

# Whitehall Mill Condominium Association, Inc.

Athens, GA • September 27, 2022

FULL RESERVE STUDY





Whitehall Mill Condominium Association, Inc.  
Athens, Georgia

Dear Board of Directors of Whitehall Mill Condominium Association, Inc.:

At the direction of the Board that recognizes the need for proper reserve planning, we have conducted a *Full Reserve Study* of Whitehall Mill Condominium Association, Inc. in Athens, Georgia and submit our findings in this report. The effective date of this study is the date of our visual, noninvasive inspection, September 27, 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 Whitehall Mill Condominium Association, Inc. plan for a successful future.

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

Respectfully submitted on October 19, 2022 by

*Reserve Advisors, LLC*

Visual Inspection and Report by: Brandon L. Bloomer, RS<sup>1</sup>

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



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

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





## Table of Contents

<b>1. RESERVE STUDY EXECUTIVE SUMMARY .....</b>	<b>1.1</b>
<b>2. RESERVE STUDY REPORT .....</b>	<b>2.1</b>
<b>3. RESERVE EXPENDITURES and FUNDING PLAN.....</b>	<b>3.1</b>
<b>4. RESERVE COMPONENT DETAIL.....</b>	<b>4.1</b>
Exterior Building Elements.....	4.1
Balconies, Rooftop, Waterproofing System .....	4.2
Gutters and Downspouts .....	4.3
Historic Equipment and House, Inspections and Preservation .....	4.4
Roofs, Asphalt Shingles .....	4.6
Roof, Modified Bitumen, Historic Equipment House .....	4.7
Roofs, Thermoplastic.....	4.10
Walls, Masonry .....	4.13
Windows and Doors, Frames .....	4.18
Property Site Elements .....	4.20
Asphalt Pavement, Repaving .....	4.20
Concrete Sidewalks, Stairs and Pedestrian Bridge .....	4.23
Mailbox Stations .....	4.25
Perimeter Walls, Concrete.....	4.25
Retaining Walls, Masonry and Concrete .....	4.27
Retaining Walls, Stone (Millrace Wall).....	4.28
Stairs and Deck, Building 5 Access .....	4.29
Reserve Study Update.....	4.31
<b>5. METHODOLOGY .....</b>	<b>5.1</b>
<b>6. CREDENTIALS .....</b>	<b>6.1</b>
<b>7. DEFINITIONS .....</b>	<b>7.1</b>
<b>8. PROFESSIONAL SERVICE CONDITIONS .....</b>	<b>8.1</b>





# 1. RESERVE STUDY EXECUTIVE SUMMARY

**Client:** Whitehall Mill Condominium Association, Inc. (Whitehall Mill)

**Location:** Athens, Georgia

**Reference:** 221129

**Property Basics:** Whitehall Mill Condominium Association, Inc. is a condominium style development which consists of 54 units in seven buildings. The buildings vary in age, with the oldest portions of buildings predating the 1890's. The buildings were converted to condominiums in the late 1990's.

**Reserve Components Identified:** 23 Reserve Components.

**Inspection Date:** September 27, 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 these threshold funding years in 2023 and 2024 due to an accumulation of elements including near term masonry inspections and capital repairs and roof replacements, followed by future masonry inspections and capital repairs.

In addition, the Reserve Funding Plan recommends 2052 year end accumulated reserves of approximately \$585,500. We judge this amount of accumulated reserves in 2052 necessary to fund the likely replacement of the masonry inspections and capital repairs after 2052. Future replacement costs beyond the next 30 years for the replacement of the masonry inspections and capital repairs 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 2052 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
- 0.7% 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:**

- Projected balance of \$197,308 as of December 31, 2022
- 2022 budgeted Reserve Contributions of \$50,000
- A potential deficit in reserves might occur by 2023 based upon continuation of the most recent annual reserve contribution of \$50,000 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:

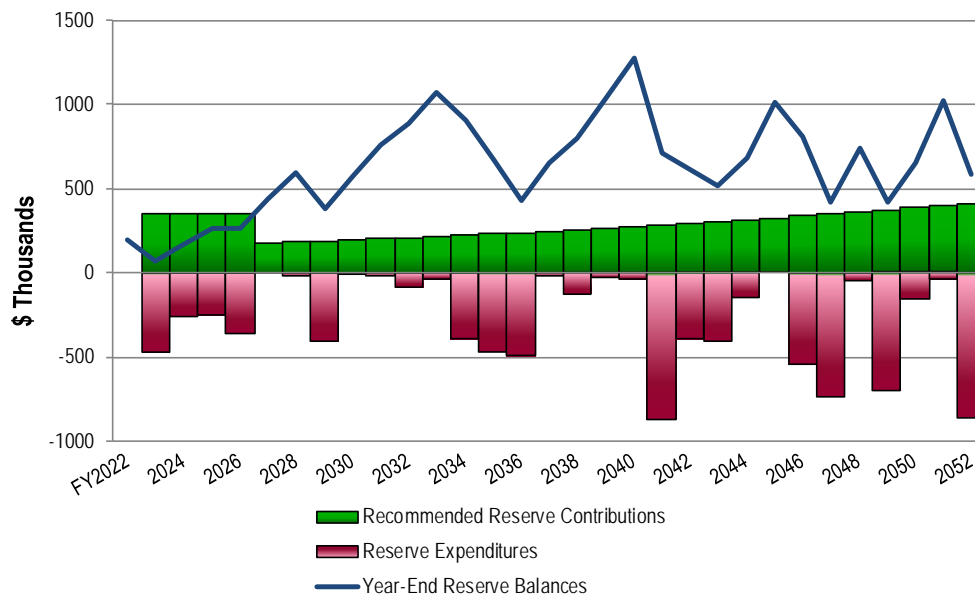
- Masonry inspections and capital repairs and concrete restoration
- Replacement of the modified bitumen roof at the historic equipment house
- TPO and asphalt shingle roof replacements at Buildings 1, 2, and 3 and the shed
- Inspections and preservation projects at the historical equipment house
- Repaving of the asphalt pavement

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

- Increase to \$350,000 in 2023
- Stable contributions of \$350,000 from 2024 through 2026
- Decrease to \$175,000 by 2027 due to fully funding for replacement of near term roof replacements, masonry inspections and capital repairs, and repaving of the streets and parking areas
- Inflationary increases through 2052, the limit of this study's Cash Flow Analysis
- 2023 Reserve Contribution of \$350,000 is equivalent to an average monthly contribution of \$540.12 per homeowner.

### Whitehall Mill Recommended Reserve Funding Table and Graph

Year	Reserve Contributions (\$)	Reserve Balances (\$)	Year	Reserve Contributions (\$)	Reserve Balances (\$)	Year	Reserve Contributions (\$)	Reserve Balances (\$)
2023	350,000	71,010	2033	215,100	1,074,544	2043	303,400	512,628
2024	350,000	163,956	2034	222,600	903,913	2044	314,000	682,764
2025	350,000	263,563	2035	230,400	673,380	2045	325,000	1,013,681
2026	350,000	258,735	2036	238,500	424,598	2046	336,400	808,071
2027	175,000	436,159	2037	246,800	656,320	2047	348,200	421,478
2028	181,100	598,304	2038	255,400	793,517	2048	360,400	741,037
2029	187,400	384,050	2039	264,300	1,038,183	2049	373,000	419,245
2030	194,000	576,250	2040	273,600	1,278,254	2050	386,100	650,425
2031	200,800	761,955	2041	283,200	707,966	2051	399,600	1,017,878
2032	207,800	890,106	2042	293,100	611,899	2052	413,600	585,489





## 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

**Whitehall Mill Condominium Association, Inc.**

**Athens, Georgia**

and submit our findings in this report. The effective date of this study is the date of our visual, noninvasive inspection, September 27, 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 Homeowners fund certain replacements and assists in preparation of the annual budget. We derive these segregated classes of property from our review of the information provided by the Association and through conversations with Management and the Board. These classes of property include:

- Reserve Components
- Long-Lived Property Elements
- Operating Budget Funded Repairs and Replacements
- Property Maintained by Homeowners
- 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:

- Whitehall Mill 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:

- Electrical Systems, Common (Dates to Conversion)
- Foundations
- Pipes, Interior Building, Domestic Water, Sanitary Waste, Vent, Common (Dates to Conversion)
- 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 \$4,000 (These relatively minor expenditures have a limited effect on the recommended Reserve Contributions.)
- Balconies, Rooftops, Waterproofing Systems, Interim Capital Repairs
- Catch Basins Inspections and Capital Repairs
- Fence, Chain Link, Building 4 Parking Area
- Fence, Split Rail, Parking Area Along White Circle
- Fence, Wood, Building 5 Parking Area
- French Drains, Inspections, Cleanouts and Capital Repairs
- Landscape
- Landscape Steps, Timber with Gravel, Repairs and Partial Replacements
- Light Poles and Fixtures
- Paint Finishes, Hallway, Building 5
- Paint Finishes, Touch Up
- Railings, Sidewalks and Stairs
- Signage, Entrance Monument
- Site Furniture
- Other Repairs normally funded through the Operating Budget





**French drain**



**Historic equipment**



**Landscape steps**

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

- Awnings and Unit Entrance Canopies
- Balconies (Not Over Living Space)
- Electrical Systems (Including Circuit Protection Panels)
- Exterior Light Fixtures
- Heating, Ventilating and Air Conditioning (HVAC) Units
- Interiors
- Pergolas
- Pipes (Serving one Unit)
- Railings (At Units)
- Skylights
- Staircases
- Unit Catwalks, Concrete and Steel Frame (We note significant deterioration which may pose safety concerns)



- Windows and Doors (Windows is glass only, the Association is responsible for the frames; due to the historic nature of the buildings, we do not recommend total replacement)



**Catwalk at unit 31 (Note exposed concrete reinforcement at column)**



**Catwalk unit 31 (Note exposed concrete reinforcement)**



**Unit owner steps and balconies**



**Unit owner balconies**

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

- Barn and Associated Components (Barn Lease)
- Retaining Wall, Timber, Near Building 5 (Neighboring Property)
- Subsurface Utility Pipes (Utility Company and Municipality)

### 3. RESERVE EXPENDITURES and FUNDING PLAN

The tables following this introduction present:

#### **Reserve Expenditures**

- Line item numbers
- Total quantities
- Quantities replaced per phase (in a single year)
- Reserve component inventory
- Estimated first year of event (i.e., replacement, application, etc.)
- Life analysis showing
  - useful life
  - remaining useful life
- 2022 local cost of replacement
  - Per unit
  - Per phase
  - Replacement of total quantity
- Percentage of future expenditures anticipated during the next 30 years
- Schedule of estimated future costs for each reserve component including inflation

#### **Reserve Funding Plan**

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

#### **Five-Year Outlook**

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

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

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



RESERVE EXPENDITURES

Whitehall Mill  
Condominium Association, Inc.  
Athens, Georgia

Explanatory Notes:  
1) 3.5% is the estimated Inflation Rate for estimating Future Replacement Costs.  
2) FY2022 is Fiscal Year beginning January 1, 2022 and ending December 31, 2022.

Line Item	Total Quantity	Per Phase Quantity	Units	Reserve Component Inventory	Estimated 1st Year of Event	Life Analysis, Years		Costs, \$			Percentage of Future Expenditures	RUL = 0 FY2022	1 2023	2 2024	3 2025	4 2026	5 2027	6 2028	7 2029	8 2030	9 2031	10 2032	11 2033	12 2034	13 2035	14 2036	15 2037
						Useful	Remaining	Unit (2022)	Per Phase (2022)	Total (2022)																	
Exterior Building Elements																											
1.129	850	850	Square Feet	Balconies, Rooftops, Waterproofing System, Replacement	2025	to 30	3	52.00	44,200	44,200	0.6%				49,005												
1.240	2,300	460	Linear Feet	Gutters and Downspouts, Aluminum and Galvanized Steel, Phased	2024	15 to 20	2 to 10	8.50	3,910	19,550	0.8%		4,188		4,487		4,806		5,149		5,515						
1.275	1	1	Allowance	Historic Equipment House, Inspections and Preservation Projects	2023	6 to 8	1	12,000.00	12,000	12,000	0.9%		12,420							16,355							
1.276	1	1	Allowance	Historic Equipment, Dampers, Inspections and Preservation Projects	2023	6 to 8	1	2,500.00	2,500	2,500	0.2%		2,588							3,407							
1.280	22	22	Squares	Roofs, Asphalt Shingles, Building 3 and Shed	2024	15 to 20	2	500.00	11,000	11,000	0.4%			11,783													
1.500	980	980	Square Feet	Roof, Modified Bitumen, Historic Equipment House, Replacement	2023	15 to 20	1	54.00	52,920	52,920	1.9%		54,772														
1.530	22,180	11,090	Square Feet	Roofs, Thermoplastic, Building 1, Phased	2024	15 to 20	2 to 3	16.50	182,985	365,970	13.6%			196,018	202,879												
1.531	5,160	5,160	Square Feet	Roofs, Thermoplastic, Building 2	2023	15 to 20	1	16.50	85,140	85,140	3.0%		88,120														
1.532	13,240	13,240	Square Feet	Roofs, Thermoplastic, Building 4	2034	15 to 20	12	20.00	264,800	264,800	12.8%												400,131				
1.533	15,170	15,170	Square Feet	Roofs, Thermoplastic, Building 5	2036	15 to 20	14	20.00	303,400	303,400	16.0%														491,112		
1.819	700	700	Square Feet	Walls, Concrete Restoration and Inspections (Building 1)	2023	to 35	1	42.00	29,400	29,400	0.4%		30,429														
1.820	52,800	52,800	Square Feet	Walls, Masonry, Inspections and Repairs	2023	6 to 8	1	4.80	253,440	253,440	24.7%		262,310						322,446						396,369		
1.980	12,800	12,800	Square Feet	Windows and Doors, Frames, Paint Finishes, Inspections and Capital Repairs	2029	6 to 8	7	3.50	44,800	44,800	3.8%							56,998							70,065		
Property Site Elements																											
4.020	11,250	11,250	Square Yards	Asphalt Pavement, Patch Repairs	2023	3 to 5	1	1.00	11,250	11,250	1.3%		11,644					14,313				16,425				18,848	
4.040	11,250	11,250	Square Yards	Asphalt Pavement, Mill and Overlay, Streets	2026	15 to 20	4	21.00	236,250	236,250	9.7%					271,102											
4.139	1	1	Allowance	Concrete Pedestrian Bridge, Replacement	2024	to 65	2	30,000.00	30,000	30,000	0.4%			32,137													
4.140	3,200	535	Square Feet	Concrete Sidewalks and Stairs, Partial	2023	to 65	1 to 1	27.00	14,445	86,400	1.7%		14,951					17,757				21,089					
4.600	5	5	Each	Mailbox Stations	2026	to 25	4	2,800.00	14,000	14,000	0.6%					16,065											
4.640	890	890	Linear Feet	Perimeter Walls, Concrete, Inspections and Capital Repairs	2029	10 to 15	7	10.00	8,900	8,900	0.4%							11,323									
4.736	2,060	2,060	Square Feet	Retaining Walls, Masonry and Concrete, Inspections, Capital Repairs and Partial Replacements	2026	to 10	4	24.00	49,440	49,440	5.3%					56,734					69,740						
4.740	400	400	Linear Feet	Retaining Walls, Stone (Millrace Wall), Inspections and Capital Repairs	2026	6 to 8	4	18.00	7,200	7,200	0.8%					8,262					10,156						
4.801	350	350	Square Feet	Stairs and Deck, Building 5 Access, Deck Boards and Interim Repairs	2024	12 to 18	2	22.00	7,700	7,700	0.1%			8,248													
4.802	350	350	Square Feet	Stairs and Deck, Building 5 Access, Replacement	2040	to 35	18	64.00	22,400	22,400	0.5%																
		1	Allowance	Reserve Study Update with Site Visit	2024	2	2	5,500.00	5,500	5,500	0.1%			5,500													
Anticipated Expenditures, By Year (\$8,374,727 over 30 years)												0	477,234	257,874	251,884	356,650	0	22,563	405,080	5,149	19,762	85,411	37,514	400,131	466,434	491,112	18,848



RESERVE EXPENDITURES

Whitehall Mill  
Condominium Association, Inc.  
Athens, Georgia

Line Item	Total Quantity	Per Phase Quantity	Units	Reserve Component Inventory	Estimated 1st Year of Event	Life Analysis, Years		Costs, \$			Percentage of Future Expenditures	16 2038	17 2039	18 2040	19 2041	20 2042	21 2043	22 2044	23 2045	24 2046	25 2047	26 2048	27 2049	28 2050	29 2051	30 2052	
						Useful	Remaining	Unit (2022)	Per Phase (2022)	Total (2022)																	
Exterior Building Elements																											
1.129	850	850	Square Feet	Balconies, Rooftops, Waterproofing System, Replacement	2025	to 30	3	52.00	44,200	44,200	0.6%																
1.240	2,300	460	Linear Feet	Gutters and Downspouts, Aluminum and Galvanized Steel, Phased	2024	15 to 20	2 to 10	8.50	3,910	19,550	0.8%					7,780		8,334		8,928		9,564		10,245			
1.275	1	1	Allowance	Historic Equipment House, Inspections and Preservation Projects	2023	6 to 8	1	12,000.00	12,000	12,000	0.9%		21,536								28,359						
1.276	1	1	Allowance	Historic Equipment, Dampers, Inspections and Preservation Projects	2023	6 to 8	1	2,500.00	2,500	2,500	0.2%		4,487								5,908						
1.280	22	22	Squares	Roofs, Asphalt Shingles, Building 3 and Shed	2024	15 to 20	2	500.00	11,000	11,000	0.4%					21,888											
1.500	980	980	Square Feet	Roof, Modified Bitumen, Historic Equipment House, Replacement	2023	15 to 20	1	54.00	52,920	52,920	1.9%				101,739												
1.530	22,180	11,090	Square Feet	Roofs, Thermoplastic, Building 1, Phased	2024	15 to 20	2 to 3	16.50	182,985	365,970	13.6%					364,102	376,845										
1.531	5,160	5,160	Square Feet	Roofs, Thermoplastic, Building 2	2023	15 to 20	1	16.50	85,140	85,140	3.0%				163,682												
1.532	13,240	13,240	Square Feet	Roofs, Thermoplastic, Building 4	2034	15 to 20	12	20.00	264,800	264,800	12.8%												670,359				
1.533	15,170	15,170	Square Feet	Roofs, Thermoplastic, Building 5	2036	15 to 20	14	20.00	303,400	303,400	16.0%															851,581	
1.819	700	700	Square Feet	Walls, Concrete Restoration and Inspections (Building 1)	2023	to 35	1	42.00	29,400	29,400	0.4%																
1.820	52,800	52,800	Square Feet	Walls, Masonry, Inspections and Repairs	2023	6 to 8	1	4.80	253,440	253,440	24.7%				487,239						598,941						
1.980	12,800	12,800	Square Feet	Windows and Doors, Frames, Paint Finishes, Inspections and Capital Repairs	2029	6 to 8	7	3.50	44,800	44,800	3.8%				86,128						105,873						
Property Site Elements																											
4.020	11,250	11,250	Square Yards	Asphalt Pavement, Patch Repairs	2023	3 to 5	1	1.00	11,250	11,250	1.3%				21,628								28,480				
4.040	11,250	11,250	Square Yards	Asphalt Pavement, Mill and Overlay, Streets	2026	15 to 20	4	21.00	236,250	236,250	9.7%									539,436							
4.139	1	1	Allowance	Concrete Pedestrian Bridge, Replacement	2024	to 65	2	30,000.00	30,000	30,000	0.4%																
4.140	3,200	535	Square Feet	Concrete Sidewalks and Stairs, Partial	2023	to 65	1 to 1	27.00	14,445	86,400	1.7%	25,047					29,748					35,332					
4.600	5	5	Each	Mailbox Stations	2026	to 25	4	2,800.00	14,000	14,000	0.6%														37,966		
4.640	890	890	Linear Feet	Perimeter Walls, Concrete, Inspections and Capital Repairs	2029	10 to 15	7	10.00	8,900	8,900	0.4%							18,970									
4.736	2,060	2,060	Square Feet	Retaining Walls, Masonry and Concrete, Inspections, Capital Repairs and Partial Replacements	2026	to 10	4	24.00	49,440	49,440	5.3%	85,728						105,382						129,541			
4.740	400	400	Linear Feet	Retaining Walls, Stone (Millrace Wall), Inspections and Capital Repairs	2026	6 to 8	4	18.00	7,200	7,200	0.8%	12,485						15,347						18,865			
4.801	350	350	Square Feet	Stairs and Deck, Building 5 Access, Deck Boards and Interim Repairs	2024	12 to 18	2	22.00	7,700	7,700	0.1%																
4.802	350	350	Square Feet	Stairs and Deck, Building 5 Access, Replacement	2040	to 35	18	64.00	22,400	22,400	0.5%			41,608													
		1	Allowance	Reserve Study Update with Site Visit	2024	2	2	5,500.00	5,500	5,500	0.1%																
Anticipated Expenditures, By Year (\$8,374,727 over 30 years)												123,260	26,023	41,608	860,416	393,770	406,593	148,033	0	548,364	739,081	44,896	698,839	158,651	37,966	851,581	

RESERVE FUNDING PLAN

CASH FLOW ANALYSIS		Individual Reserve Budgets & Cash Flows for the Next 30 Years															
Whitehall Mill																	
Condominium Association, Inc.																	
Athens, Georgia		FY2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Reserves at Beginning of Year	(Note 1)	N/A	197,308	71,010	163,956	263,563	258,735	436,159	598,304	384,050	576,250	761,955	890,106	1,074,544	903,913	673,380	424,598
Total Recommended Reserve Contributions	(Note 2)	N/A	350,000	350,000	350,000	350,000	175,000	181,100	187,400	194,000	200,800	207,800	215,100	222,600	230,400	238,500	246,800
Estimated Interest Earned, During Year	(Note 3)	N/A	936	820	1,491	1,822	2,424	3,608	3,426	3,349	4,667	5,762	6,852	6,900	5,501	3,830	3,770
Anticipated Expenditures, By Year		N/A	(477,234)	(257,874)	(251,884)	(356,650)	0	(22,563)	(405,080)	(5,149)	(19,762)	(85,411)	(37,514)	(400,131)	(466,434)	(491,112)	(18,848)
Anticipated Reserves at Year End		<u>\$197,308</u>	<u>\$71,010</u>	<u>\$163,956</u>	<u>\$263,563</u>	<u>\$258,735</u>	<u>\$436,159</u>	<u>\$598,304</u>	<u>\$384,050</u>	<u>\$576,250</u>	<u>\$761,955</u>	<u>\$890,106</u>	<u>\$1,074,544</u>	<u>\$903,913</u>	<u>\$673,380</u>	<u>\$424,598</u>	<u>\$656,320</u>
Predicted Reserves based on 2022 funding level of:	\$50,000	197,308	(NOTE 5) (230,040)	(NOTE 5)													

(continued)		Individual Reserve Budgets & Cash Flows for the Next 30 Years, Continued															
		2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	
Reserves at Beginning of Year		656,320	793,517	1,038,183	1,278,254	707,966	611,899	512,628	682,764	1,013,681	808,071	421,478	741,037	419,245	650,425	1,017,878	
Total Recommended Reserve Contributions		255,400	264,300	273,600	283,200	293,100	303,400	314,000	325,000	336,400	348,200	360,400	373,000	386,100	399,600	413,600	
Estimated Interest Earned, During Year		5,057	6,389	8,079	6,928	4,603	3,922	4,169	5,917	6,354	4,288	4,055	4,047	3,731	5,819	5,592	
Anticipated Expenditures, By Year		(123,260)	(26,023)	(41,608)	(860,416)	(393,770)	(406,593)	(148,033)	0	(548,364)	(739,081)	(44,896)	(698,839)	(158,651)	(37,966)	(851,581)	
Anticipated Reserves at Year End		<u>\$793,517</u>	<u>\$1,038,183</u>	<u>\$1,278,254</u>	<u>\$707,966</u>	<u>\$611,899</u>	<u>\$512,628</u>	<u>\$682,764</u>	<u>\$1,013,681</u>	<u>\$808,071</u>	<u>\$421,478</u>	<u>\$741,037</u>	<u>\$419,245</u>	<u>\$650,425</u>	<u>\$1,017,878</u>	<u>\$585,489</u>	(NOTE 4)

Explanatory Notes:

- 1) Year 2022 ending reserves are projected by Management and the Board as of December 31, 2022; FY2022 starts January 1, 2022 and ends December 31, 2022.
- 2) 2023 is the first year of recommended contributions.
- 3) 0.7% is the estimated annual rate of return on invested reserves
- 4) Accumulated year 2052 ending reserves consider the need to fund for replacement of the masonry inspections and capital repairs shortly after 2052, and the age, size, overall condition and complexity of the property.
- 5) Threshold Funding Years (reserve balance at critical point).

FIVE-YEAR OUTLOOK

Whitehall Mill  
Condominium Association, Inc.  
Athens, Georgia

Line Item	Reserve Component Inventory	RUL = 0 FY2022	1 2023	2 2024	3 2025	4 2026	5 2027
<b>Exterior Building Elements</b>							
1.129	Balconies, Rooftops, Waterproofing System, Replacement				49,005		
1.240	Gutters and Downspouts, Aluminum and Galvanized Steel, Phased			4,188		4,487	
1.275	Historic Equipment House, Inspections and Preservation Projects		12,420				
1.276	Historic Equipment, Dampers, Inspections and Preservation Projects		2,588				
1.280	Roofs, Asphalt Shingles, Building 3 and Shed			11,783			
1.500	Roof, Modified Bitumen, Historic Equipment House, Replacement		54,772				
1.530	Roofs, Thermoplastic, Building 1, Phased			196,018	202,879		
1.531	Roofs, Thermoplastic, Building 2		88,120				
1.819	Walls, Concrete Restoration and Inspections (Building 1)		30,429				
1.820	Walls, Masonry, Inspections and Repairs		262,310				
<b>Property Site Elements</b>							
4.020	Asphalt Pavement, Patch Repairs		11,644				
4.040	Asphalt Pavement, Mill and Overlay, Streets					271,102	
4.139	Concrete Pedestrian Bridge, Replacement			32,137			
4.140	Concrete Sidewalks and Stairs, Partial		14,951				
4.600	Mailbox Stations					16,065	
4.736	Retaining Walls, Masonry and Concrete, Inspections, Capital Repairs and Partial Replacements					56,734	
4.740	Retaining Walls, Stone (Millrace Wall), Inspections and Capital Repairs					8,262	
4.801	Stairs and Deck, Building 5 Access, Deck Boards and Interim Repairs			8,248			
<b>Reserve Study Update with Site Visit</b>				5,500			
<b>Anticipated Expenditures, By Year (\$8,374,727 over 30 years)</b>		0	477,234	257,874	251,884	356,650	0



## 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



Exterior viewed from balcony



Exterior overview



Exterior overview



Exterior overview

## Balconies, Rooftop, Waterproofing System

---

**Line Item:** 1.129

**Quantity:** Approximately 850 square feet of horizontal surface area.

**History:** We presume that the rooftop balcony waterproofing systems and decking are original to conversion in the 1990's.

**Condition:** We note difficulty ascertaining a condition of these balconies due to a lack of access. We base our recommendations and timing on conversations with Management and the Board.



**Locations of Association maintained balconies over living space**

**Useful Life:** Full replacement at up to 30 years with the benefit of timely capital repairs, which we recommend be funded through the operating budget.

**Component Detail Notes:** We surmise the balconies comprise thinset lightweight concrete over a waterproof membrane atop the wood structure below. A waterproof membrane minimizes storm water penetration into the wood structure and therefore minimizes future balcony deterioration.

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



**Expenditure Detail Notes:** Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. Our cost includes the following activities per event:

- Removal of floor coverings
- Removal and replacement of the entirety of the thinset concrete topping and underlying waterproof membrane
- Partial replacement of the wood decking and framing components.
- Repairs of adjacent wall surfaces
- Repairs to the railings as necessary
- Replacement of perimeter sealants as needed
- Replacement of wood balcony support posts as needed
- Application of an acrylic based paint coating

## Gutters and Downspouts

---

**Line Item:** 1.240

**Quantity:** Approximately 2,300 linear feet of galvanized steel and aluminum gutters and downspouts

**History:** The ages of the gutters and downspouts vary and have been replaced as-needed.

**Condition:** Good to fair overall with rust evident.



**Galvanized gutters and downspouts**



**Rust at downspouts**



**Galvanized and aluminum gutters and downspouts**

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

**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.

## **Historic Equipment and House, Inspections and Preservation**

---

**Line Items:** 1.275 and 1.276

**Quantity:** One historic equipment house and associated equipment, and two dampers

**History:** The exact age of these items are unknown, but presumed to remain from the time of mill operations.





**Damper and roller system**



**Window damper overview**



**Historic mill equipment house, note chimney stack secured with cables**



**Separation at chimney joint at historic equipment house**

**Useful Life:** We recommend the Association have the historic equipment house and dampers inspected and potentially make repairs or preservation measures every six- to eight-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. Actual costs of inspections and preservation projects may vary from our recommendations. Future updates of this study can implement any findings and recommendations from third-party professional engineers and historical preservation committees.

## Roofs, Asphalt Shingles

**Line Item:** 1.280

**Quantity:** Approximately 22 squares<sup>1</sup> at Building 3 and the shed

**History:** The age of the Building 3 roofs are unknown. We estimate the roof to be more than 15 years old.

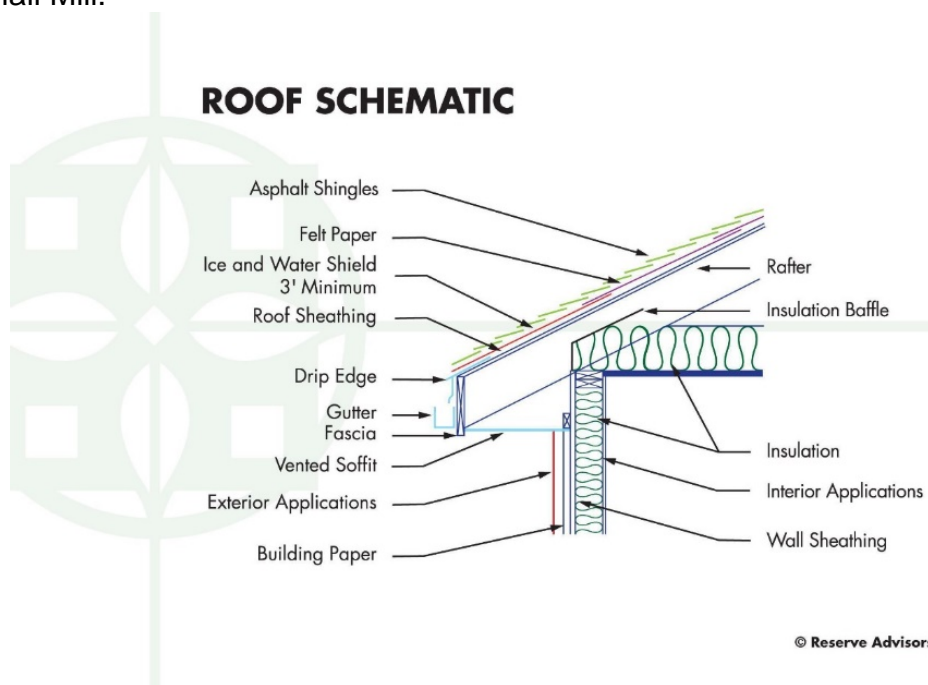
**Condition:** Fair to poor overall with significantly weathered three-tab shingles evident.



**Weathered three-tab shingles at building 3**

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

**Component Detail Notes:** The following cross-sectional schematic illustrates a typical asphalt shingle roof system although it may not reflect the actual configuration at Whitehall Mill:



© Reserve Advisors

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

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

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

**Preventative Maintenance Notes:** We recommend the Association maintain a service and inspection contract with a qualified professional and record all documentation of repairs conducted. We note the following select recommended preventative maintenance activities to maximize the remaining useful life:

- 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.

## **Roof, Modified Bitumen, Historic Equipment House**

---

**Line Item:** 1.500

**Quantity:** Approximately 980 square feet at the historic equipment house, beneath the rooftop deck.

**History:** The age of the roof system at the historic equipment house is unknown, and we estimate the wood base layer to be more than 25 years old.

**Condition:** Poor overall with significant wood deterioration and one area of complete failure of the roofing system.





**Significant wood deterioration at underside of roofing system at historic mill equipment**



**Weathered wood base layer**



**Modified bitumen roof system beneath deck at historic equipment house**



**Overview of roof at historic equipment house**

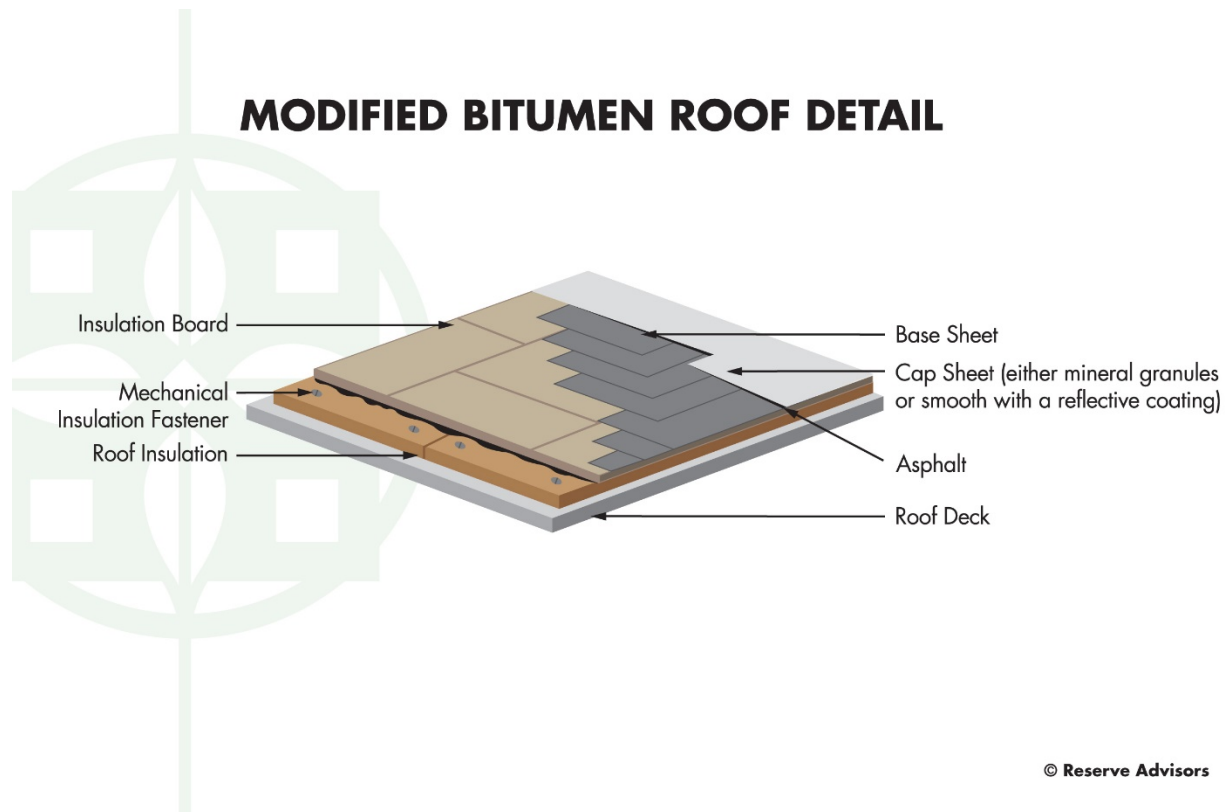


**Inspection image from *Parsons Roofing Co.***

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

**Component Detail Notes:** Modified bitumen roofing systems are composed of factory manufactured sheets of polymer-modified bitumen with polyester and/or fiberglass reinforcements. The bitumen adds a waterproof characteristic to the system and the reinforcements add strength and puncture resistance. These factory assembled roofing systems offer the advantages of a built-up roofing system through a less labor intensive installation. The following detail depicts a typical modified bitumen roof although it may not reflect the actual configuration at Whitehall Mill:

## MODIFIED BITUMEN ROOF DETAIL



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Contractors can install a new modified bitumen roof in one of two ways: *tear-off* or an *overlay*. An overlay is the application of a new roof membrane over an existing roof. This method, although initially more economical, often covers up problems with the deck, flashing and saturated insulation. The tear-off method of replacement includes removal of the existing roofing, flashings and insulation, and installation of a new roofing system.

The contractor should follow the manufacturer's directions and specifications upon installation of the roof. The contractor should remove the original insulation if saturated or compacted and apply a new layer of insulation per the manufacturer's instructions. The insulation should fit loosely with gaps no greater than  $\frac{1}{4}$  inch. Gaps will cause failure of the membrane later. Mechanical fastening of the insulation is the best manner of installation. The contractor applies the base sheet of roofing over the insulation board. This sheet is normally 30-pound material. The contractor should start the installation of a roof membrane from the lowest points of the roof. Mechanical fastening and embedding the base sheet in a flood coat of hot asphalt is the best manner of installation. The membrane and plies are either torch applied (thermoset) or hot asphalt

applied. We recommend the contractor use the torch method to install a modified bitumen membrane roof system.

**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. The Association currently has a bid for repairs to the roof system at the historic equipment house for approximately \$15,700. Due to the age of the overall structure and historic nature of the equipment within the house being preserved, we recommend a near term replacement of the entire roofing system, as opposed to repairs. Our estimate for cost of replacement includes the removal and replacement of the existing rooftop balcony deck, and the complete replacement of the modified bitumen roofing system, including a complete replacement of the wood deck which shows significant signs of deterioration and moisture.

## Roofs, Thermoplastic

---

**Line Items:** 1.530 through 1.533

**Quantity and History:**

Location	Quantity (Square Feet)	Year(s) of Construction
Building 1	22,180	2005
Building 2	5,160	2005
Building 4	13,240	Recovered 2019
Building 5	15,170	Recovered 2020



**Condition:** We note due to the configuration of buildings 1 and 2, we were unable to ascertain the condition of the roofs. Management and the Board expect near term replacement or recovery of these roofs. The roofs at Buildings 4 and 5 are in good to fair condition with evidence of standing water.



**Roof overview at building 4 (lower)**



**Evidence of standing water at building 4**



**Building 5 roof overview**



**Underside of roof structure at building 5**

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

**Component Detail Notes:** Thermoplastic roofs include the following:

- Polyvinyl chloride (PVC or simply vinyl)
- PVC alloys or compounded thermoplastics
- Thermoplastic olefin (TPO)
- Chlorinated polyethylene (CPE)

The following characteristics define most thermoplastic roofs:

- Attachment to the roof deck is either fully adhered, mechanical or ballasted
- Membranes are commonly white and reinforced with polyester

- Seams are sealed with heat or chemical welding
- Sheet widths range from 6- to 12-feet wide
- Sheets are typically 40- to 100-mils thick
- Single ply (one layer)

Over time, exposure to ultraviolet light, heat and weather degrade the membrane. This degradation results in membrane damage from thermal expansion and contraction, adverse weather and pedestrian traffic. The aging process makes the membrane less pliable and more difficult to maintain. Ponding water on the roof can increase the effects of ultraviolet light on the membrane and contaminants in ponded water can cause the membrane to deteriorate prematurely. Thermoplastic roofs (especially TPO) are relatively new and their long term performance is not well defined.

Contractors can install a new thermoplastic roof in one of two ways: *tear-off* or an *overlay*. An *overlay* is the application of a new roof membrane over an existing roof. This method, although initially more economical, often covers up problems with the deck, flashing and saturated insulation. The *tear-off* method of replacement includes removal of the existing roofing, flashings and insulation, and installation of a new roofing system.

The contractor should follow the manufacturer's directions and specifications upon installation of the roof. The contractor should remove the original insulation if saturated or compacted and apply a new layer of insulation per the manufacturer's instructions. The insulation should fit loosely with gaps no greater than ¼ inch. Gaps will cause failure of the membrane later. Mechanical fastening of the insulation is the best manner of installation.

***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. We note that Buildings 4 and 5 were recovered as opposed to replaced. We note that future replacements of these roofs will likely require more removal and labor costs. We recommend the replacement of the TPO roofs as opposed to recovery. If the Association wishes to recover roofs at Buildings 1 and 2, we recommend conducting moisture surveys to ascertain if recovery is an acceptable option for the roofing system.

## **Walls, Masonry**

---

**Line Items:** 1.819 and 1.820

**Quantity:** Approximately 52,800 square feet of masonry comprises the exterior walls. We note that approximately 700 square feet of concrete façade at the underside of unit 3 is severely deteriorated with exposed reinforcement and will likely require concrete restoration measures in the near term.

**History:** Significantly varying ages and extensive repairs and rebuilds which also vary in ages.

**Condition:** We note significantly weathered masonry throughout the community.

Good overall with the following evident:

- Common Brick Masonry and Limited Quantities of River Rock and Concrete Construction
- Extensive previous repairs evident
- Excessive lintel rust is evident
- Masonry exhibits systemic cracks, spalls and significant weathering.
- We note significant concrete deterioration with exposed reinforcement evident.



**Masonry facade at building 2**



**Masonry cracks and concrete deterioration with exposed reinforcement**





**Repairs at building 4**



**Hallway masonry at building 5**



**Separation at chimney joint at historic equipment house**



**Windows with painted lintels**



**Significantly weathered lintel**



**I-beam and masonry facade**





**Limited quantities of River Rock facade**



**Detail view of River rock and mortar**



**Masonry walls overview**



**Significant masonry repairs at doorway**



**Weathered masonry with partial replacements at unit 5**



**Masonry facade**





**Frequent previous repairs evident**



**Historic equipment housing facade**



**Masonry facade at unit 31 exit**



**Pavement parking area overview**

**Useful Life:** We advise a complete inspection of the masonry and related masonry repairs 8- to 12-years to forestall deterioration. We note a need for concrete restoration to be likely at up to 35 years.

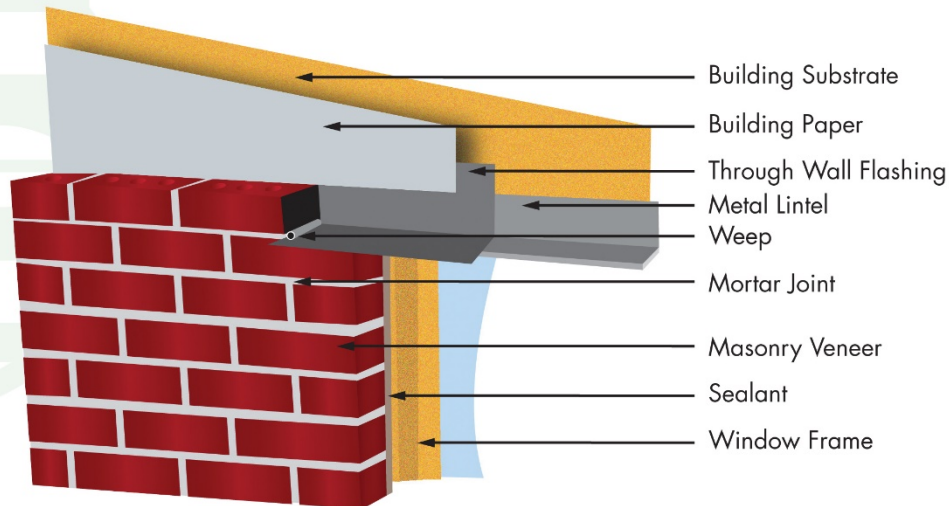
**Component Detail Notes:** Common types of masonry deterioration include efflorescence, spalling, joint deterioration and cracking. The primary cause of efflorescence, cracks and face spall is water infiltration; therefore, prevention of water infiltration is the principal concern for the maintenance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

Repointing is a process of raking and cutting out defective mortar to a depth of not less than  $\frac{1}{2}$  inch nor more than  $\frac{3}{4}$  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.



We recommend an inspection, partial repair and replacement of the steel lintels. Lintels are structural supports or beams above windows and doors. Fatigued lintels also allow the direct penetration of storm water into the wall assembly. These inspections should locate areas of rust on the lintels and cracks or other structural damage to the walls around lintels. The contractor should remove any areas of rust, prime and paint these lintels. Paint protects and maximizes the remaining useful life of the lintels and therefore the exterior wall systems. Structural damage can eventually lead to costly replacements of lintels and surrounding wall systems. The following diagram details a typical metal lintel and weep system and may not reflect the actual configuration at the Association:

### MASONRY WALL, METAL LINTEL AND WEEP SYSTEM DETAIL



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

**Expenditure Detail Notes:** Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. Due to aesthetic and historic preservation purposes, we do not recommend paint finishes to the masonry. Our cost includes the following activities:

- Complete inspection of the masonry
- Repointing of up to twenty percent (20%) of the masonry
- Replacement of up to two percent (2%) (The exact amount of area in need of replacement will be discretionary based on the actual future conditions and the desired appearance.)
- Replacement/flushing installation at up to five percent (5%) of the metal lintels
- Paint applications to the metal lintels (approximately 800 linear feet)

## Windows and Doors, Frames

---

**Line Item:** 1.980

**Quantity:** Approximately 12,800 linear feet of window and door frames which vary from wood to steel construction.

**History:** Significantly varying ages, with the most recent paint finishes having been applied within the past two years.

**Condition:** Fair overall condition.



**Steel frame windows**



**Windows and doors overview**



**Wood frame windows**



**Wood frame windows**



**Original factory steel window frames**

**Useful Life:** Paint finishes, inspections and capital repairs every six- to eight-years

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

- Wood and steel frames
- Single pane windows
- Single-hung swinging, hinged, sliding, and fixed windows

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

The thermal efficiencies of the window and door assemblies are affected by their design and construction components. These components include glazings, thickness of air space between glazings, low-conductivity gas, tinted coatings, low-e coatings and thermal barriers. The Association should thoroughly investigate these component options at the time of replacement. Some manufacturers may include these components as part of the standard product and other manufacturers may consider these components as options for an additional cost. Whitehall Mill 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 note that historical preservation codes may restrict the community from replacements of the window frames. We recommend inspections and capital repairs, as well as replacements in severe cases if capable. Our estimate for cost of inspections and capital repairs includes the following:

- Complete inspection and paint finishes to the window frames
- Replacement of up to thirty-three percent (33%) of the sealants
- Repairs and partial replacements of up to fifteen percent (15%) of the window frames.

## Property Site Elements

### Asphalt Pavement, Repaving

---

**Line Items:** 4.020 and 4.040

**Quantity:** Approximately 11,250 square yards which includes limited quantities of stamped and colored asphalt.

**History:**

- Repaving: Initial paving was approximately 1997
- Repairs: Repaired in 2022.

**Condition:** Fair to poor overall with significant deterioration including pothole formation and alligator cracks.



**Pavement deterioration**



**Stamped asphalt**





**Pothole formation**



**Significant deterioration of asphalt pavement**



**Upper parking area overview**



**Alligator cracks at upper parking area**



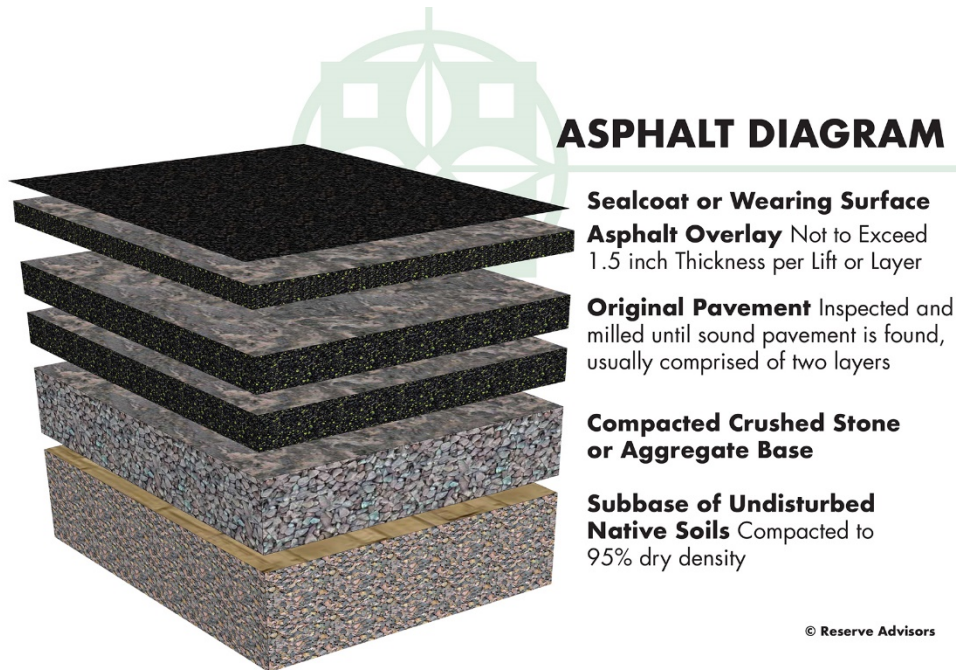
**Pavement patch**

**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 Whitehall Mill:



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

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

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



- As needed:
  - Perform crack repairs and patching

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

**Expenditure Detail Notes:** Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. Our cost includes an allowance for patching of up to two percent (2%) of the pavement. Our cost for milling and overlayment includes area patching of up to twenty-five percent (25%).

## **Concrete Sidewalks, Stairs and Pedestrian Bridge**

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**Line Items:** 4.139 and 4.140

**Quantity:** Approximately 3,200 square feet of concrete sidewalks and stairs, and a pedestrian bridge, spanning the millrace approximately 20 feet in length

**Condition:** The sidewalks and stairs vary in condition from fair to poor, we note damage and trip hazards evident. We note significant deterioration at the pedestrian bridge. We recommend the Association to contract a structural engineer to opine on whether or not the pedestrian bridge should be remediated or restored, as opposed to completely replaced.



**Concrete flatwork near building 5**



**Concrete sidewalk**





**Concrete stairs at building 3**



**Deterioration at concrete stairs at pedestrian bridge**



**Concrete stairs near building 4**



**Concrete stairs**

**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 the entirety of the concrete sidewalks, will likely require replacement during the next 30 years.



## Mailbox Stations

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**Line Item:** 4.600

**Quantity:** Five stations

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

**Condition:** Good to fair overall



Mailbox stations



Mailbox stations

**Useful Life:** Up to 25 years

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

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

**Priority/Criticality:** Per Board discretion

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

## Perimeter Walls, Concrete

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**Line Item:** 4.640

**Quantity:** Approximately 2,170 square feet of surface area and approximately 890 linear feet

**History:** The age of the perimeter walls is unknown.



**Condition:** Fair overall with frequent stains, cracks and isolated exposed concrete reinforcement evident



**Concrete wall at upper parking area**



**Cracks and exposed concrete reinforcement**



**Wall overview**

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

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

- As-needed:
  - Inspect for significant damage, spalling and cracks. If these conditions exist, perform near term repairs and remediation, utilizing reserve funds if project scope warrants.
  - Ensure irrigation heads are directed away from the walls and tree roots do not undermine the support columns

**Priority/Criticality:** Not recommended to defer

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



## Retaining Walls, Masonry and Concrete

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**Line Item:** 4.736

**Quantity:** Approximately 2,060 square feet of masonry and concrete retaining walls. The heights of the walls vary from two- to eight-feet tall.

**History:** The age of the retaining walls is unknown.

**Condition:** Varying from fair to poor overall condition. We note stabilization at the retaining wall near building 4.



**Retaining wall near building 4**



**Stabilized retaining wall with repairs**



**Retaining wall near building 5 and barn**



**Step cracks and header deterioration**

**Useful Life:** Concrete retaining walls have indeterminate useful lives. However, we recommend the Association plan for inspections, capital repairs and partial replacements every ten years to forestall deterioration.

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



**Expenditure Detail Notes:** Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. Our cost estimate for inspections, capital repairs and partial replacements anticipates the following per event:

- Inspections of the entirety of the masonry and concrete retaining walls
- Replacement of approximately fifteen percent (15%) of the retaining walls
- Crack repairs and repointing of up to fifteen percent (15%) of the retaining walls.

Updates of this Reserve Study will continue to monitor the rate of deterioration and incorporate any available inspection reports. Future updates of this study will consider the need for total replacement of the walls.

## **Retaining Walls, Stone (Millrace Wall)**

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**Line Item:** 4.740

**Quantity:** Approximately 400 linear feet

**History:** The wall was originally constructed in the 1830's to function as a millrace. A history of rebuilds and repairs is unknown.

**Condition:** We do not note significant deterioration, leaning or eroded sections of the wall. Vegetative growth is present.



**Stone retaining wall**



**Stone retaining wall near building 3**



**Stone retaining wall**



**Stone retaining wall**

**Useful Life:** Stone retaining walls have indeterminate useful lives. However, we recommend the Association plan for inspections and capital repairs every 10- to 15-years to forestall deterioration.

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

**Expenditure Detail Notes:** Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. Our cost includes an allowance for an inspection, partial resetting and replacement of up to seven percent (7%). Updates of this Reserve Study will continue to monitor the rate of deterioration and incorporate any available inspection reports. Due to the historic nature of this wall, the method of capital repairs and preservation of the wall may vary from our recommendations.

## **Stairs and Deck, Building 5 Access**

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**Line Items:** 4.801 and 4.802

**Quantity:** Two sets of stairs and decking which comprise approximately 350 square feet

**History:** Approximately 10- to 15-years old.

**Condition:** Good to fair overall condition with damaged composite railings and weathered wood decking evident.





**Access at building 5**



**Damaged composite railing**



**Galvanized steel and wood railing**



**Structure detail**



**Weathered wood decking**

**Useful Life:** Up to 35 years with the benefit of deck board replacement and interim repairs every 12- to 18-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. Our estimate for cost of deck boards and interim repairs includes the following:

- Complete deck board replacement
- Repairs to the railings and wood frame as-necessary

## 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.

Whitehall Mill 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 annual 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 Homeowners pay their "fair share" of the weathering and aging of the commonly owned property each year. Level reserve assessments preserve the property and enhance the resale value of the homes.

This Reserve Study is in compliance with and exceeds the National standards<sup>1</sup> set forth by the Association of Professional Reserve Analysts (APRA) fulfilling the requirements of a "Level I Full Reserve Study." These standards require a Reserve Component to have a "predictable remaining Useful Life." Estimating Remaining Useful Lives and Reserve Expenditures beyond 30 years is often indeterminate. Long-Lived Property Elements are necessarily excluded from this analysis. We considered the following factors in our analysis:

- The Cash Flow Method to compute, project and illustrate the 30-year Reserve Funding Plan
- Local<sup>2</sup> costs of material, equipment and labor
- Current and future costs of replacement for the Reserve Components
- Costs of demolition as part of the cost of replacement
- Local economic conditions and a historical perspective to arrive at our estimate of long-term future inflation for construction costs in Athens,

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

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

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

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

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

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



## 6. CREDENTIALS

### HISTORY AND DEPTH OF SERVICE

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

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

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

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

### TOTAL STAFF INVOLVEMENT

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

### OUR GOAL

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

### VAST EXPERIENCE WITH A VARIETY OF BUILDINGS

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

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

### OLD TO NEW

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

**BRANDON L. BLOOMER, MBA, RS**  
**Responsible Advisor**

**CURRENT CLIENT SERVICES**

Brandon Bloomer is an Associate Engineer for Reserve Advisors, LLC. Mr. Bloomer is responsible for the inspection and analysis of the condition of clients' property, and recommending engineering solutions to prolong the lives of the components. He also forecasts capital expenditures for the repair and/or replacement of the property components and prepares technical reports on assignments. He is responsible for conducting Life Cycle Cost Analysis and Capital Replacement Forecast services and the preparation of Reserve Studies for condominiums, townhomes and homeowners associations.

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



**The Sawgrass Players Club Association, Inc.** - Located in Ponte Vedra, Florida, this Master Association is comprised of over 1,800 homes at the historic TPC Sawgrass golf course. The Master Association maintains multiple pool and recreation areas, streets, gate houses, and concrete bridges. The Association also maintains an extensive stormwater management system including weirs, dams, pipes, and high-volume pump stations.

**The Palms at Marsh Landing Condominium Association** – This condominium association located in Jacksonville Beach, Florida was constructed from 1995-1998. The community is comprised of 419 units in 34 buildings. The buildings are comprised of painted stucco exterior walls, asphalt shingle roofs, exterior staircases, and breezeways located on the front and centers of the buildings. Additionally the property has a clubhouse, a pool house, multiple ponds with bulkheads, and two swimming pools.

**Wekiva Fairway Condominium Association, Inc.** – This townhome association was built in 1981 and is located in Longwood, Florida. The community consists of 12 buildings which contain 48 units along the fairways of Wekiva Golf Club. The buildings are comprised of a combination of painted plywood siding and stucco. The community also features a pool and pool house for their residents.

**Bronson's Landing Homeowners Association, Inc.** - This single family home community contains 126 residential homes and is located in Winter Garden, Florida. The Association maintains the shared common elements including a beautiful common area pergola, a pond with multiple fountains, and nearly half a mile of masonry brick perimeter wall.

**Willowcove Master Association, Inc.** - This homeowners' association is located in Ponte Vedra, Florida features 342 single family homes, multiple ponds, and multiple playgrounds throughout the community.

**PRIOR RELEVANT EXPERIENCE**

Before joining Reserve Advisors, LLC, Mr. Bloomer successfully completed the bachelors program in Industrial Engineering from Texas A&M University-Commerce. He was the sole proprietor of UQSC Solutions, where he contracted with numerous companies in the oil & gas industry implementing quality management systems (QMS) and intuitive inventory tracking systems throughout supply chains. He also served honorably in the United States Marine Corps for six years as an Engineer Equipment Operator, as a Sergeant he was the foreman of IRT Old Harbor, Alaska where he and his Marines completed the extension of an airplane runway for the village of Old Harbor.

**EDUCATION**

Texas A&M University-Commerce - B.S. Industrial Engineering  
Western Governor's University - Master of Business Administration

**PROFESSIONAL AFFILIATIONS/DESIGNATIONS**

*Reserve Specialist (RS)* - Community Associations Institute

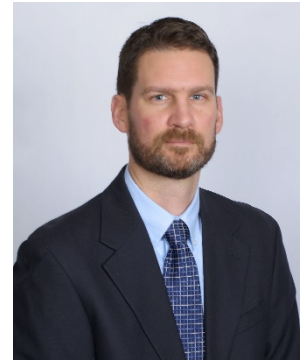


**ALAN M. EBERT, P.E., PRA, RS**  
**Director of Quality Assurance**

**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

## RESOURCES

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

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

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

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

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

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

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



## 7. DEFINITIONS

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

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

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

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

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

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

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

**Long-Lived Property Component** - Property component of Whitehall Mill 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) Whitehall Mill 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 our report. The inspection is made by employees generally familiar with real estate and building construction but in the absence of invasive testing RA cannot opine on, nor is RA responsible for, the structural integrity of the property including its conformity to specific governmental code requirements for fire, building, earthquake, and occupancy, or any physical defects that were not readily apparent during the inspection.

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 water, oil, gas, coal, or other subsurface mineral and use rights or such hidden conditions. RA assumes no responsibility for any such conditions. The Report contains opinions of estimated costs and remaining useful lives which are neither a guarantee of the actual costs of replacement 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.

**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, however, considers any additional information made available to us within 6 months of issuing the Report if a timely request for a revised Report is made. 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.

**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 this Report is limited to only the purpose stated herein. You hereby acknowledge that any use or reliance by you on the Report for any unauthorized purpose is at your own risk and you shall hold RA harmless from any consequences of such use. Use by any unauthorized third party is unlawful. 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 our Report in its entirety to the following third parties: members of your organization, your accountant, attorney, financial institution and property manager who need to review the information contained herein. Without the written consent of RA, you shall not disclose the Report to any other third party. The Report contains intellectual property developed by RA and **shall not be reproduced or distributed to any party that conducts reserve studies without the written consent of RA**.

RA will include your name in our client lists. RA reserves the right to 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** - 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. Any litigation necessary to collect an unpaid balance shall be venued in Milwaukee County Circuit Court for the State of Wisconsin.