneys' fees, to which we may become subject in connection with this engagement, because of any false, misleading or incomplete information which we have relied upon 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. Your obligation for indemnification and reimbursement shall extend to any director, officer, employee, affiliate, or agent of RA. Liability of RA and its employees, affiliates, and agents for errors and omissions, if any, in this work is limited to the amount of its compensation for the work performed in this engagement.

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. 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 completes the services in accordance with the Proposal. The Report represents a valid opinion of RA's findings and recommendations 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 issuant 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 on-site visual 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. 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. 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 - The retainer payment is due upon authorization and prior to inspection. The balance is due net 30 days from the report shipment date. 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.

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.