

FULL RESERVE STUDY

**Harbor Island Beach House and Ocean Villas,
HPR, Inc.**



**St. Helena, South Carolina
August 30, 2018**



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Harbor Island Beach House and Ocean Villas, HPR, Inc.
St. Helena, South Carolina

Dear Board of Directors of Harbor Island Beach House and Ocean Villas, HPR, Inc.:

At the direction of the Board that recognizes the need for proper reserve planning, we have conducted a *Full Reserve Study* of Harbor Island Beach House and Ocean Villas, HPR, Inc. in St. Helena, South Carolina and submit our findings in this report. The effective date of this study is the date of our visual, noninvasive inspection, August 30, 2018.

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 Harbor Island Beach House and Ocean Villas, HPR, 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 4, 2018 by

Reserve Advisors, Inc.

Visual Inspection and Report by: Victor Vogt

Review by: Alan M. Ebert, RS, PRA², Director of Quality Assurance



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

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



Long-term thinking. Everyday commitment.

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1. RESERVE STUDY EXECUTIVE SUMMARY

Client: Harbor Island Beach House and Ocean Villas, HPR, Inc. (Harbor Island)

Location: St. Helena, South Carolina

Reference: 180836

Property Basics: Harbor Island Beach House and Ocean Villas, HPR, Inc. is a condominium style development of 54 units in two buildings. The buildings were built in 1987.

Reserve Components Identified: 32 Reserve Components.

Inspection Date: August 30, 2018.

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 2028 and 2048 due to replacement of the wood siding and roofs and pool structure and deck replacement, respectively.

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

- Current and future local costs of replacement
- 1.7% anticipated annual rate of return on invested reserves
- 2.7% 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.

Cash Status of Reserve Fund:

- \$0 as of June 19, 2018
- 2018 budgeted Reserve Contributions of \$38,983
- A potential deficit in reserves might occur by 2019 based upon continuation of the most recent annual reserve contribution of \$38,983 and the identified Reserve Expenditures.

Project Prioritization: We recommend the Association prioritize the following project in the next five years based on the conditions identified:

- Perform paint finish applications to the wood siding and trim to ensure the wood siding can reach its full useful life and prevent future costly repairs

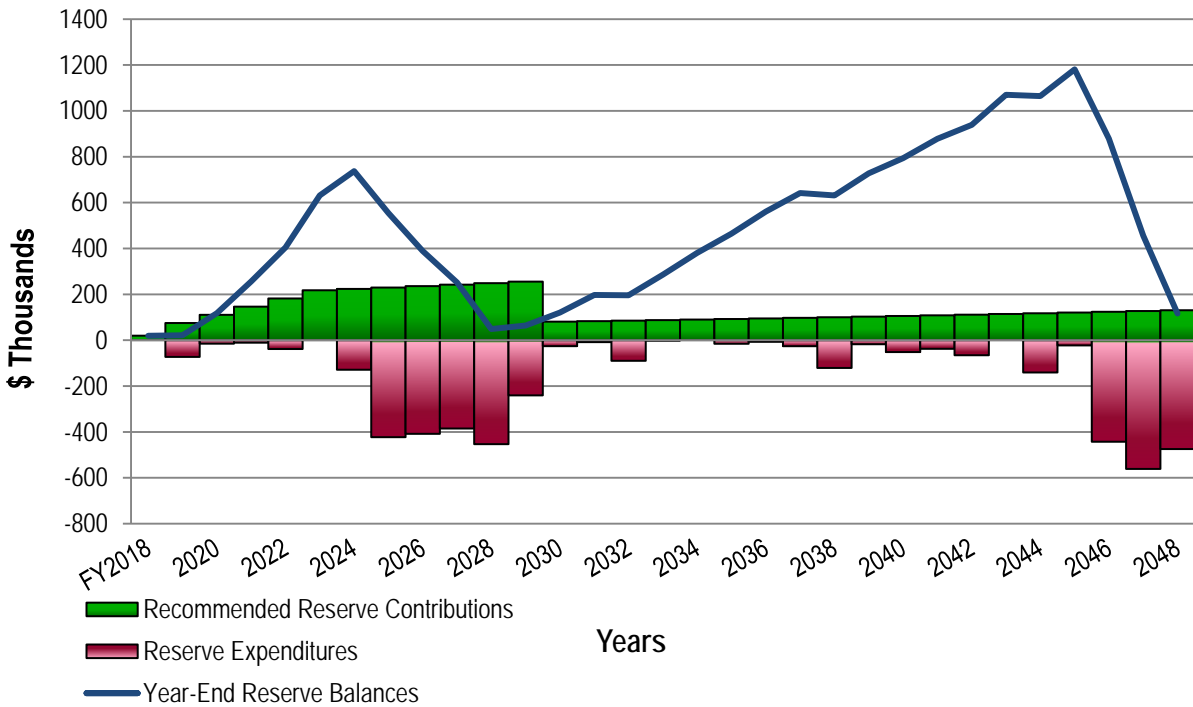
Recommended Reserve Funding: We recommend the following in order to achieve a stable and equitable Funding Plan:

- Phased increases of approximately \$35,700 from 2019 through 2023
- Inflationary increases from 2024 through 2029
- Decrease to \$80,700 by 2030 due to fully funding for replacement of the wood siding and roofs
- Inflationary increases through 2048, the limit of this study's Cash Flow Analysis
- Initial adjustment in Reserve Contributions of \$35,717 represents an average monthly increase of \$55.12 per homeowner and about a ten percent (10.3%) adjustment in the 2018 total Operating Budget of \$345,639.



Harbor Island
Recommended Reserve Funding Table and Graph

Year	Reserve Contributions (\$)	Reserve Balances (\$)	Year	Reserve Contributions (\$)	Reserve Balances (\$)	Year	Reserve Contributions (\$)	Reserve Balances (\$)
2019	74,700	21,590	2029	255,200	64,477	2039	102,600	727,665
2020	110,400	117,885	2030	80,700	120,580	2040	105,400	793,978
2021	146,100	256,130	2031	82,900	197,577	2041	108,200	878,492
2022	181,800	404,898	2032	85,100	195,983	2042	111,100	939,143
2023	217,500	631,130	2033	87,400	285,711	2043	114,100	1,070,178
2024	223,400	737,089	2034	89,800	381,131	2044	117,200	1,064,457
2025	229,400	554,353	2035	92,200	464,731	2045	120,400	1,180,865
2026	235,600	389,454	2036	94,700	560,825	2046	123,700	878,984
2027	242,000	251,565	2037	97,300	641,917	2047	127,000	455,745
2028	248,500	49,111	2038	99,900	631,391	2048	130,400	116,126





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

Harbor Island Beach House and Ocean Villas, HPR, Inc.

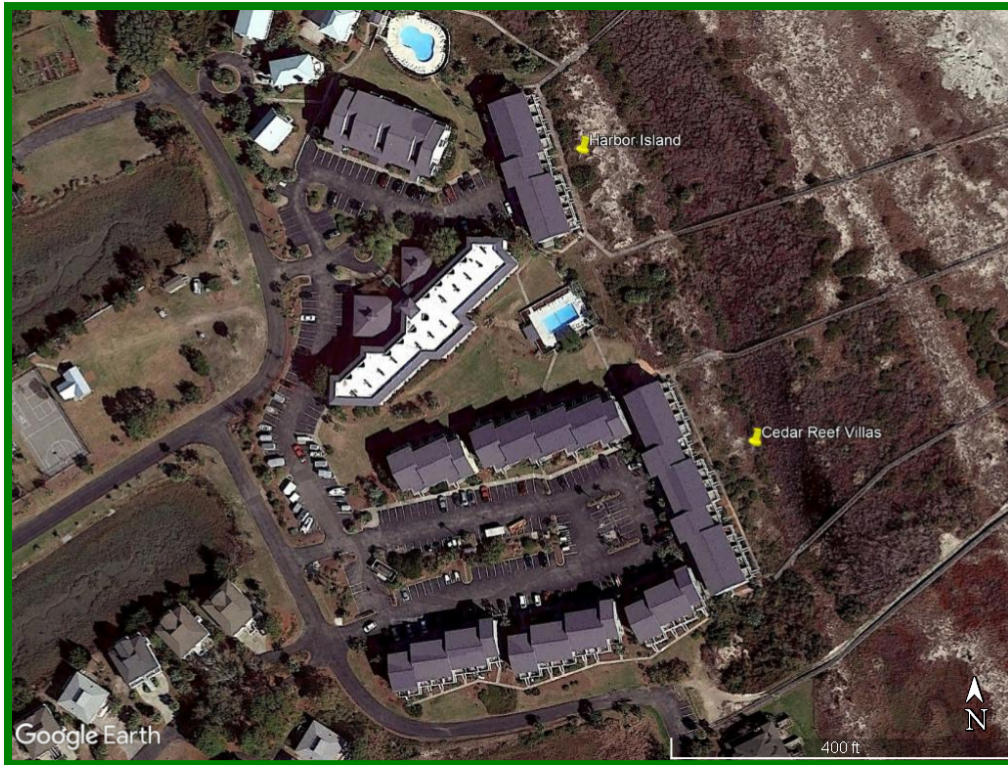
St. Helena, South Carolina

and submit our findings in this report. The effective date of this study is the date of our visual, noninvasive inspection, August 30, 2018.

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
- **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:



- Harbor Island 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 reserve funding at this time.

- Electrical Systems, Common
- Foundations
- 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 \$3,000 (These relatively minor expenditures have a limited effect on the recommended Reserve Contributions.) (Excluding Shared Elements)
- Landscape, Maintenance
- Pool Furniture
- Fence, Wood, Trash Compactor, Replacement
- Paint Finishes, Touch Up
- Irrigation System, Controllers
- Paint Finishes, Fences, Wood, Pool
- Pool Mechanical Equipment
- Other Repairs normally funded through the Operating Budget

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:

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



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

- Trash Compactor (Leased)
- Mailbox Stations (United States Postal Service)

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
- 2018 local cost of replacement
 - Per unit
 - Per phase
 - Replacement of total quantity
- Total future costs of replacement 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

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

Harbor Island Beach House and Ocean Villas,
HPR, Inc.
St. Helena, South Carolina

Explanatory Notes:

- 1) **2.7%** is the estimated future Inflation Rate for estimating Future Replacement Costs.
- 2) **FY2018** is Fiscal Year beginning January 1, 2018 and ending December 31, 2018.

Line Item	Total Quantity	Per Phase Quantity	Units	Reserve Component Inventory	Estimated 1st Year of Event	Life Analysis, Years		Unit Cost, \$	Percentage Ownership	Costs, \$			RUL = 0 FY2018	1 2019	2 2020	3 2021	4 2022	5 2023	6 2024	7 2025	8 2026	9 2027	10 2028	11 2029	12 2030	13 2031	14 2032	15 2033
						Useful	Remaining			Per Phase (2018)	Total (2018)	30-Year Total (Inflated)																
Exterior Building Elements																												
1.105	1,980	990	Linear Feet	Balconies, Railings, Wood, Replacement, Phased	2025	to 30	7 to 8	35.00	100%	34,650	69,300	84,635								41,754	42,881							
1.110	36	18	Each	Balconies, Screens, Phased	2025	to 15	7 to 8	800.00	100%	14,400	28,800	87,626								17,352	17,821							
1.120	3,000	1,500	Square Feet	Balconies, Wood, Phased	2025	to 30	7 to 8	40.00	100%	60,000	120,000	146,554								72,301	74,253							
1.121	7,650	3,825	Square Feet	Breezeways, Wood, Phased	2025	to 30	7 to 8	40.00	100%	153,000	306,000	373,713								184,368	189,345							
1.240	350	350	Linear Feet	Gutters and Downspouts, Aluminum	2028	15 to 20	10	11.00	100%	3,850	3,850	13,143											5,025					
1.260	46	23	Each	Light Fixtures, Phased	2027	to 25	9 to 11	75.00	100%	1,725	3,450	4,504										2,192		2,312				
1.280	160	160	Squares	Roofs, Asphalt Shingles	2028	15 to 20	10	510.00	100%	81,600	81,600	278,564											106,511					
1.530	9,970	9,970	Square Feet	Roof, Thermoplastic	2028	15 to 20	10	12.50	100%	124,625	124,625	425,442											162,671					
1.555	20	10	Each	Staircases, Wood, Phased	2025	to 30	7 to 8	6,800.00	100%	68,000	136,000	166,095								81,941	84,154							
1.755	29,630	29,630	Square Feet	Walls, Fiber Cement Siding, Paint Finishes and Repairs	2038	8 to 10	20	2.40	100%	71,112	71,112	279,303																
1.760	29,630	29,630	Square Feet	Walls, Wood Siding, Paint Finishes and Repairs	2019	4 to 6	1	2.40	100%	71,112	71,112	156,470		73,032					83,438									
1.845	29,650	14,825	Square Feet	Walls, Wood Siding (Replace with Fiber Cement), Phased	2027	to 45	9 to 11	12.00	100%	177,900	355,800	464,584										226,105		238,479				
Interior Building Elements																												
2.100	1	1	Each	Elevator Cab Finishes	2028	to 20	10	10,500.00	100%	10,500	10,500	37,056											13,705					
Building Services Elements																												
3.320	1	1	Each	Elevator, Hydraulic, Pump and Controls	2048	to 35	30	45,000.00	100%	45,000	45,000	100,075																
3.330	1	1	Each	Elevator, Hydraulic, Cylinder	2032	to 45	14	34,000.00	100%	34,000	34,000	49,370															49,370	
3.555	2	1	Allowance	Life Safety System, Control Panels	2025	to 15	7	4,000.00	100%	4,000	8,000	11,456								4,820								
3.560	1	1	Allowance	Life Safety System, Emergency Devices	2025	to 25	7	7,000.00	100%	7,000	7,000	8,435								8,435								
3.605	216	11	Each	Pipes, Riser Sections, Domestic Water and Waste, Partial	2037	to 80+	19 to 30+	1,100.00	100%	11,880	237,600	45,434																
Property Site Elements																												
4.020	12,000	12,000	Square Yards	Asphalt Pavement, Crack Repair, Patch and Seal Coat	2020	3 to 5	2	1.70	22%	4,488	4,488	56,643			4,734				5,266				5,858			6,517		
4.040	12,000	12,000	Square Yards	Asphalt Pavement, Mill and Overlay	2024	15 to 20	6	13.00	22%	34,320	34,320	40,269							40,269									
4.045	12,000	12,000	Square Yards	Asphalt Pavement, Total Replacement	2044	15 to 20	26	25.00	22%	66,000	66,000	131,940																
4.084	12,550	6,275	Square Feet	Boardwalks, Wood, Decks and Rails, Phased	2047	20 to 25	29 to 30	15.00	22%	73,418	146,835	322,252																
4.085	12,550	6,275	Square Feet	Boardwalks, Wood, Replacement, Phased	2027	to 40	9 to 10	25.00	22%	122,363	244,725	315,237										155,519	159,718					
4.140	6,000	480	Square Feet	Concrete Sidewalks, Partial	2021	to 65	3 to 30+	11.00	22%	1,162	14,520	8,884				1,258						1,476				1,732		
4.420	20	5	Zones	Irrigation System, Phased	2021	to 40	3 to 30	1,800.00	100%	9,000	36,000	57,902					9,749							12,390				
4.500	1	1	Allowance	Landscape, Partial Replacements	2020	to 5	2	10,000.00	100%	10,000	10,000	90,594			10,547				12,050					13,767				
4.650	1,380	138	Linear Feet	Pipes, Subsurface Utilities, Partial	2031	to 85+	13 to 30+	200.00	22%	6,072	60,720	19,791													8,585			

RESERVE EXPENDITURES

Harbor Island Beach House and Ocean Villas,
HPR, Inc.
St. Helena, South Carolina

Line Item	Total Quantity	Per Phase Quantity	Units	Reserve Component Inventory	Estimated 1st Year of Event	Life Analysis, Years		Unit Cost, \$	Percentage Ownership	Costs, \$			16 2034	17 2035	18 2036	19 2037	20 2038	21 2039	22 2040	23 2041	24 2042	25 2043	26 2044	27 2045	28 2046	29 2047	30 2048
						Useful	Remaining			Per Phase (2018)	Total (2018)	30-Year Total (Inflated)															
<u>Exterior Building Elements</u>																											
1.105	1,980	990	Linear Feet	Balconies, Railings, Wood, Replacement, Phased	2025	to 30	7 to 8	35.00	100%	34,650	69,300	84,635															
1.110	36	18	Each	Balconies, Screens, Phased	2025	to 15	7 to 8	800.00	100%	14,400	28,800	87,626						25,877	26,576								
1.120	3,000	1,500	Square Feet	Balconies, Wood, Phased	2025	to 30	7 to 8	40.00	100%	60,000	120,000	146,554															
1.121	7,650	3,825	Square Feet	Breezeways, Wood, Phased	2025	to 30	7 to 8	40.00	100%	153,000	306,000	373,713															
1.240	350	350	Linear Feet	Gutters and Downspouts, Aluminum	2028	15 to 20	10	11.00	100%	3,850	3,850	13,143												8,118			
1.260	46	23	Each	Light Fixtures, Phased	2027	to 25	9 to 11	75.00	100%	1,725	3,450	4,504															
1.280	160	160	Squares	Roofs, Asphalt Shingles	2028	15 to 20	10	510.00	100%	81,600	81,600	278,564												172,053			
1.530	9,970	9,970	Square Feet	Roof, Thermoplastic	2028	15 to 20	10	12.50	100%	124,625	124,625	425,442												262,771			
1.555	20	10	Each	Staircases, Wood, Phased	2025	to 30	7 to 8	6,800.00	100%	68,000	136,000	166,095															
1.755	29,630	29,630	Square Feet	Walls, Fiber Cement Siding, Paint Finishes and Repairs	2038	8 to 10	20	2.40	100%	71,112	71,112	279,303					121,158									158,145	
1.760	29,630	29,630	Square Feet	Walls, Wood Siding, Paint Finishes and Repairs	2019	4 to 6	1	2.40	100%	71,112	71,112	156,470															
1.845	29,650	14,825	Square Feet	Walls, Wood Siding (Replace with Fiber Cement), Phased	2027	to 45	9 to 11	12.00	100%	177,900	355,800	464,584															
<u>Interior Building Elements</u>																											
2.100	1	1	Each	Elevator Cab Finishes	2028	to 20	10	10,500.00	100%	10,500	10,500	37,056															23,351
<u>Building Services Elements</u>																											
3.320	1	1	Each	Elevator, Hydraulic, Pump and Controls	2048	to 35	30	45,000.00	100%	45,000	45,000	100,075															100,075
3.330	1	1	Each	Elevator, Hydraulic, Cylinder	2032	to 45	14	34,000.00	100%	34,000	34,000	49,370															
3.555	2	1	Allowance	Life Safety System, Control Panels	2025	to 15	7	4,000.00	100%	4,000	8,000	11,456				6,636											
3.560	1	1	Allowance	Life Safety System, Emergency Devices	2025	to 25	7	7,000.00	100%	7,000	7,000	8,435															
3.605	216	11	Each	Pipes, Riser Sections, Domestic Water and Waste, Partial	2037	to 80+	19 to 30+	1,100.00	100%	11,880	237,600	45,434				19,709									25,725		
<u>Property Site Elements</u>																											
4.020	12,000	12,000	Square Yards	Asphalt Pavement, Crack Repair, Patch and Seal Coat	2020	3 to 5	2	1.70	22%	4,488	4,488	56,643			7,250			8,065					8,972			9,981	
4.040	12,000	12,000	Square Yards	Asphalt Pavement, Mill and Overlay	2024	15 to 20	6	13.00	22%	34,320	34,320	40,269															
4.045	12,000	12,000	Square Yards	Asphalt Pavement, Total Replacement	2044	15 to 20	26	25.00	22%	66,000	66,000	131,940											131,940				
4.084	12,550	6,275	Square Feet	Boardwalks, Wood, Decks and Rails, Phased	2047	20 to 25	29 to 30	15.00	22%	73,418	146,835	322,252													158,980	163,272	
4.085	12,550	6,275	Square Feet	Boardwalks, Wood, Replacement, Phased	2027	to 40	9 to 10	25.00	22%	122,363	244,725	315,237															
4.140	6,000	480	Square Feet	Concrete Sidewalks, Partial	2021	to 65	3 to 30+	11.00	22%	1,162	14,520	8,884						2,033					2,385				
4.420	20	5	Zones	Irrigation System, Phased	2021	to 40	3 to 30	1,800.00	100%	9,000	36,000	57,902						15,748								20,015	
4.500	1	1	Allowance	Landscape, Partial Replacements	2020	to 5	2	10,000.00	100%	10,000	10,000	90,594		15,729					17,970					20,531			
4.650	1,380	138	Linear Feet	Pipes, Subsurface Utilities, Partial	2031	to 85+	13 to 30+	200.00	22%	6,072	60,720	19,791											11,206				

RESERVE EXPENDITURES

Harbor Island Beach House and Ocean Villas,
HPR, Inc.
St. Helena, South Carolina

Explanatory Notes:

- 1) **2.7%** is the estimated future Inflation Rate for estimating Future Replacement Costs.
- 2) **FY2018** is Fiscal Year beginning January 1, 2018 and ending December 31, 2018.

Line Item	Total Quantity	Per Phase Quantity	Units	Reserve Component Inventory	Estimated 1st Year of Event	Life Analysis, Years		Unit Cost, \$	Percentage Ownership	Costs, \$			RUL = 0 FY2018	1 2019	2 2020	3 2021	4 2022	5 2023	6 2024	7 2025	8 2026	9 2027	10 2028	11 2029	12 2030	13 2031	14 2032	15 2033
						Useful	Remaining			Per Phase (2018)	Total (2018)	30-Year Total (Inflated)																
<u>Pool Elements</u>																												
6.200	2,540	2,540	Square Feet	Concrete Deck, Textured Coating, Partial Replacements and Repairs	2022	8 to 12	4	4.00	100%	10,160	10,160	45,313					11,303										14,753	
6.400	260	260	Linear Feet	Fence, Wood	2022	15 to 20	4	20.00	100%	5,200	5,200	15,641					5,785											
6.800	1,160	1,160	Square Feet	Pool Finish, Plaster	2022	8 to 12	4	11.50	100%	13,340	13,340	59,495					14,840										19,371	
6.850	2	2	Each	Pool House, Rest Rooms, Renovation	2022	to 20	4	3,000.00	100%	6,000	6,000	18,047					6,675											
6.900	1,160	1,160	Square Feet	Structure and Deck, Total Replacement	2047	to 60	29	150.00	100%	174,000	174,000	376,784																
Anticipated Expenditures, By Year												\$4,291,251	0	73,032	15,281	11,007	38,603	0	128,973	423,021	408,454	385,292	453,488	240,791	26,157	8,585	90,011	1,732

RESERVE EXPENDITURES

Harbor Island Beach House and Ocean Villas,
HPR, Inc.
St. Helena, South Carolina

Line Item	Total Quantity	Per Phase Quantity	Units	Reserve Component Inventory	Estimated 1st Year of Event	Life Analysis, Years		Unit Cost, \$	Percentage Ownership	Costs, \$			16 2034	17 2035	18 2036	19 2037	20 2038	21 2039	22 2040	23 2041	24 2042	25 2043	26 2044	27 2045	28 2046	29 2047	30 2048
						Useful	Remaining			Per Phase (2018)	Total (2018)	30-Year Total (Inflated)															
<u>Pool Elements</u>																											
6.200	2,540	2,540	Square Feet	Concrete Deck, Textured Coating, Partial Replacements and Repairs	2022	8 to 12	4	4.00	100%	10,160	10,160	45,313															19,257
6.400	260	260	Linear Feet	Fence, Wood	2022	15 to 20	4	20.00	100%	5,200	5,200	15,641															9,856
6.800	1,160	1,160	Square Feet	Pool Finish, Plaster	2022	8 to 12	4	11.50	100%	13,340	13,340	59,495															25,284
6.850	2	2	Each	Pool House, Rest Rooms, Renovation	2022	to 20	4	3,000.00	100%	6,000	6,000	18,047															11,372
6.900	1,160	1,160	Square Feet	Structure and Deck, Total Replacement	2047	to 60	29	150.00	100%	174,000	174,000	376,784															376,784
Anticipated Expenditures, By Year												\$4,291,251	0	15,729	7,250	26,345	121,158	17,781	51,912	37,782	65,769	0	140,912	22,916	442,942	561,489	474,839

RESERVE FUNDING PLAN

CASH FLOW ANALYSIS Harbor Island Beach House and Ocean Villas, HPR, Inc.

Individual Reserve Budgets & Cash Flows for the Next 30 Years

St. Helena, South Carolina	FY2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Reserves at Beginning of Year (Note 1)	0	19,575	21,590	117,885	256,130	404,898	631,130	737,089	554,353	389,454	251,565	49,111	64,477	120,580	197,577	195,983
Total Recommended Reserve Contributions (Note 2)	19,492	74,700	110,400	146,100	181,800	217,500	223,400	229,400	235,600	242,000	248,500	255,200	80,700	82,900	85,100	87,400
Plus Estimated Interest Earned, During Year (Note 3)	83	347	1,176	3,152	5,571	8,732	11,532	10,885	7,955	5,403	2,534	957	1,560	2,682	3,317	4,060
Less Anticipated Expenditures, By Year	0	(73,032)	(15,281)	(11,007)	(38,603)	0	(128,973)	(423,021)	(408,454)	(385,292)	(453,488)	(240,791)	(26,157)	(8,585)	(90,011)	(1,732)
Anticipated Reserves at Year End	\$19,575	\$21,590	\$117,885	\$256,130	\$404,898	\$631,130	\$737,089	\$554,353	\$389,454	\$251,565	\$49,111	\$64,477	\$120,580	\$197,577	\$195,983	\$285,711
Predicted Reserves based on 2018 funding level of: \$38,983	19,575	(14,431)									(NOTE 5)					

(continued)

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

	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
Reserves at Beginning of Year	285,711	381,131	464,731	560,825	641,917	631,391	727,665	793,978	878,492	939,143	1,070,178	1,064,457	1,180,865	878,984	455,745
Total Recommended Reserve Contributions	89,800	92,200	94,700	97,300	99,900	102,600	105,400	108,200	111,100	114,100	117,200	120,400	123,700	127,000	130,400
Plus Estimated Interest Earned, During Year	5,620	7,129	8,644	10,137	10,732	11,455	12,825	14,096	15,320	16,935	17,991	18,924	17,361	11,250	4,820
Less Anticipated Expenditures, By Year	0	(15,729)	(7,250)	(26,345)	(121,158)	(17,781)	(51,912)	(37,782)	(65,769)	0	(140,912)	(22,916)	(442,942)	(561,489)	(474,839)
Anticipated Reserves at Year End	\$381,131	\$464,731	\$560,825	\$641,917	\$631,391	\$727,665	\$793,978	\$878,492	\$939,143	\$1,070,178	\$1,064,457	\$1,180,865	\$878,984	\$455,745	\$116,126

(NOTES 4&5)

Explanatory Notes:

- 1) Year 2018 starting reserves are as of June 19, 2018; FY2018 starts January 1, 2018 and ends December 31, 2018.
- 2) Reserve Contributions for 2018 are the remaining budgeted 6 months; 2019 is the first year of recommended contributions.
- 3) 1.7% is the estimated annual rate of return on invested reserves; 2018 is a partial year of interest earned.
- 4) Accumulated year 2048 ending reserves consider the age, size, overall condition and complexity of the property.
- 5) Threshold Funding Years (reserve balance at critical point).

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



Building M overview



Building L overview

Balconies, Railings, Wood

Line Item: 1.105

Quantity: Approximately 1,980 linear feet of wood railings at the balconies, breezeways and staircases

History: Original to construction with repairs performed as needed

Conditions: Good overall with isolated deterioration evident



Wood railing overview



Wood railings in good condition

Useful Life: Railings of this type have a useful life of up to 30 years with the benefit of periodic maintenance. Periodic maintenance should include applications of a protective paint finish and partial replacement of deteriorated wood.

Component Detail Notes: Preparation of the wood before application of the paint finish is critical to maximize the useful life of the finish.

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

Expenditure Detail Notes: Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. We include paint finish applications and repairs to the wood railings with “**Walls, Wood Siding, Paint Finishes and Repairs**” and “**Walls, Fiber Cement Siding, Paint Finishes and Repairs.**”

Balconies, Screens

Line Item: 1.110

Quantity: 36 balcony screens at Building L

History: Reportedly original to construction with repairs performed as needed

Condition: Good overall with isolated tears evident



Screens at the balconies



Isolated tears

Useful Life: Up to 15 years

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

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

Balconies and Breezeways, Wood

Line Items: 1.120 and 1.121

Quantity: Approximately 3,000 square feet of wood balconies and approximately 7,650 square feet of wood breezeways

History: Original to construction with repairs performed as needed

Condition: Good overall with isolated deterioration evident



Balconies overview



Breezeway overview



Isolated fascia deterioration at the balconies



Carpets at the breezeways

Useful Life: Up to 30 years with proper maintenance

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. Proper maintenance should include the following activities funded through the operating budget:

- Annual inspections to identify and correct any unsafe conditions
- Securing of loose fasteners and replacement of deteriorated fasteners
- Replacement of deteriorated wood components
- Power washing with an algaecide and application of a sealer/stain

Gutters and Downspouts, Aluminum

Line Item: 1.240

Quantity: Approximately 350 linear feet of aluminum six-inch seamless gutters and three-inch by four-inch downspouts

History: Likely replaced with the roofs and major repairs were performed in 2017.

Condition: Good overall



Typical gutter and downspout assembly

Useful Life: 15- to 20-years

Component Detail Notes: Downspouts that discharge directly onto roofs cause premature deterioration of the roofs due to the high concentration of storm water. We recommend either routing these downspouts directly to the ground, connecting the downspouts to the gutters of the lower roof or distributing the storm water discharge over a large area.

The useful life of gutters and downspouts coincides with that of the asphalt shingle 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.

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.

Light Fixtures

Line Item: 1.260

Quantity: Approximately 46 exterior wall and ceiling mounted light fixtures

History: Mostly original to construction with replacements as needed

Condition: Fair overall



Ceiling light fixture

Useful Life: Up to 25 years

Priority/Criticality: Per Board discretion

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

Roofs, Asphalt Shingles

Line Item: 1.280

Quantity: Approximately 160 squares¹ of asphalt shingle roofs at the buildings

History: Replaced in 2009

Condition: Good overall with

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



Asphalt shingle roof overview



Isolated replaced sections of shingles

Useful Life: 15- to 20-years

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

- Laminate shingles
- Boston style ridge caps
- Rubber seal with plastic base boot flashing at waste pipes
- Metal drip edge
- Enclosed full weaved valleys

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

The Association should periodically ensure that the vents are clear of debris and are not blocked from above by attic insulation. If the soffit vents are blocked from above, the Association should install polystyrene vent spaces or baffles between the roof joists at these locations to ensure proper ventilation. Harbor Island should fund this ongoing maintenance through the operating budget.

Certain characteristics of condition govern the times of replacement. Replacement of an asphalt shingle roof becomes necessary when there are multiple or recurring leaks and when the shingles begin to cup, curl and lift. These conditions are indications that the asphalt shingle roof is near the end of its useful life. Even if the shingles are largely

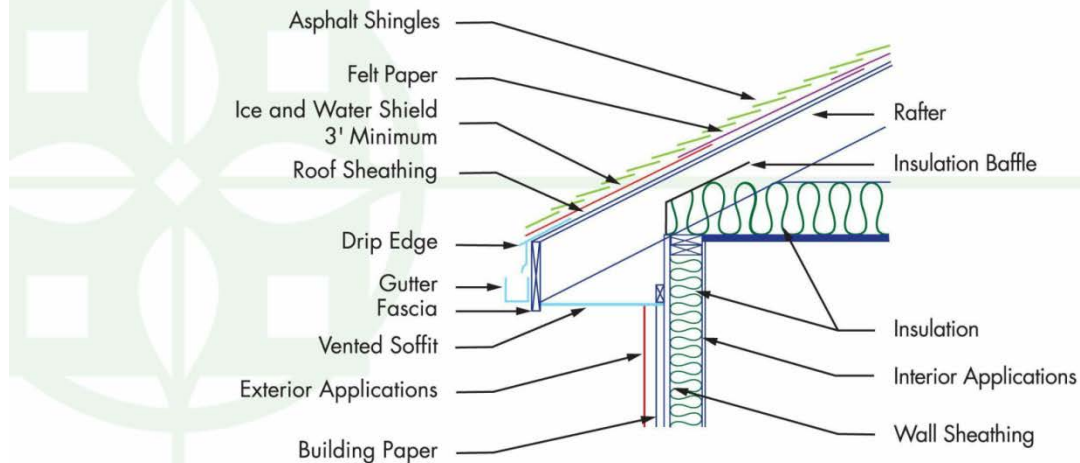
watertight, the infiltration of water in one area can lead to permanent damage to the underlying roof sheathing. This type of deterioration requires replacement of saturated sections of sheathing and greatly increases the cost of roof replacement. Roof leaks may occur from interrelated roof system components, i.e., flashings. Therefore, the warranty period, if any, on the asphalt shingles, may exceed the useful life of the roof system.

Warranties are an indication of product quality and are not a product guarantee. Asphalt shingle product warranties vary from 20- to 50-years and beyond. However, the scope is usually limited to only the material cost of the shingles as caused by manufacturing defects. Warranties may cover defects such as thermal splitting, granule loss, cupping, and curling. Labor cost is rarely included in the remedy so if roof materials fail, the labor to tear off and install new shingles is extra. Other limitations of warranties are exclusions for "incidental and consequential" damages resulting from age, hurricanes, hail storms, ice dams, severe winds, tornadoes, earthquakes, etc. There are some warranties which offer no dollar limit for replacement at an additional cost (effectively an insurance policy) but again these warranties also have limits and may not cover all damages other than a product defect. We recommend a review of the manufacturers' warranties as part of the evaluation of competing proposals to replace a roof system. This evaluation should identify the current costs of remedy if the roof were to fail in the near term future. A comparison of the costs of remedy to the total replacement cost will assist in judging the merits of the warranties.

Contractors use one of two methods for replacement for 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 following cross-sectional schematic illustrates an asphalt shingle roof system:

ROOF SCHEMATIC



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Contractors use one of two methods for replacement for 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.

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 base our cost on replacement with standard laminate Class A 240-260-pounds per square shingles.

Roof, Thermoplastic

Line Item: 1.530

Quantity: Approximately 9,970 square feet of thermoplastic roofs at Building L

History: Replaced in 2009 in conjunction with the surrounding asphalt shingle roof. Repairs were performed in 2017 after Hurricane Matthew.

Condition: Good overall with isolated bulges and standing water



Thermoplastic roof overview



Isolated bulges at the roof



Standing water at the roof

Useful Life: 15- to 20-years

Component Detail Notes: 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.

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.

Staircases

Line Item: 1.600

Quantity: approximately 20 staircases at the buildings

History: Original to construction with repairs performed as needed

Condition: Good overall



Staircases at Building M



Staircase overview



Stairs in good condition

Useful Life: Up to 30 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. The Association should budget for periodic power washing and minor replacements through the operating budget.

Walls, Paint Finishes

Line Items: 1.755 and 1.760

Quantity: Approximately 29,630 square feet of wood siding, trim, soffit and fascia is located at the buildings throughout the community

History: Paint finishes were applied in 2012

Condition: Fair- to poor-overall with deterioration and stains evident



Paint finishes in fair- to poor-condition



Paint finish deterioration



Paint finish deterioration



Stains

Useful Life: Four- to six-years for wood siding and 8- to 10- for fiber cement siding

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

Expenditure Detail Notes: Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. We assume the following activities during each wood siding paint finish application:

- Paint finish applications
- Replacement of 1,480 square feet, or up to five percent (5%), of the wood siding and trim (The exact amount of material in need of replacement will depend on the actual future conditions and desired appearance. We recommend replacement wherever holes, cracks and deterioration impair the ability of the material to prevent water infiltration.)
- Replacement of sealants as needed

We assume the following activities during each fiber cement siding paint finish application:

- Paint finish applications
- Replacement of 590 square feet, or up to two percent (2%), of the fiber cement siding and trim (The exact amount of material in need of replacement will depend on the actual future conditions and desired appearance. We recommend replacement wherever holes, cracks and deterioration impair the ability of the material to prevent water infiltration.)
- Replacement of sealants as needed

Walls, Wood Siding, Replacement

Line Item: 1.845

Quantity: Approximately 29,630 square feet of wood siding, trim, soffit and fascia is located at the buildings throughout the community

History: Original to construction with repairs as needed

Condition: Fair overall with deterioration evident throughout the community



Wood siding deterioration



Wood siding deterioration



Wood siding deterioration



Wood trim deterioration



Wood soffit being replaced



Wood siding deterioration

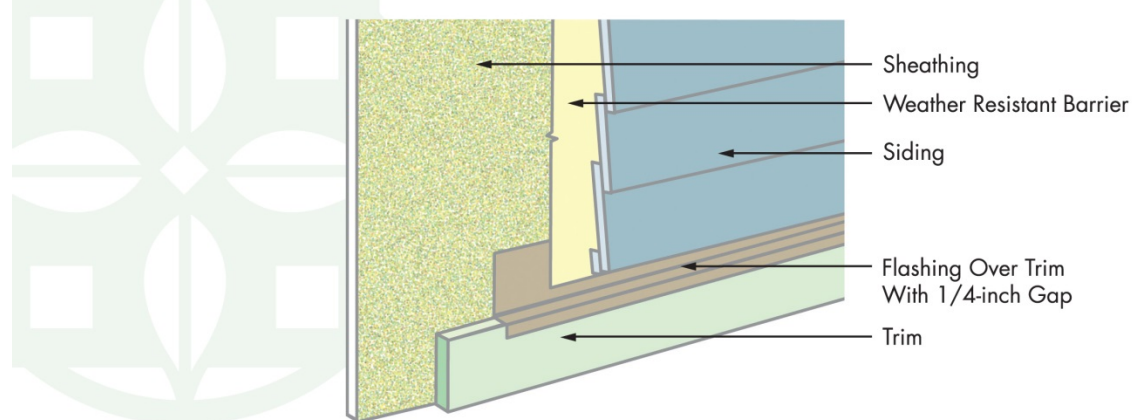
Useful Life: Wood siding has a typical useful life of 35- to 45-years with the benefit of paint finish applications every four- to six-years. Fiber cement siding with the benefit of periodic maintenance can have a useful life of up to 50 years. This useful life is based on a high grade pre-finish applied in the factory. This useful life is also dependent upon paint applications and partial replacements up to every 8- to 10-years.

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

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

The following diagram details a fiber cement siding system at the interface with other building components:

FIBER CEMENT SIDING 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.

Interior Building Elements

Elevator Cab Finishes

Line Item: 2.100

Quantity: One elevator at Building L

History: At an unknown age

Condition: Good overall



Useful Life: Up to 20 years

Component Detail Notes: The elevator cab finishes consist of:

- Rubberized floor coverings
- Wood wall coverings
- Metal ceiling with light fixtures

Priority/Criticality: Per Board discretion

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

Building Services Elements

Elevator, Hydraulic

Line Items: 3.320 and 3.330

Quantity: One hydraulic passenger elevator

History: The pumps and controls were replaced in 2013. The cylinder is original to construction

Condition: Reported satisfactory

Useful Life: Pumps and controls have a useful life of up to 35 years. Cylinders have a useful life of up to 45 years.

Component Detail Notes: Major components in a hydraulic elevator system include the pump, controls, cylinder, fluid reservoir and a valve between the cylinder and reservoir. Once activated by the elevator controls, the pump forces hydraulic fluid from



the reservoir into the cylinder. The piston within the cylinder rises lifting the elevator cab. The elevator cab lowers at a controlled rate when the controls open the valve.

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

Expenditure Detail Notes: Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. We anticipate the following hydraulic elevator system components will require replacement:

- Cab control panel
- Door operator
- Hallway panels/buttons
- Microprocessor based controller
- Pump (20-HP)

These costs may vary based on the desired scope of the actual replacements, changes in technology and requirements of local codes or ordinances at the actual times of replacements. However, we judge our estimated costs sufficient to budget appropriate reserves at this time. The Association should require the contractor to verify that elevator component replacements include all of the necessary features for the latest in elevator code compliance.

Life Safety System

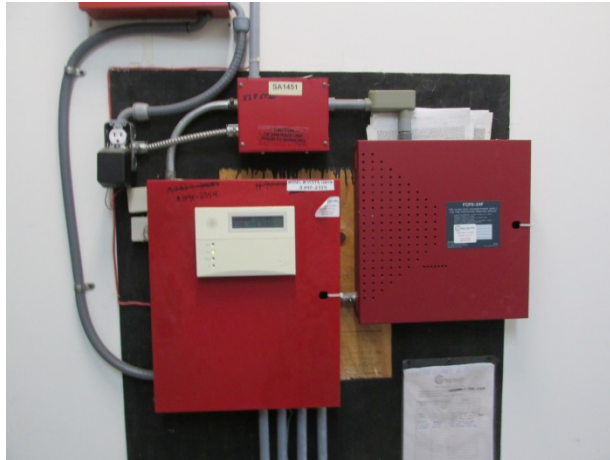
Line Items: 3.555 and 3.560

Quantity: The life safety system at Harbor Island includes the following components:

- Control panels
- Detectors
- Emergency light fixtures
- Exit light fixtures
- Pull stations
- Wiring

History: At varied ages

Conditions: Reported satisfactory



Life safety control panel

Useful Life: Up to 25 years for the devices and up to 15 years for the control panels

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. Changes in technology or building codes may make a replacement desirable prior to the end of the functional life. Our estimate of future cost considers only that amount necessary to duplicate the same functionality. Local codes or ordinances at the actual time of replacement may require a betterment as compared to the existing system. A betterment could result in a higher, but at this time unknown, cost of replacement.

Pipes

Line Item: 3.605

Quantity: We estimate that the community contains approximately 216 copper riser pipes. We estimate that each unit shares domestic water plumbing pipes for either the kitchen or bathroom with the adjacent unit.

History: Original to construction with repairs performed as needed

Conditions: Reported satisfactory without a history of leaks

Component Detail Notes: The Association is responsible for maintenance and replacement of the piping systems arranged in vertical and horizontal segments. These pipes comprise the following:

- Domestic cold water
- Domestic hot water supply and return
- Sanitary waste disposal

The exact locations and conditions of the pipes were not ascertained due to the nature of their location and the non-invasive nature of our inspection. We comment on the respective quantities and conditions of the piping systems in the following sections of this narrative.

Domestic Water - Copper piping is the predominant type of pipe used in new construction for domestic water piping. With low mineral content in the water, the useful life of copper domestic water pipes is up to and sometimes beyond 80 years. However, there is recent evidence that copper piping prematurely develops pinhole leaks. Studies have shown that changes in water treatment practices, recently required in response to U.S. Environmental Protection Agency regulations, are dramatically increasing the risk of pitting corrosion in many geographic locations. Utility companies are implementing higher chloride levels to prevent outbreaks of waterborne disease. These higher chloride levels can accelerate corrosion of copper pipes and indeterminately reduce their useful life.

In the event that numerous pinhole leaks develop or occur throughout the system of pipes, Harbor Island should also consider “in-place” pipe restoration technology. This process includes drying, sandblasting away interior pipe occlusions and applying an epoxy lining to the interior surfaces of the pipes. Future updates of this study will consider the possibility of the pipe restoration process in lieu of pipe replacement at Harbor Island. Restoration technology can extend the useful life of a pipe system thus avoiding a system pipe replacement.

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

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

Expenditure Detail Notes: Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. Our cost for a single riser section assumes replacement of all pipes located within each wall opening, associated branch piping, fittings and minimal interior finishes. However, the cost does not include temporary housing for affected residents, pipes within the units or significant interior finishes.

The Association budgets an amount in the annual operating budget for minor pipe repairs and replacements. We recommend the Association continue to fund interim pipe replacements, prior to more aggregate replacements identified in the following paragraphs, from the operating budget. We also recommend the Association contract for an invasive investigation of the condition of the piping system prior to beginning more aggregate replacements, funded through the operating budget.

We recommend the Association budget the following expenditures:

- Domestic water and waste - We include expenditures to replace 32 riser sections beginning by 2031 followed by an increasing rate of replacement as the pipes age. Our estimate provides funds to replace approximately ten percent (10%) of the riser sections during the next 30 years.

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

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

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

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

Property Site Elements

Asphalt Pavement, Crack Repair, Patch and Seal Coat

Line Item: 4.020

Quantity: Approximately 12,000 square yards of asphalt pavement parking areas

History: Repairs were performed within the last year

Condition: Fair overall

Useful Life: Three- to five-years

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

Priority/Criticality: Per Board discretion

Expenditure Detail Notes: Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. Our cost includes an allowance for crack repairs and patching of up to two percent (2%) of the pavement. Harbor Island shares ownership of the asphalt pavement parking areas with Cedar Reef Villas. Harbor Island will contribute twenty-two percent (22%) of the cost of repairs or replacements.

Asphalt Pavement, Repaving

Line Items: 4.040 and 4.045

Quantity: Approximately 12,000 square yards of asphalt pavement parking areas

History: Reportedly original to construction

Condition: Fair overall with previously replaced sections and cracks evident



Asphalt pavement overview



Replaced section of asphalt pavement



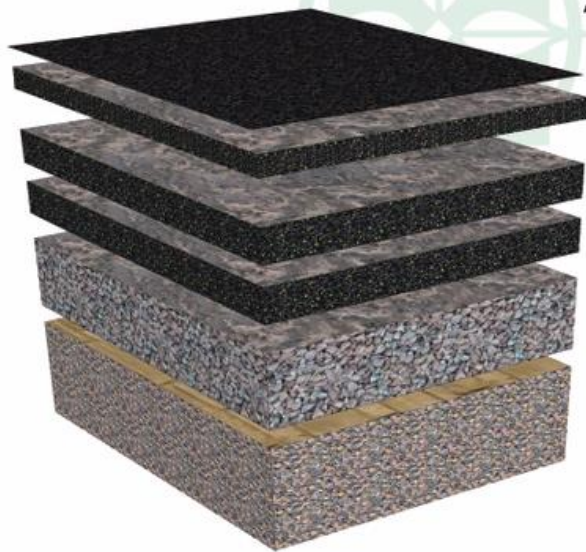
Cracks



Cracks

Useful Life: 15- to 20-years

Component Detail Notes: 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 these components:



ASPHALT DIAGRAM

Sealcoat or Wearing Surface

Asphalt Overlay Not to Exceed 1.5 inch Thickness per Lift or Layer

Original Pavement Inspected and milled until sound pavement is found, usually comprised of two layers

Compacted Crushed Stone or Aggregate Base

Subbase of Undisturbed Native Soils Compacted to 95% dry density

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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 overlay on asphalt pavement that exhibits normal deterioration and wear. We recommend total replacement of asphalt pavement that exhibits severe deterioration, inadequate drainage, pavement that has been overlaid multiple times in the past or where the configuration makes overlayment not possible. Based on the apparent visual condition and configuration of the asphalt pavement, we recommend the mill and overlay method for initial repaving followed by the total replacement method for subsequent repaving at Harbor Island.

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

Expenditure Detail Notes: Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. Our cost for milling and overlayment includes area patching of up to ten percent (10%). Harbor Island shares ownership of the asphalt pavement parking areas with Cedar Reef Villas. Harbor Island will contribute twenty-two percent (22%) of the cost of repairs or replacements.

Boardwalks, Wood

Line Items: 4.084 and 4.085

Quantity: Approximately 12,550 square feet of wood at the four boardwalks that lead to the beach

History: Portions of the boardwalks have been replaced as needed. Therefore the boardwalks are varied in age.

Condition: Good- to fair-overall with isolated wood deterioration and sand atop the boardwalk



Boardwalk overview



Boardwalk in good condition



Boardwalk pull off



Sand atop the boardwalk

Useful Life: 20- to 25-years for replacement of the wood decks and rails and up to 40 year for total replacement.

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. Harbor Island shares ownership of the asphalt pavement parking areas with Cedar Reef Villas. Harbor Island will contribute twenty-two percent (22%) of the cost of repairs or replacements.

Concrete Sidewalks

Line Item: 4.140

Quantity: Approximately 6,000 square feet of concrete sidewalks throughout the community

Condition: Good- to fair-overall with isolated cracks evident



Concrete sidewalk overview



Isolated cracks



Isolated cracks



Isolated cracks

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

Priority/Criticality: Per Board discretion

Expenditure Detail Notes: Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. We estimate that up to 2,400 square feet of concrete sidewalks, or forty percent (40%) of the total, will require replacement during the next 30 years. Harbor Island shares ownership of the concrete sidewalks with Cedar Reef



Villas. Harbor Island will contribute twenty-two percent (22%) of the cost of repairs or replacements.

Irrigation System

Line Item: 4.420

Quantity: 20 zones irrigate the landscape at the buildings

History: Repairs are performed as needed

Condition: Good overall

Useful Life: Up to 40 years

Component Detail Notes: Irrigation systems typically include the following components:

- Electronic controls (timer)
- Impact rotors
- Network of supply pipes
- Pop-up heads
- Valves

Harbor Island should anticipate interim and partial replacements of the system network supply pipes and other components as normal maintenance to maximize the useful life of the irrigation system. The Association should fund these ongoing seasonal repairs through the operating budget.

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.

Landscape

Line Item: 4.500

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



Useful Life: Partial replacements up to every five years

Priority/Criticality: Per Board discretion

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

Pipes, Subsurface Utilities

Line Item: 4.650

Quantity: Approximately 1,380 linear feet of subsurface utilities provide utilities to the community

History: A large repair project was performed within the last year

Condition: Reported satisfactory

Useful Life: Up to and likely beyond 85 years

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

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

Expenditure Detail Notes: Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. We recommend the Association budget for replacement of twenty percent (20%) of the subsurface utilities during the next 30 years. Although it is likely that the times of replacement and extent of repair costs may vary from the budgetary allowance, Harbor Island could budget sufficient reserves for these utility repairs and have the opportunity to adjust its future reserves up or down to meet any changes to these budgetary estimates. Updates of this Reserve Study would incorporate changes to budgetary costs through a continued historical analysis of the rate of deterioration and actual repairs to budget sufficient reserves. Harbor Island shares ownership of the subsurface utilities with Cedar Reef Villas. Harbor Island will contribute twenty-two percent (22%) of the cost of repairs or replacements.

Pool Elements

Concrete Deck

Line Item: 6.200

Quantity: Approximately 2,540 square feet of concrete deck at the pool

History: Repairs were performed within the last 14 years

Condition: Good condition with isolated cracks evident



Concrete deck overview



Isolated crack at the deck

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

Component Detail Notes: We recommend the Association budget for the following:

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

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

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

Fence, Wood

Line Item: 6.400

Quantity: Approximately 260 linear feet

History: Repairs are performed as needed

Condition: Fair overall



Wood fence at the pool

Useful Life: 15- to 20-years

Component Detail Notes: The Association should anticipate periodic partial replacements due to the non-uniform nature of wood deterioration. Along with these partial replacements, the Association should apply periodic paint applications as needed and fund these activities through the operating budget.

Priority/Criticality: Not recommended to defer

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

Pool Finishes, Plaster

Line Item: 6.800

Quantity: Approximately 1,160 square feet based on the horizontal surface area

History: The Association has historically painted the concrete shell of the pool. Management and the Board inform us that they intend to install plaster the pool.

Condition: Fair overall



Pool overview



Pool steps

Useful Life: 8- to 12-years

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

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

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.

Pool House, Rest Rooms

Line Item: 6.850

Quantity: Two rest rooms at the pool house

History: Components are at an unknown age

Condition: Fair overall



Rest room overview

Useful Life: Renovations up to 20 years

Component Detail Notes: Components include:

- Coated concrete floor coverings
- Paint finishes on the walls and ceiling
- Light fixtures
- Plumbing fixtures

Priority/Criticality: Per Board discretion

Expenditure Detail Notes: Expenditure timing and costs are depicted in the **Reserve Expenditures** table in Section 3. We include funds for repairs to the concrete floor, reapplication of coating to the concrete and replacement of the remaining elements listed above.

Structures and Decks

Line Item: 6.900

Quantity: Approximately 1,160 square feet of horizontal surface area

History: Original to construction

Conditions: Visually appear in good condition. The concrete floor and walls have a paint finish. This finish makes it difficult to thoroughly inspect the concrete structure during a noninvasive visual inspection.

Useful Life: Up to 60 years

Component Detail Notes: The need to replace a pool structure depends on the condition of the concrete structure, the condition of the embedded or concealed water circulation piping, possible long term uneven settlement of the structure, and the

increasing cost of repair and maintenance. Deterioration of any one of these component systems could result in complete replacement of the pool. For example, deferral of a deteriorated piping system could result in settlement and cracks in the pool structure. This mode of failure is more common as the system ages and deterioration of the piping system goes undetected. For reserve budgeting purposes, we recommend Harbor Island plan to replace the following components:

- Concrete decks
- Pool structures
- Subsurface piping

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

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

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.

Harbor Island can fund capital repairs and replacements in any combination of the following:

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

We do not advocate special assessments or loans unless near term circumstances dictate otherwise. Although loans provide a gradual method of funding a replacement, the costs are higher than if the Association were to accumulate reserves ahead of the actual replacement. Interest earnings on reserves also accumulate in this process of saving or reserving for future replacements, thereby defraying the amount of gradual reserve collections. We advocate the third method of *Level Monthly Reserve Assessments* with relatively minor annual adjustments. The method ensures that 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 standards¹ set forth by the Community Associations Institute (CAI) and the Association of Professional Reserve Analysts (APRA) fulfilling the requirements of a "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
- Local² costs of material, equipment and labor
- Current and future costs of replacement for the Reserve Components
- Costs of demolition as part of the cost of replacement
- Local economic conditions and a historical perspective to arrive at our estimate of long term future inflation for construction costs in St. Helena, South Carolina at an annual inflation rate. Isolated or regional markets of

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

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

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

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

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



6. CREDENTIALS

HISTORY AND DEPTH OF SERVICE

Founded in 1991, Reserve Advisors, Inc. 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 principals are founders of Community Associations Institute's (CAI) Reserve Committee that developed national standards for reserve study providers. One of our principals 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 the 2,600,000-square foot 98-story Trump International Hotel and Tower in Chicago. 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.

QUALIFICATIONS

THEODORE J. SALGADO

Principal Owner

CURRENT CLIENT SERVICES

Theodore J. Salgado is a co-founder of Reserve Advisors, Inc., which is dedicated to serving community associations, city and country clubs, religious organizations, educational facilities, and public and private entities throughout the United States. He is responsible for the production, management, review, and quality assurance of all reserve studies, property inspection services and consulting services for a nationwide portfolio of more than 6,000 clients. Under his direction, the firm conducts reserve study services for community associations, apartment complexes, churches, hotels, resorts, office towers and vintage architecturally ornate buildings.



PRIOR RELEVANT EXPERIENCE

Before founding Reserve Advisors, Inc. with John P. Poehlmann in 1991, Mr. Salgado, a professional engineer registered in the State of Wisconsin, served clients for over 15 years through American Appraisal Associates, the world's largest full service valuation firm. Mr. Salgado conducted facilities analyses of hospitals, steel mills and various other large manufacturing and petrochemical facilities and casinos.

He has served clients throughout the United States and in foreign countries, and frequently acted as project manager on complex valuation, and federal and state tax planning assignments. His valuation studies led to negotiated settlements on property tax disputes between municipalities and property owners.

Mr. Salgado has authored articles on the topic of reserve studies and facilities maintenance. He also co-authored *Reserves*, an educational videotape produced by Reserve Advisors on the subject of Reserve Studies and maintaining appropriate reserves. Mr. Salgado has also written in-house computer applications manuals and taught techniques relating to valuation studies.

EXPERT WITNESS

Mr. Salgado has testified successfully before the Butler County Board of Tax Revisions in Ohio. His depositions in pretrial discovery proceedings relating to reserve studies of Crestview Estates Condominium Association in Wauconda, Illinois, Rivers Point Row Property Owners Association, Inc. in Charleston, South Carolina and the North Shore Club Associations in South Bend, Indiana have successfully assisted the parties in arriving at out of court settlements.

EDUCATION - Milwaukee School of Engineering - B.S. Architectural Engineering

PROFESSIONAL AFFILIATIONS/DESIGNATIONS

American Association of Cost Engineers - Past President, Wisconsin Section

Association of Construction Inspectors - Certified Construction Inspector

Association of Professional Reserve Analysts - Past President & Professional Reserve Analyst (PRA)

Community Associations Institute - Member and Volunteer Leader of multiple chapters

Concordia Seminary, St. Louis - Member, National Steering Committee

Milwaukee School of Engineering - Member, Corporation Board

Professional Engineer, Wisconsin (1982) and North Carolina (2014)

Ted continually maintains his professional skills through American Society of Civil Engineers, ASHRAE, Association of Construction Inspectors, and continuing education to maintain his professional engineer licenses.

JOHN P. POEHLMANN, RS
Principal

John P. Poehlmann is a co-founder of Reserve Advisors, Inc. He is responsible for the finance, accounting, marketing, and overall administration of Reserve Advisors, Inc. He also regularly participates in internal Quality Control Team Reviews of Reserve Study reports.



Mr. Poehlmann directs corporate marketing, including business development, advertising, press releases, conference and trade show exhibiting, and electronic marketing campaigns. He frequently speaks throughout the country at seminars and workshops on the benefits of future planning and budgeting for capital repairs and replacements of building components and other assets.

PRIOR RELEVANT EXPERIENCE

Mr. Poehlmann served on the national Board of Trustees of Community Associations Institute. An international organization, Community Associations Institute (CAI) is a nonprofit 501(c)(3) trade association created in 1973 to provide education and resources to America's 335,000 residential condominium, cooperative and homeowner associations and related professionals and service providers.

He is a founding member of the Institute's Reserve Committee. The Reserve Committee developed national standards and the Reserve Specialist (RS) Designation Program for Reserve Study providers. Mr. Poehlmann has authored numerous articles on the topic of Reserve Studies, including Reserve Studies for the First Time Buyer, Minimizing Board Liability, Sound Association Planning Parallels Business Concepts, and Why Have a Professional Reserve Study. He is also a contributing author in Condo/HOA Primer, a book published for the purpose of sharing a wide background of industry knowledge to help boards in making informed decisions about their communities.

INDUSTRY SERVICE AWARDS

- CAI Wisconsin Chapter Award
- CAI National Rising Star Award
- CAI Michigan Chapter Award

EDUCATION

- University of Wisconsin-Milwaukee - Master of Science Management
- University of Wisconsin - Bachelor of Business Administration

PROFESSIONAL AFFILIATIONS

- Community Associations Institute (CAI)** - Founding member of Reserve Committee; former member of National Board of Trustees; Reserve Specialist (RS) designation; Member of multiple chapters
- Association of Condominium, Townhouse, & Homeowners Associations (ACTHA)** – member



ALFRED VICTOR VOGT, EIT
Responsible Advisor

CURRENT CLIENT SERVICES

Alfred Victor Vogt, a Civil Engineer, is an Advisor for Reserve Advisors, which is dedicated to serving community associations, religious organizations, educational facilities, and public and private entities throughout the United States. Mr. Vogt is responsible for the inspection and analysis of the property's current condition, recommending engineering solutions to prolong the lives of building components, forecasting capital expenditures for the repair and/or replacement of the property components, and technical report preparation on assignments. He is responsible for conducting Life Cycle Cost Analysis and Capital Replacement Forecast Services on townhomes, homeowners associations and planned unit developments.

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

Escondora Condominium Owners Association, Inc. A gated Mediterranean style condominium development, situated in central Texas, that features a view of the surrounding countryside. The homes are comprised of a combination of masonry and stucco exteriors, with clay tile roofs.

Heights at Stone Oak Homeowners Association Upscale gated community in San Antonio, Texas comprising over 1,000 homes. Amenities include gate houses with on-site security personnel, miles of perimeter walls and a park development including a pool, playground and tennis and basketball courts.

Boardwalk GR Association Prominent, historic condominium building in Grand Rapids, Michigan. Converted from a furniture factory built in 1892, this condominium contains a game room, several restaurants and a four story garage.

Timber Creek Condominium at Winghaven Association An apartment style condominium development located outside of St. Louis, Missouri. The buildings comprise vinyl siding, asphalt shingle roofs and wood balconies. The Association maintains private concrete street systems, sidewalks and stoops.

Grand Oaks Office Condominium Association, Inc. An office park located in Austin, Texas which houses local businesses and contains a large concrete drainage basin. The exteriors of the buildings comprise stucco and masonry veneer with asphalt shingle roofs.

Rumson Country Club Country club located in Rumson, New Jersey that overlooks the Atlantic Ocean. This historic club contains an 18-hole golf course, a shooting range, and boat pier along with two clubhouses.

Canyon at Lake Travis Residential Community, Inc. A developing community in Austin, Texas that features a scenic overlook of the nearby Mansfield Dam. This community features private streets and a prominent entrance monument.

Barton Creek North Property Owners Association A Master Association responsible for the common elements shared by many subsidiary Associations west of Austin, Texas. The community is responsible for its extensive landscape displays and irrigation.

PRIOR RELEVANT EXPERIENCE

Before joining Reserve Advisors, Mr. Vogt attended Texas A&M University, in College Station, Texas, where he majored in Civil Engineering. His relevant course work includes foundations, structure design and project planning. While attending Texas A&M, he assisted in the design and life cycle cost analysis of a shipping plant in Dallas, Texas.

EDUCATION

Texas A&M University - B.S. Civil Engineering



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, Inc. 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. Several advisors and a Principal of Reserve Advisors, Inc. hold Senior Memberships with ACI.

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

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

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

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

Reserve Advisors, Inc., 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 Harbor Island 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) Harbor Island 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, Inc. (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.