FULL RESERVE STUDY

Cobblestone Homeowners Association, Inc.



Tucson, Arizona January 24, 2017



Long-term thinking. Everyday commitment.

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Reserve Advisors. Inc. 735 N. Water Street, Suite 175 Milwaukee, WI 53202

1. RESERVE STUDY EXECUTIVE SUMMARY

Client: Cobblestone Homeowners Association, Inc. (Cobblestone)

Location: Tucson, Arizona

Reference: 161764

Property Basics: Cobblestone Homeowners Association, Inc. is a homeowners association which is responsible for the common elements shared by 130 single family homes. The single family homes were built from approximately 1980 to 1985. The development contains asphalt pavement streets, masonry pavers, concrete flatwork, perimeter walls, a gatehouse and an office building.

Reserve Components Identified: 19 Reserve Components.

Inspection Date: January 24, 2017.

Funding Goal: The Funding Goal of this Reserve Study is to maintain reserves above an adequate, not excessive threshold during one or more years of significant expenditures. Our recommended Funding Plan recognizes this threshold funding year in 2028 due to asphalt repaying.

The **Reserve Funding Plan** recommends 2047 year end accumulated reserves of approximately \$812,600. We judge this amount of accumulated reserves in 2047 desirable or necessary, to fund subsequent asphalt repaying after 2047. Future replacement costs beyond the next 30 years for asphalt pavement is likely to more than double the current cost of replacement. These future needs, although beyond the limit of the Cash Flow Analysis of this Reserve Study, are reflected in the amount of accumulated 2047 year end reserves.

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
- 1.2% annual rate of return on invested reserves
- 1.1% 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: \$445,878 as of January 1, 2017. A potential deficit in reserves might occur by 2027 based upon continuation of the most recent annual reserve contribution of \$49,775 and the identified Reserve Expenditures.

Recommended Reserve Funding: The Association budgeted \$49,775 for Reserve Contributions in 2017. We recommend the Association budget annual phased increases in Reserve Contributions of approximately \$12,000 from 2018 through 2022. Afterwards, the Association should budget gradual annual increases in reserve funding that in part consider the effects of inflation through 2047, the limit of this study's Cash Flow Analysis. The initial adjustment in Reserve Contributions of \$12,025 represents about a two percent (2.4%) adjustment in the 2017 total Operating Budget of \$493,384. This initial adjustment of \$12,025 is equivalent to an increase of \$7.71 in the monthly contributions per homeowner.

Certification: This Full Reserve Study exceeds the Community Associations Institute (CAI) and the Association of Professional Reserve Analysts (APRA) standards fulfilling the requirements of a "Level I Full Reserve Study."

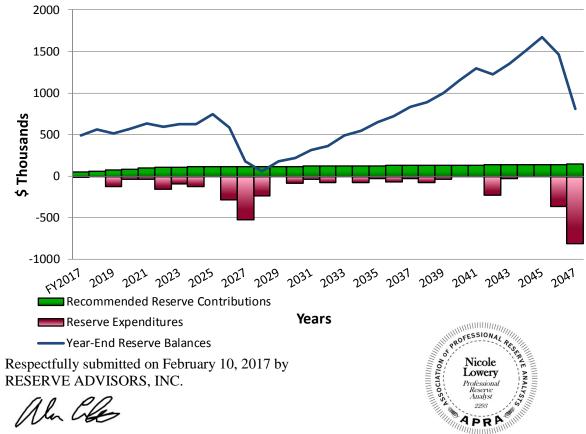






CobblestoneRecommended Reserve Funding Table and Graph

	Reserve	Reserve		Reserve	Reserve		Reserve	Reserve
Year	Contributions (\$)	Balances (\$)	Year	Contributions (\$)	Balances (\$)	Year	Contributions (\$)	Balances (\$)
2018	61,800	558,350	2028	117,200	58,892	2038	130,700	892,289
2019	73,800	514,097	2029	118,500	178,810	2039	132,100	1,003,106
2020	85,800	567,078	2030	119,800	220,712	2040	133,600	1,149,545
2021	97,800	632,332	2031	121,100	311,985	2041	135,100	1,299,250
2022	109,800	592,562	2032	122,400	363,370	2042	136,600	1,225,961
2023	111,000	621,365	2033	123,700	492,173	2043	138,100	1,352,437
2024	112,200	621,033	2034	125,100	547,067	2044	139,600	1,509,104
2025	113,400	742,566	2035	126,500	649,510	2045	141,100	1,669,160
2026	114,600	582,078	2036	127,900	717,858	2046	142,700	1,463,149
2027	115,900	177,872	2037	129,300	831,132	2047	144,300	812,558



Alan M. Ebert, PRA¹, RS², Director of Quality Assurance

Reviewed by: Nicole L. Lowery, PRA, RS, Associate Director of Quality Assurance

Visual Inspection and Report by: Louise L. Heffernan, RS

¹PRA (Professional Reserve Analyst) is the professional designation of the Association of Professional Reserve Analysts. Learn more about APRA at http://www.apra-usa.com.

² 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. 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

Cobblestone Homeowners Association, Inc.

Tucson, Arizona

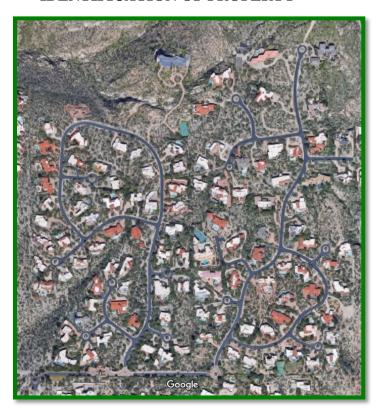
and submit our findings in this report. The effective date of this study is the date of our visual, noninvasive inspection, January 24, 2017.

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
- Condition Assessment 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, financial information relied upon for the Financial Analysis of 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



Cobblestone Homeowners Association, Inc. is a homeowners association which is responsible for the common elements shared by 130 single family homes. The single family homes were built from approximately 1980 to 1985. The development contains asphalt pavement streets, masonry pavers, concrete flatwork, perimeter walls, a gatehouse and an office building. We identify 19 major reserve components that are likely to require capital repair or replacement during the next 30 years.

Our investigation includes Reserve Components or property elements as set forth in your Declaration. 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 the Municipality

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:

- Cobblestone 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, Office Building and Gate House
- Pipes, Interior Building, Domestic Water, Sanitary Waste and Vent, Office Building
- Pipes, Subsurface Utilities
- Structural Frames, Office Building and Gate House
- Windows and Doors, Office Building and Gate House (2016)



The operating budget provides money for the repair and replacement of certain Reserve Components. Operating Budget Funded Repairs and Replacements relate to:

- General Maintenance to the Common Elements
- Expenditures less than \$4,000 (These relatively minor expenditures have a limited effect on the recommended Reserve Contributions.)
- Equipment, Office Building Rear Elevation, Removal (Management and the Board inform us the cable equipment at the rear elevation of the office building is abandoned. The Association should fund removal through the operating budget as needed.)
- Flat Roof, Gate House, Replacement, Interim
- Irrigation System, Controllers and Backflow Valves
- Landscape, Maintenance
- Paint Finishes, Touch Up
- Pavers, Masonry, Inspections, Resetting and Partial Replacements
- Site Furniture
- Water Feature, Maintenance
- Water Heater, Office Building
- 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:

- Driveways
- Homes and Lots
- Mailbox Stations, Housing and Mailboxes

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

• Fence, Chain Link, North Property Perimeter, Cobblestone Road



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
- Unit cost of replacement
- 2017 local cost of replacement
- 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

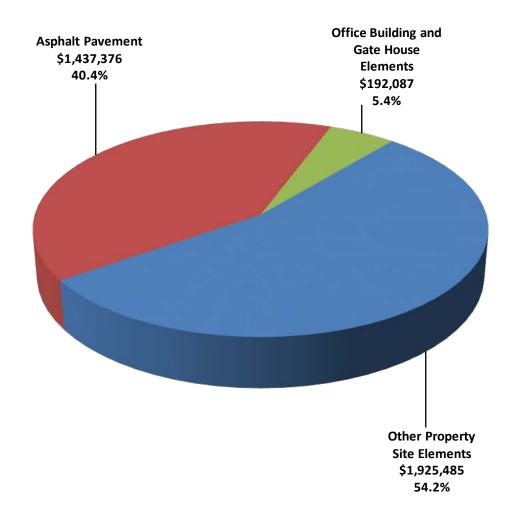
- Reserves at the beginning of each year
- Total recommended reserve contributions
- Estimated interest earned from invested reserves
- Anticipated expenditures by year
- Anticipated reserves at year end
- Predicted reserves based on current funding level

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*.



The following chart illustrates the relative importance of the categories noted in *Reserve**Expenditures* and relative funding during the next 30 years.

CobblestoneFuture Expenditures Relative Cost Illustration



RESERVE EXPENDITURES

Cobblestone Homeowners Association, Inc.

Explanatory Notes:

- 1) 1.1% is the estimated future Inflation Rate for estimating Future Replacement Costs.
- 2) FY2017 is Fiscal Year beginning January 1, 2017 and ending December 31, 2017.

				Tucson, Arizona								-,		is riscai		j		, _0		,		• • • • • • • • • • • • • • • • • • • •					
	-				Estimated		nalysis,			sts,\$		DIII 0		2	2		-	,	7	•	0	10	11	10	10	14	15
Line Item	Total Quantity	Per Pha Quantit		Reserve Component Inventory	1st Year of Event		ears Remaining		Per Phase (2017)	Total (2017)			2018	2019	2020	2021	5 2022	2023	2024	8 2025	9 2026	10 2027	11 2028	12 2029	13 2030	14 2031	20:
				Property Site Elements																							
.020	40,150	40,15	50 Square Yards	Asphalt Pavement, Crack Repair, Patch and Seal Coat (2017 is Budgeted Repairs)	2017	3 to 5	0	1.00	40,150	40,150	292,795	10,941		41,038				42,874							46,286		
1.040	40,150	13,38	83 Square Yards	Asphalt Pavement, Mill and Overlay, Phased	2026	20 to 25	9 to 11	14.00	187,367	562,100	1,144,581										206,753	209,028	211,327				
.110	29,700	67	75 Linear Feet	Concrete Curbs and Gutters, Partial	2019	to 65	2 to 30+	34.50	23,288	1,024,650	305,737			23,803				24,867			25,697	25,980	26,265		26,847		
.140	51,600	1,93	35 Square Feet	Concrete Sidewalks (Incl. Sidewalk Paver Repairs), Partial	2019	to 65	2 to 30+	10.50	20,318	541,800	194,607			20,767				21,696				22,666				23,680	
.220	4,600	4,60	00 Linear Feet	Fences, Chain Link	2024	to 25	7	23.00	105,800	105,800	261,120								114,220								
.245	220	22	20 Linear Feet	Fences, Steel	2022	to 40	5	57.00	12,540	12,540	13,245						13,245										
.320	3		1 Each	Gates and Operators, Swing Arm, Phased	2022	10 to 15	5 to 9	5,300.00	5,300	15,900	36,960						5,598		5,722		5,848						
.330	2		2 Each	Gates, Metal, Decorative, Community Entrance	2026	to 40	9	3,500.00	7,000	7,000	7,724										7,724						
420	4		1 Allowance	Irrigation System, Phased	2019	to 40	2 to 5	23,000.00	23,000	92,000	95,598			23,509	23,767	24,029	24,293										
.500	1		1 Allowance	Landscape, Partial Replacements	2019	to 5	2	15,000.00	15,000	15,000	155,969			15,332	15,500	15,671	15,843					16,734					17,
.620	22,430	22,43	30 Square Feet	Pavers, Masonry (Incl. Office Building Pedestrian Pavers)	2027	to 25	10	10.00	224,300	224,300	561,664											250,231					
.640	22,130	22,13	30 Square Feet	Perimeter Walls, Masonry, Inspections, Repairs and Finish Applications (Incl. Traffic Circle and Monument Paint Finishes)	2022	8 to 10	5	2.20	48,686	48,686	172,791						51,423										57,
.800	1		1 Allowance	Signage, Monuments, Renovations	2022	15 to 20	5	44,000.00	44,000	44,000	104,314						46,474										
810	1		1 Allowance	Signage, Traffic, Replacement	2030	15 to 20	13	6,200.00	6,200	6,200	15,756														7,148		
				Office Building and Gate House Elements																							
.310	1		1 Allowance	Exterior Renovations	2026	8 to 12	9	20,500.00	20,500	20,500	76,011										22,621						
.450	1		1 Allowance	HVAC Equipment	2031	12 to 18	14	8,000.00	8,000	8,000	20,311															9,324	
.500	1		1 Allowance	Interior, Renovations, Complete	2036	to 20	19	34,500.00	34,500	34,500	42,471																
.510	1		1 Allowance	Interior, Renovations, Partial	2026	to 10	9	13,000.00	13,000	13,000	32,199										14,345						
.600	16	1	16 Squares	Roofs, Concrete Tiles (Incl. Gate House Flat Roof)	2046	to 30	29	960.00	15,360	15,360	21,095																
				Anticipated Expenditures, By Year							\$3,554,948	10 941	0	124,449	39 267	39 700	156.876	89 437	119 942	0	282,988	524 639	237 592	0	80 281	33,004	75

RESERVE EXPENDITURES

Cobblestone Homeowners Association, Inc.

Tucson, Arizona						Life A	nalysis,		Co	sts,\$																
Line		Per P		Pour a Common Harris	1st Year of	fY	ears		Per Phase	Total	30-Year Total		17	18	19	20	21	22	23	24	25	26 2043	27 2044	28	29	30
Item	Quantity	Qua	ntity Units	Reserve Component Inventory	Event	Useful	Remaining	(2017)	(2017)	(2017)	(Inflated)	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
				Property Site Elements																						
4.020	40,150	0 40	0,150 Square Yards	Asphalt Pavement, Crack Repair, Patch and Seal Coat (2017 is Budgeted Repairs)	2017	3 to 5	0	1.00	40,150	40,150	292,795		48,357				50,520				52,779					
4.040	40,150	0 13	3,383 Square Yards	Asphalt Pavement, Mill and Overlay, Phased	2026	20 to 25	9 to 11	14.00	187,367	562,100	1,144,581														257,321	260,152
4.110	29,700	0	675 Linear Feet	Concrete Curbs and Gutters, Partial	2019	to 65	2 to 30+	34.50	23,288	1,024,650	305,737		28,047				29,302				30,613				31,982	32,334
4.140	51,600	0 1	1,935 Square Feet	Concrete Sidewalks (Incl. Sidewalk Paver Repairs), Partial	2019	to 65	2 to 30+	10.50	20,318	541,800	194,607			24,740				25,846				27,002				28,210
4.220	4,600	0 4	4,600 Linear Feet	Fences, Chain Link	2024	to 25	7	23.00	105,800	105,800	261,120															146,900
4.245	220	0	220 Linear Feet	Fences, Steel	2022	to 40	5	57.00	12,540	12,540	13,245															
4.320	3	3	1 Each	Gates and Operators, Swing Arm, Phased	2022	10 to 15	5 to 9	5,300.00	5,300	15,900	36,960			6,454		6,596		6,742								
4.330	2	2	2 Each	Gates, Metal, Decorative, Community Entrance	2026	to 40	9	3,500.00	7,000	7,000	7,724															
4.420	4	4	1 Allowance	Irrigation System, Phased	2019	to 40	2 to 5	23,000.00	23,000	92,000	95,598															
4.500	1	1	1 Allowance	Landscape, Partial Replacements	2019	to 5	2	15,000.00	15,000	15,000	155,969					18,669					19,718					20,827
4.620	22,430	0 22	2,430 Square Feet	Pavers, Masonry (Incl. Office Building Pedestrian Pavers)	2027	to 25	10	10.00	224,300	224,300	561,664															311,433
4.640	22,130	0 22	2,130 Square Feet	Perimeter Walls, Masonry, Inspections, Repairs and Finish Applications (Incl. Traffic Circle and Monument Paint Finishes)	2022	8 to 10	5	2.20	48,686	48,686	172,791										64,000					
4.800	1	1	1 Allowance	Signage, Monuments, Renovations	2022	15 to 20	5	44,000.00	44,000	44,000	104,314										57,840					
4.810	1	1	1 Allowance	Signage, Traffic, Replacement	2030	15 to 20	13	6,200.00	6,200	6,200	15,756															8,608
				Office Building and Gate House Elements																						
5.310	1	1	1 Allowance	Exterior Renovations	2026	8 to 12	9	20,500.00	20,500	20,500	76,011				25,236										28,154	
5.450	1	1	1 Allowance	HVAC Equipment	2031	12 to 18	14	8,000.00	8,000	8,000	20,311														10,987	
5.500	1	1	1 Allowance	Interior, Renovations, Complete	2036	to 20	19	34,500.00	34,500	34,500	42,471				42,471											
5.510	1	1	1 Allowance	Interior, Renovations, Partial	2026	to 10	9	13,000.00	13,000	13,000	32,199														17,854	
5.600	16	6	16 Squares	Roofs, Concrete Tiles (Incl. Gate House Flat Roof)	2046	to 30	29	960.00	15,360	15,360	21,095														21,095	
				Anticipated Expenditures, By Year							\$3,554,948	0	76,404	31,194	67,707	25,265	79,822	32,588	0	0	224,950	27,002	0	0	367,393	808,464

Reserve Advisors, Inc.

RESERVE FUNDING PLAN

CASH FLOW ANALYSIS

Cobblestone

Homeowners Association, Inc.																
Tucson, Arizona	FY2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Reserves at Beginning of Year (Note 1)	445,878	490,296	558,350	514,097	567,078	632,332	592,562	621,365	621,033	742,566	582,078	177,872	58,892	178,810	220,712	311,985
Total Recommended Reserve Contributions (Note 2)	49,775	61,800	73,800	85,800	97,800	109,800	111,000	112,200	113,400	114,600	115,900	117,200	118,500	119,800	121,100	122,400
Plus Estimated Interest Earned, During Year (Note 3)	5,584	6,254	6,396	6,448	7,154	7,306	7,240	7,410	8,133	7,900	4,533	1,412	1,418	2,383	3,177	4,028
Less Anticipated Expenditures, By Year	(10,941)	0	(124,449)	(39,267)	(39,700)	(156,876)	(89,437)	(119,942)	0	(282,988)	(524,639)	(237,592)	0	(80,281)	(33,004)	(75,043)
Anticipated Reserves at Year End	<u>\$490,296</u>	<u>\$558,350</u>	<u>\$514,097</u>	<u>\$567,078</u>	<u>\$632,332</u>	<u>\$592,562</u>	<u>\$621,365</u>	<u>\$621,033</u>	<u>\$742,566</u>	<u>\$582,078</u>	<u>\$177,872</u>	<u>\$58,892</u>	<u>\$178,810</u>	<u>\$220,712</u>	<u>\$311,985</u>	<u>\$363,370</u>
												(NOTE 5)				
Predicted Reserves based on 2017 funding level of: \$49,775	490,296	546,253	477,686	493,989	510,052	408,429	373,430	307,323	361,085	130,806	(345, 338)	(538,426)				

(continued)	Individual Res	erve Budgets	& Cash Flow	s for the Next	30 Years, Co	ntinued									
	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
Reserves at Beginning of Year	363,370	492,173	547,067	649,510	717,858	831,132	892,289	1,003,106	1,149,545	1,299,250	1,225,961	1,352,437	1,509,104	1,669,160	1,463,149
Total Recommended Reserve Contributions	123,700	125,100	126,500	127,900	129,300	130,700	132,100	133,600	135,100	136,600	138,100	139,600	141,100	142,700	144,300
Plus Estimated Interest Earned, During Year	5,103	6,198	7,137	8,155	9,239	10,279	11,305	12,839	14,605	15,061	15,378	17,067	18,956	18,682	13,573
Less Anticipated Expenditures, By Year	0	(76,404)	(31,194)	(67,707)	(25,265)	(79,822)	(32,588)	0	0	(224,950)	(27,002)	0	0	(367,393)	(808,464)
Anticipated Reserves at Year End	<u>\$492,173</u>	<u>\$547,067</u>	<u>\$649,510</u>	<u>\$717,858</u>	<u>\$831,132</u>	<u>\$892,289</u>	<u>\$1,003,106</u>	<u>\$1,149,545</u>	\$1,299,250	<u>\$1,225,961</u>	<u>\$1,352,437</u>	<u>\$1,509,104</u>	<u>\$1,669,160</u>	<u>\$1,463,149</u>	\$812,558 (NOTE 4)

Explanatory Notes:

- 1) Year 2017 starting reserves are as of January 1, 2017; FY2017 starts January 1, 2017 and ends December 31, 2017.
- 2) Reserve Contributions for 2017 are budgeted; 2018 is the first year of recommended contributions.
- 3) 1.2% is the estimated annual rate of return on invested reserves.
- 4) Accumulated year 2047 ending reserves consider the need to fund for subsequent repaving of the asphalt pavement streets shortly after 2047, and the age, size, overall condition and complexity of the property.
- 5) Threshold Funding Year (reserve balance at critical point).

Funding Plan - Section 3



4. CONDITION ASSESSMENT

The Condition this Full. Reserve includes Assessment of Study Enhanced Solutions and Procedures for select significant components. These narratives describe the Reserve Components, document specific problems and conditions, 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.

Property Site Elements

Asphalt Pavement, Crack Repair, Patch and Seal Coat - Asphalt pavement comprises approximately 40,150 square yards of streets and parking areas throughout the community. The pavement is in fair overall condition with isolated areas in fair to poor condition at an unknown age. Management and the Board inform us the Association applied a seal coat in 2015 and plans to conduct pavement repairs in 2017. The Association should plan future applications and repairs every three- to five-years. These activities reduce water infiltration and the effects of inclement weather. We elaborate on solutions and procedures necessary for the optimal maintenance of asphalt pavement in the following discussion.

We recommend periodic seal coat applications, crack repairs and patching to maintain the pavement. These activities minimize the damaging effects of vehicle fluids, maintain a uniform and positive appearance, and maximize the useful life of the pavement. Depressions often appear at areas where vehicles park. Isolated areas of depressions, cracks and deterioration indicate the need for crack repairs and patching. The contractor should patch areas that exhibit



potholes, alligator or spider web pattern cracks, and areas of pavement that are severely deteriorated from oil and gasoline deposits from parking vehicles. Area patching requires total replacement of isolated areas of pavement. The contractor should mechanically rout and fill all cracks with hot emulsion. Crack repair minimizes the chance of the cracks transmitting through the pavement.

There are four main types of seal coats available: fog coat, acrylic sealer, chip seals and asphaltic emulsion. A fog coat is a simple mixture of water and asphalt. Acrylic sealers include an acrylic additive to the water and asphalt mixture for greater resistance to abrasion. Fog coats and acrylic sealers are typically spray applied and are only for aesthetic purposes. Chip seal is the most substantial type of seal coat which involves placement of oil and aggregate on the driving surface. Either a roller or normal vehicular traffic works the gravel into the oil. Asphaltic emulsions combine a sharp sand mixture or mineral fibers, and an emulsifying agent with the water and asphalt mixture. Asphaltic emulsions are typically hand applied with squeegees to ensure that the sealer fills surface abrasions and minor cracks. This prevents the infiltration of water through cracks into the underlying pavement base. Seal coats therefore minimize the damaging effects of water from expansion and contraction. We regard asphaltic emulsions as the most effective and economical type of seal coat.

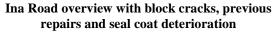
Cobblestone should repair any isolated areas of deteriorated pavement prior to seal coat applications. Proposals for seal coat applications should include crack repairs and patching. The contractor should only apply seal coat applications after repairs are completed. A seal coat does not bridge or close cracks, therefore, unrepaired cracks render the seal coat applications useless. Our future estimates of cost include an allowance for repair activities.



Following near term asphalt pavement repairs in 2017, we recommend Cobblestone budget for subsequent applications of seal coat, crack repairs and patching by 2019, 2023, 2030 and every four years thereafter except when subsequent repaving occurs. Line Item 4.020 of *Reserve Expenditures* notes our estimate of future costs and anticipated times of these activities. The estimate of cost for asphalt pavement repairs in 2017 reflects a bid cost provided by Management and the Board.

Asphalt Pavement, Repaving - As previously mentioned, asphalt pavement comprises approximately 40,150 square yards of streets and parking areas throughout the community. The pavement is in fair overall condition with isolated areas in fair to poor condition at an unknown age. We note cracks, previous repairs, seal coat deterioration, partial replacements and vehicle fluid stains.







Ina Road with lateral cracks and previous repairs





Catalina Ridge Drive overview with cracks and previous repairs



Windsong Place overview with cracks, seal coat deterioration and partial replacements



Sun Cloud Place overview with previous repairs, seal coat deterioration and fatigue cracks



Cathedral Rock Road overview with cracks and previous repairs



Finger Rock Road overview with block cracks, fatigue cracks and previous repairs



Cobblestone Road overview with block cracks, fatigue cracks, seal coat deterioration and repairs





Finger Rock Circle overview with partial replacements, previous repairs and cracks



Moon Spirit Place overview with transverse cracks and previous repairs



Cobblestone Road overview with vehicle fluid stains, seal coat deterioration, cracks and previous repairs



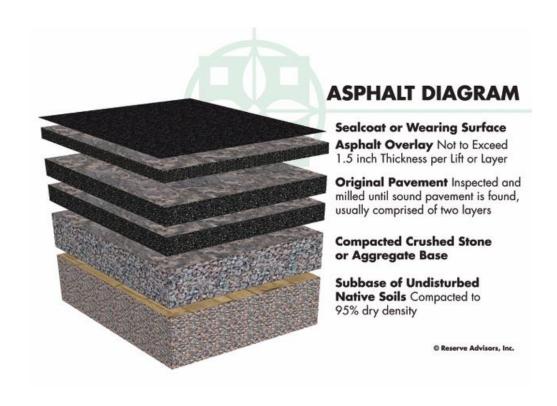
Cathedral Rock Road overview with partial replacements, seal coat deterioration and cracks

The useful life of pavement in Tucson is from 20- to 25-years. We include the following repaving solutions and procedures for the benefit of the present and future board members.

Components of asphalt pavement include native soil, aggregate and asphalt. First the contractor creates a base course of aggregate or crushed stone and native soil. The base course is individually compacted to ninety-five percent (95%) dry density prior to the application of the asphalt. Compaction assures a stable base for the asphalt that reduces the possibility of settlement. For street systems, 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:



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



apparent visual condition and configuration of the asphalt pavement, we recommend the mill and overlay method of repaving at Cobblestone.

A variety of repairs are necessary to deteriorated pavement prior to the application of an overlay. The contractor should use a combination of area patching, crack repair and milling before the overlayment. Properly milled pavement removes part of the existing pavement and permits the overlay to match the elevation of adjacent areas not subject to repaving. Milling also allows the contractor to make adjustments to the slope of the pavement to ensure proper drainage. The contractor should clean the milled pavement to ensure proper bonding of the new overlayment. We recommend an overlayment thickness that averages 1½ inches (not less than one inch or more than two inches). Variable thicknesses are often necessary to create an adequate slope for proper drainage. The contractor should identify and quantify areas of pavement that require area patching, crack repair and milling to help the Association compare proposed services.

Total replacement requires the removal of all existing asphalt. For area patching, we recommend the contractor use a rectangular saw cut to remove the deteriorated pavement. For larger areas such as entire parking areas or driveways, we recommend the contractor grind, mill or pulverize the existing pavement to remove it. The contractor should then augment and compact the existing aggregate and native soil to create a stable base. Finally the contractor should install the new asphalt in at least two lifts.

The time of replacement is dependent on the useful life, age and condition of the pavement. The useful life is dependent in part on the maintenance applied to the pavement, the amounts and concentration of auto solvents that penetrate the pavement, the exposure to sunlight



and detrimental effects of inclement weather. Cobblestone should repair any isolated areas of deteriorated pavement concurrent with periodic seal coat applications. We recommend the Association plan for phased milling and overlayment of the pavement with area patching of up to ten percent (10%) beginning by 2026 and concluding by 2028. A subsequent phased mill and overlayment is likely beginning by 2046. We depict this information on Line Item 4.040 of *Reserve Expenditures*. The Association should coordinate asphalt repaving with related activities such as partial replacement of concrete curbs and gutters.

Concrete, Flatwork - The Association maintains various applications of concrete flatwork. These applications of concrete have useful lives of up to 65 years although isolated deterioration of limited areas of concrete is common. Inclement weather, inadequate subsurface preparation and improper concrete mixtures or finishing techniques can result in premature deterioration such as settlement, chips, cracks and spalls. Variable conditions like these result in the need to plan for periodic partial replacements of the concrete flatwork throughout the next 30 years. We comment on the respective quantities, conditions and times of partial replacements of concrete flatwork in the following sections of this narrative.

Concrete Curbs and Gutters - Concrete curbs and gutters line the pavement of Cobblestone. These curbs and gutters comprise approximately 29,700 linear feet and are in good to fair condition overall with isolated areas in fair to poor condition. We note concrete curb and gutter cracks, spall, partial replacements and deterioration.





Concrete curb replacement near community entrance



Concrete curb spall along Ina Road



Concrete curb and gutter cracks and deterioration near gate house



Significant concrete curb and sidewalk cracks and deterioration along Finger Rock Circle





Significant concrete curb cracks and spall along Sun Cloud Place

We estimate that up to 7,425 linear feet of curbs and gutters, or twenty-five percent (25%) of the total, will require replacement during the next 30 years. We estimate that up to 675 linear feet of curbs and gutters, or approximately two percent (2.3%) of the total, will require replacement in conjunction with each phase of repaving, and asphalt crack repair, patch and seal coat events. We depict this information on Line Item 4.110 of *Reserve Expenditures*. We assume the use of 3,500 pounds per square inch (PSI) concrete.

Concrete Sidewalks - Concrete sidewalks comprise approximately 51,600 square feet throughout the community. This quantity includes the accent brick masonry pavers at the traffic circle sidewalks. The sidewalks are in good to fair overall condition. We note partial replacements, cracks and deterioration.





Concrete sidewalk partial replacements near office building and gate house area



Concrete sidewalk cracks near office building and gate house area



Concrete sidewalk cracks and deterioration along Moon Spirit Place



Concrete sidewalk cracks along Star Fury Place

We estimate that up to 15,480 square feet of concrete sidewalks, or thirty percent (30%) of the total, will require replacement during the next 30 years. We recommend the Association budget for replacement of up to 1,935 square feet of concrete sidewalks every four years beginning by 2019. Line Item 4.140 of *Reserve Expenditures* notes our estimate of future costs and anticipated times of replacements. We base our estimate of replacement on four-inch thick, 3,000 PSI concrete with 6x6 - W1.4xW1.4 steel reinforcing mesh. We recommend an annual inspection of the sidewalks to identify

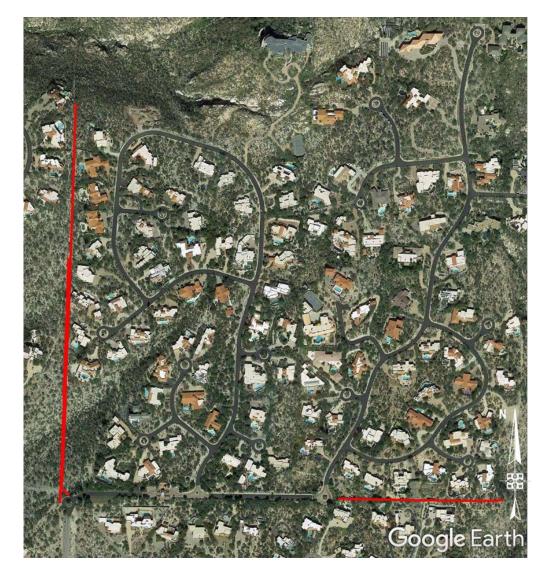


potential trip hazards. We suggest the Association grind down or mark these hazards with orange safety paint prior to replacement and fund this ongoing activity through the operating budget. Our estimate of cost includes sidewalk masonry paver repairs.

The Association should coordinate the concrete flatwork partial replacements on Line Items 4.110 and 4.140 of *Reserve Expenditures* when applicable to maximize the given amount of concrete in a single event. This will permit the use of a single contractor and likely achieve the most economical unit price for the work. The Association should also coordinate partial replacements of concrete curbs and gutters with asphalt pavement, due to the interrelated nature of these items. The times and costs of these replacements may vary. However, the estimated expenditures detailed in *Reserve Expenditures* are sufficient to budget appropriate reserves.

Fences, Chain Link - Approximately 4,600 linear feet of chain link fences are found along portions of the west and south perimeters of the property. The following aerial image depicts the locations of the chain link fences:





The fences are likely original and in fair overall condition.





Chain link fences along the west perimeter of the property



Chain link fence along the west perimeter of the property near the community entrance



Chain link fence along the south perimeter of the property

Chain link fences have useful lives of up to 25 years. Based on the condition of the fences, we recommend the Association anticipate replacement by 2024. The Association should anticipate subsequent replacement by 2047. We recommend the Association install vinyl coated fences at the time of replacement. We depict this information on Line Item 4.220 of *Reserve Expenditures*.

Fences, Steel - Approximately 220 linear feet of steel fences are found at the entrance monuments, gate house, office building and perimeter walls. The fences are likely original and



in fair overall condition. The protective finishes are in fair to poor condition at an unknown age. We note rust and paint finish deterioration.



Metal fence at gate house

Metal fence along perimeter wall



Typical metal fence along perimeter wall with rust and paint finish deterioration



Typical metal fence along perimeter wall with rust and paint finish deterioration

Fences of this type have a long useful life but are not maintenance free. Periodic maintenance should include applications of protective paint finish to the steel surfaces and partial replacement of deteriorated sections as needed. Steel components at grade and key structural connections are especially prone to failure if not thoroughly maintained. Secure and rust free fasteners and connections will prevent premature deterioration. We anticipate a useful life of up



to 40 years for the fences. Management and the Board inform us the Association typically applies a paint finish at the steel fences in conjunction with perimeter wall paint finish applications. See "**Perimeter Walls, Masonry**" for our recommendations on steel fence paint finish applications.

Periodic applications of paint to the steel will help maximize the useful life. Preparation of the steel before application of the paint finish is important. The paint contractor should remove all soil, dirt, oil, grease and other foreign materials before application of the paint finish to maximize its useful life. The contractor should also remove paint blisters and rust prior to the paint finish application. We recommend the use of a power wire brush, scraper and/or sander as effective means of removal. The Association should require the application of a primer on bare steel. The primer for steel surfaces should include a rust inhibitor for added protection. Based on the age and condition of the fences, we recommend replacement by 2022 in conjunction with monument renovations, and perimeter wall inspections, repairs and paint finish applications. We depict this information on Line Item 4.245 of *Reserve Expenditures*.

Gates and Operators - The Association maintains three swing arm gates and operators. The Association recently replaced one swing arm gate and operator and it is in good condition. The two remaining swing arm gates and operators are reported in fair operational condition at various unknown ages. The Association also maintains two decorative non-operable metal gates at the community entrance. Management and the Board inform us the Association recently replaced one decorative metal gate and it is in good to fair condition. The remaining decorative metal gate is likely original and in fair condition. We note rust and paint finish deterioration at the decorative metal gates.







Typical swing arm gate and operator

Decorative community entrance gate



Decorative community entrance gate with rust and paint finish deterioration

We anticipate a useful life of 10- to 15-years for the swing arm gates and operators and recommend the Association budget for phased replacement beginning by 2022 and concluding by 2026. The Association should anticipate subsequent phased replacement of the swing arm gates and operators beginning by 2035 and concluding by 2039. The decorative metal gates have a longer useful life of up to 40 years. In an effort to maintain a uniform appearance at the community entrance, we recommend the Association budget for replacement of the decorative metal gates by 2026. We depict this information on Line Items 4.320 and 4.330 of *Reserve*



Expenditures. The estimate of cost on Line Item 4.320 reflects a historical cost provided by Management and the Board.

Irrigation System - An irrigation system waters the lawn and landscaped areas throughout the property. The system is mostly original and reported in fair operational condition. Irrigation systems typically include the following components:

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

Water pressure activates the lawn spray pop-up heads. Controllers operate the main water flow valves. The exact amounts and locations of system components were not ascertained due to the nature of the underground construction and the non-invasive nature of the inspection.

The system as a whole has a useful life of up to 40 years. The system network supply pipes will dislodge as tree roots grow and soil conditions change. Cobblestone 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.

Management and the Board inform us the Association plans to renovate the irrigation system and potentially install a combination of drip irrigation, pop-up heads and xeriscape. At the request of Management and the Board, we include phased replacement of the irrigation system beginning by 2019 and concluding by 2022. We note this information on Line Item 4.420 of *Reserve Expenditures*. Updates to this Reserve Study will consider irrigation system renovations or modifications.



Landscape, Partial Replacements - The Association contains a large quantity of cacti, 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. The Association may also desire to periodically update the appearance of the community through major improvements to the landscape.

Management and the Board inform us the Association will potentially install xeriscape at portions of the landscape throughout the community. The water demand in Tucson is constantly increasing. Factors in this demand include population growth, and Arizona's dry climate and droughts. Many areas in this region are beginning to use a form of landscaping termed as xeriscaping. This practice of landscaping uses plants that do not require large volumes of water, efficient watering systems, and hardscape options that require minimal maintenance.

In consideration of these factors and at the request of Management and the Board, we include an annual landscape allowance of \$15,000 plus inflation beginning by 2019 and concluding by 2022, in conjunction with irrigation system renovations. Following near term landscape renovations, we include \$15,000 plus inflation every five years beginning by 2027 to ensure the accumulation of sufficient reserves for partial replacements of the landscape. The times and costs of these replacements may vary. However, we judge the amounts shown on Line Item 4.500 of *Reserve Expenditures* sufficient to budget appropriate reserves. Updates to this Reserve Study will consider the need to adjust the landscape allowance pending near term landscape renovations.



Pavers, Masonry - The traffic circles along Ina Road utilize approximately 22,430 square feet of masonry pavers. This quantity includes the pedestrian pavers at the office building. The pavers are in fair overall condition at an unknown age. We note masonry paver cracks, settlement, standing water, vehicle fluid stains and efflorescence.



Masonry pavers near Cobblestone Road with minor cracks and settlement



Masonry pavers along Ina Road



Masonry pavers near office building with vehicle fluid stains



Masonry pedestrian pavers at office building with settlement, efflorescence and standing water



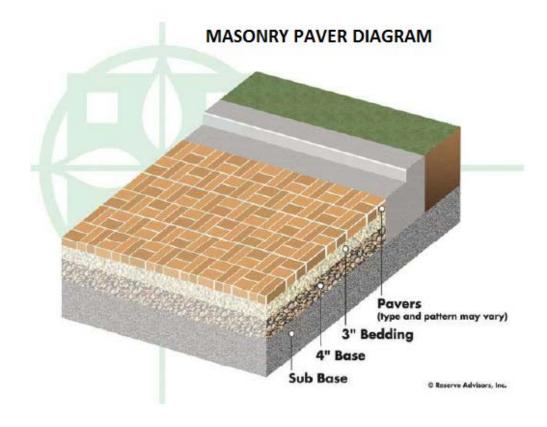


Standing water at pavers and concrete gutters near office building

Manufacturers construct masonry pavers as a traffic surface for installation without mortar. Pavers comprise special types of clays that are baked at higher temperatures and for a longer time than other masonry types. Thus, masonry pavers have greater strength and durability than common masonry.

The masonry pavers receive direct traffic wear and transfer loads to the base layers. Pavers at high traffic areas such as at property entrances will experience accelerated deterioration. The base layers comprise well graded aggregate to transfer loads to the sub base and prevent upward migration of water. The sub base carries the entire pavement load and should comprise undisturbed native soil or compacted fill, sloped at a minimum one percent (1%) grade to adequately drain infiltrated moisture. The following diagram depicts the components of a masonry paver system:



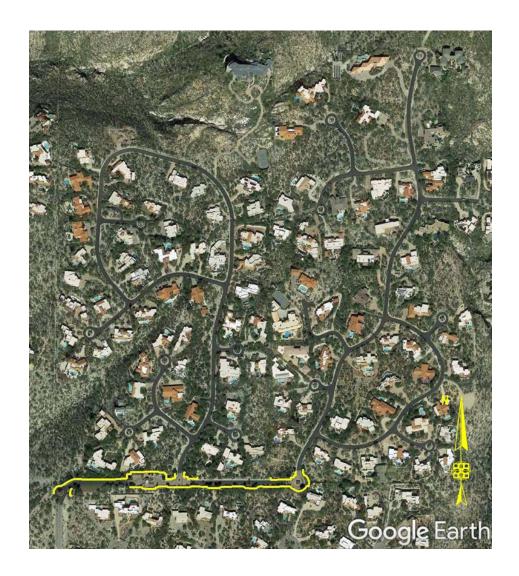


Masonry pavers have a long functional useful life. However, over time, the negative effects of inclement weather, erosion and vehicle traffic will create isolated areas of deterioration. We advise the Association budget for complete replacement of the pavers up to every 25 years. The Association should budget for this work by 2027 and again by 2047 in conjunction with asphalt pavement repaving. We depict this information on Line Item 4.620 of *Reserve Expenditures*. We suggest the Association conduct interim resetting and replacement of minor areas of pavers as normal maintenance, funded from the operating budget.

Perimeter Walls, Masonry - The Association maintains approximately 2,600 linear feet of masonry perimeter walls that comprise approximately 22,130 square feet of masonry surface area. This quantity includes both sides of the walls and the decorative walls at the traffic circles. The walls are located at the south perimeter of the property along Ina Road and at the traffic



circles throughout the community. The following aerial image depicts the perimeter walls along Ina Road:



The overall condition of the masonry is fair. The perimeter walls utilize coping. The masonry exhibits areas of cracks, finish deterioration, efflorescence and mortar deterioration.





Perimeter wall overview with minor cracks, finish deterioration and efflorescence



Perimeter wall coping cracks and finish deterioration



Perimeter wall rear with finish deterioration and cracks



Perimeter wall finish deterioration, cracks and mortar deterioration



Traffic circle wall



Monument finish application





Street entrance monument finish application

Masonry generally requires less maintenance than other types of exterior elements. However, masonry is not maintenance free. Cobblestone should plan for the periodic inspection of the masonry to identify and repair areas of deterioration. Common types of masonry deterioration include efflorescence, spalling and cracking.

Repointing is a process of raking and cutting out defective mortar to a depth of not less than ½ inch nor more than ¾ inch and replacing it with new mortar. We advise a complete inspection of the perimeter walls, and partial repointing with related masonry repairs and finish applications every 8- to 10-years to forestall deterioration. We suggest that the Association budget for the following activities by 2022:

- Complete inspection of the perimeter walls
- Repointing of up to five percent (5%), or up to 1,107 square feet of masonry
- Replacement of a limited amount of masonry
- Paint finish applications at both sides of the perimeter walls
- Paint finish applications at the steel fences (Management and the Board inform us the Association historically applies a paint finish application at the fences in conjunction with the perimeter walls.)
- Paint finish applications at the monuments throughout the community



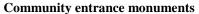
The Association should anticipate subsequent inspections, repairs and finish applications every 10 years thereafter. We depict this information on Line Item 4.640 of *Reserve Expenditures*.

Signage, Monuments, Renovations - The Association maintains decorative monuments, street entrance monuments and community entrance monuments that include the following elements:

- Decorative concrete tile roofs
- Decorative tile
- Light fixtures
- Water features

The monument components are mostly original and in fair overall condition. We note concrete tile roof deterioration and accent tile finish deterioration.







Monument near office building







Monument at traffic circle

Monument at street entrance with concrete tile roof deterioration



Typical monument tile with minor finish deterioration

The functional useful life of monuments is from 15- to 20-years. Community monuments contribute to the overall aesthetic appearance of the property to owners and potential buyers. Renovation or replacement of monuments is often predicated upon the desire to "update" the perceived identity of the community rather than for utilitarian concerns. Therefore, the specific times for replacement or renovation are discretionary. We recommend the Association plan to renovate the monuments by 2022 and again by 2042, in conjunction with perimeter wall repairs. Renovation should include the following work:



- Repointing and repairs to the masonry
- Replacement of the remaining components listed above

We note this information on Line Item 4.800 of *Reserve Expenditures*. The Association should fund interim repairs and replacements through the operating budget.

Signage, Traffic, Replacement - The Association maintains the traffic signs throughout the community. These signs are in good to fair condition at an age of approximately three years.



Typical traffic signage

The functional useful life of the signs is from 15- to 20-years. The community signs contribute to the overall aesthetic appearance of the property to owners and potential buyers. Replacement of community signs is often predicated upon the desire to "update" the perceived identity of the community rather than for utilitarian concerns. Therefore, the specific time for replacement of the signs is discretionary. We recommend the Association plan to replace the signs by 2030 and again by 2047. We note this information on Line Item 4.810 of *Reserve Expenditures*.



Office Building and Gate House Elements





Gate house front

Gate house rear



Office building

Exterior Renovations - The office building and gate house exteriors comprise approximately 3,900 square feet of brick with a stucco paint finish application. Management and the Board inform us the Association renovated the office building and gate house in 2016. These exterior elements are in good condition.

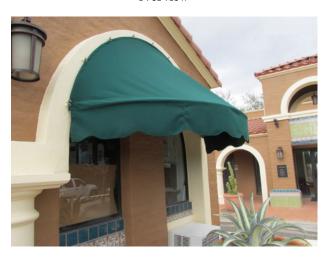




Gate house stucco and paint finish application overview



Gate house overhang underside



Gate house awning



Office building tower and decorative tile





Office building stucco and paint finish application overview

The useful lives of the office building and gate house exterior elements vary significantly. However, due to the relatively small quantities and interrelated nature of these elements, we recommend the Association combine their replacements into coordinated exterior renovations.

We recommend the Association anticipate exterior renovations every 8- to 12-years. These renovations should include the following:

- Application of paint finish
- Inspection of the brick masonry including partial repointing of up to five percent (5%)
- Replacement of the gate house awnings

Based on the age and visual condition of these exterior office building and gate house elements, we recommend the Association budget for the next coordinated exterior renovation by 2026 and every 10 years thereafter. Line Item 5.310 of *Reserve Expenditures* notes this information. The estimates of cost reflect historical costs provided by Management and the Board.

HVAC Equipment - The office building and gate house heating, ventilating and air conditioning (HVAC) equipment includes air condensing units and furnaces. These units are



reported in satisfactory operational condition at an age of less than one year. The useful life of residential size units is from 12- to 18-years. We recommend the Association anticipate the replacement of this equipment by 2031 and again by 2046. We include this information on Line Item 5.450 of *Reserve Expenditures*. The estimate of cost reflects a historical cost provided by Management and the Board.

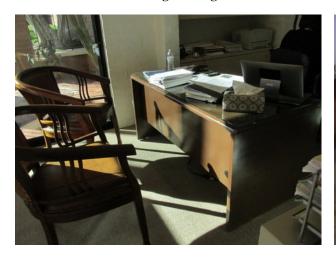
Interior Renovations - The office building and gate house interior comprises approximately 550 square feet of finished area.



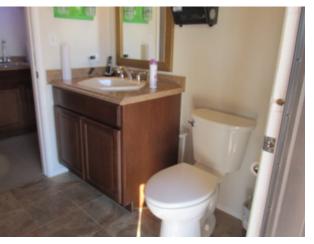
Office building meeting room



Office building kitchenette







Office building rest room





Gate house

Interior components of the office building and gate house include:

- Furnishings including tables, chairs and desks
- Kitchen cabinets and countertops
- Light fixtures
- Office equipment include computers and printers
- Paint finishes on the walls and ceilings
- Plumbing fixtures
- Tile and carpet floor coverings
- Various appliances including a refrigerator

The office building and gate house interior elements are in good condition at an age of less than one year. The useful lives of these interior building elements vary. However, due to the interrelated nature of these elements and the desire to achieve a uniform appearance, we recommend the Association combine their replacements into coordinated interior renovations.

We recommend the Association anticipate a complete interior renovation of the office building and gate house every 20 years. The complete renovation should include replacement of all the interior components listed above.

Based on the age and visual condition of these interior office building and gate house elements, we recommend the Association budget for a coordinated complete interior renovation by 2036.



In addition to the complete renovation, Cobblestone should also anticipate partial interior renovations every 10 years. These partial renovations should include the following:

- Application of paint finish to all surfaces
- Replacement of the carpet
- Replacement of up to fifty percent (50%) of the appliances, office equipment and furnishings

Based on the reported age and visual condition of these interior office building and gate house elements, we recommend the Association budget for coordinated partial interior renovations by 2026 and again by 2046. Line Items 5.500 and 5.510 of *Reserve Expenditures* note our estimates of future costs and anticipated times of interior office building and gate house renovations.

Roofs, Concrete Tiles - Approximately 16 squares¹ of concrete tiles comprise the roofs of the office building and gate house. This quantity includes the flat roof section at the gate house. The roofs are in good condition at an age of less than one year.







Gate house concrete tile and flat roofs

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



The useful life of a concrete tile roof is up to 30 years. A tile roof rarely fails at all points of application simultaneously. Rather, occurrences of roof leaks will increase as more concrete tiles crack, break and dislodge. This deterioration will result in increased maintenance costs such that replacement becomes the least costly long-term alternative as compared to ongoing repairs.

The Association should conduct normal repairs to achieve a long useful life for the concrete tile roofs and fund these maintenance activities through the operating budget. We recommend the Association anticipate complete replacement of the office building and gate house roofs by 2046. We note this information on Line Item 5.600 of *Reserve Expenditures*. The estimate of cost is based on historical costs provided by Management and the Board. The Association should fund interim flat roof replacement at the gate house through the operating budget.

Reserve Study Update

An ongoing review by the Board and an Update of this Reserve Study in two- to three-years 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.



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.

Cobblestone 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:

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



Information Furnished by the Association						
2017 unaudited Cash Status of the Reserve Fund	445,878					
2017 Budgeted Reserve Contribution	49,775					
Anticipated Interest on Reserve Fund	5,584					
Less Anticipated Reserve Expenditures	(10,941)					
Projected 2017 Year-End Reserve Balance	\$490,296					

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 Tucson, Arizona at an annual inflation rate of 1.1%. Isolated or regional markets of greater construction (development) activity may experience slightly greater rates of inflation for both construction materials and labor.

The past and current maintenance practices of Cobblestone and their effects on remaining useful lives

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.

The anticipated effects of appreciation of the reserves over time in accord with an anticipated future return or yield on investment of your cash equivalent assets at an annual rate of 1.2% (We did not consider the costs, if any, of Federal and State Taxes on income derived from interest and/or dividend income).

Interest rates on reserves are steady or increasing in concert with the certificates of deposit and money market rates. Overall, no material near term changes in savings rates are anticipated. Without significant differences in these savings rates, shorter term investments are the choice of many investors. We recommend consultation with a professional investment adviser before investing reserves to determine an appropriate investment strategy to maximize a safe return on reserve savings. The following

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



table summarizes rates of inflation and key rates for government securities, generally considered as safe investment alternatives.

Interest Rate and Inflation Data	2015				2016				
Average or Last Actual = (A)	2015:1 (A)	2015:2 (A)	2015:3 (A)	2015:4 (A)	2016:1 (A)	2016:2 (A)	2016:3 (A)	2016:4 (E)	
1-Year Treasury Bill	0.25%	0.27%	0.30%	0.65%	0.60%	0.55%	0.60%	0.65%	
10-Year Treasury Note	1.90%	2.50%	2.70%	2.25%	1.80%	1.80%	1.85%	1.85%	
30-Year Treasury Bond	2.55%	3.20%	3.40%	3.00%	2.65%	2.60%	2.60%	2.90%	
Consumer Price Index (annualized rate)	0.00%	0.00%	0.00%	0.00%	0.10%	0.00%	1.15%	1.15%	
Although past indicators are not predictive of future inflation in "building" construction, minimal inflation exists for past year Sept. 2015 to Sept. 2016 of approximately 1.7%.									
Savings Rates Results RANGE as found in 0.02 to 1.11% Money Market Savings 0.15 to 1.35% for 2-Year Certificate of Deposit									
http://www.bankrate.com			1-Year Certifica	3			for 3-Year Certif		
Estimated Near Term Yield Rate for Reserve Savings									
Est. Near Term Local Inflation Rate for Future Capital Expenditures								<u>11/11/2016</u>	

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



6. 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 Cobblestone 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) Cobblestone 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.



7. PROFESSIONAL SERVICE CONDITIONS

Our Services - Reserve Advisors, Inc. will perform its services as an independent contractor in accordance with our professional practice standards. Our compensation is not contingent upon our conclusions.

Our inspection and analysis of the subject property is limited to visual observations and is noninvasive. We will inspect sloped roofs from the ground. We will inspect 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 our observation. Conditions can change between the time of inspection and the issuance of the report. Reserve Advisors does not investigate, nor assume any responsibility for any existence or impact of any hazardous materials, structural, latent or hidden defects which may or may not be present on or within the property. Our opinions of estimated costs and remaining useful lives are not a guarantee of the actual costs of replacement, a warranty of the common elements or other property elements, or a guarantee of remaining useful lives.

We assume, without independent verification, the accuracy of all data provided to us. You agree to indemnify and hold us 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 as 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 controlling person of Reserve Advisors, Inc., including any director, officer, employee, affiliate, or agent. Liability of Reserve Advisors, Inc. 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 - Reserve Advisors, Inc. will complete the services in accordance with the Proposal. The Report represents a valid opinion of our findings and recommendations and is deemed complete. However, we will consider any additional information made available to us in the interest of promptly issuing a Revised Report if changes are requested within six months of receiving the Report. We retain the right to withhold a Revised Report if payment for services is not rendered in a timely manner. All files, work papers or documents developed by us during the course of the engagement remains our property.

Your Obligations - You agree to provide us access to the subject property during our on-site visual inspection and tour. You will provide to us to the best of your ability and if reasonably available, historical and budgetary information, the governing documents, and other information that we request and deem necessary to complete our Study. You agree to pay our actual attorneys' fees and any other costs incurred in the event we have to initiate litigation to collect on any unpaid balance for our services.

Use of Our Report and Your Name - Use of this Report is limited to only the purpose stated herein. Any use or reliance for any other purpose, by you or third parties, is invalid. Our Reserve Study Report in whole or part is not and cannot be used as a design specification, design engineering services or an appraisal. You may show our report in its entirety to those third parties who need to review the information contained herein. The Client and other third parties viewing this report should not reference our name or our report, in whole or in part, in any document prepared and/or distributed to third parties without our written consent. This report contains intellectual property developed by Reserve Advisors, Inc. specific to this engagement and cannot be reproduced or distributed to those who conduct reserve studies without the written consent of Reserve Advisors, Inc.



We reserve the right to include our client's name in our client lists, but we will maintain the confidentiality of all conversations, documents provided to us, and the contents of our reports, subject to legal or administrative process or proceedings. These conditions can only be modified by written documents executed by both parties.

Payment Terms, Due Dates and Interest Charges - The retainer payment is due upon authorization and prior to shipment of the report. The final payment of the fee is due immediately upon receipt of the Report. Subsequent changes to the report can be made for up to six months from the initial report date. Any outstanding balance after 30 days of the invoice date is subject to an interest charge of 1.5% per month. Any litigation necessary to collect an unpaid balance shall be venued in Milwaukee County Circuit Court in the State of Wisconsin.

CONDITIONS OF OUR SERVICE ASSUMPTIONS

To the best of our knowledge, all data set forth in this report are true and accurate. Although gathered from reliable sources, we make no guarantee nor assume liability for the accuracy of any data, opinions, or estimates identified as furnished by others that we used in formulating this analysis.

We did not make any soil analysis or geological study with this report; nor were any water, oil, gas, coal, or other subsurface mineral and use rights or conditions investigated.

Substances such as asbestos, urea-formaldehyde foam insulation, other chemicals, toxic wastes, environmental mold or other potentially hazardous materials could, if present, adversely affect the validity of this study. Unless otherwise stated in this report, the existence of hazardous substance, that may or may not be present on or in the property, was not considered. Our opinions are predicated on the assumption that there are no hazardous materials on or in the property. We assume no responsibility for any such conditions. We are not qualified to detect such substances, quantify the impact, or develop the remedial cost.

We have made a visual inspection of the property and noted visible physical defects, if any, in our report. Our inspection and analysis was made by employees generally familiar with real estate and building construction; however, we did not do any invasive testing. Accordingly, we do not opine on, nor are we responsible for, the structural integrity of the property including its conformity to specific governmental code requirements, such as fire, building and safety, earthquake, and occupancy, or any physical defects that were not readily apparent during the inspection.

Our opinions of the remaining useful lives of the property elements do not represent a guarantee or warranty of performance of the products, materials and workmanship.



8. 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. Each Team Review requires the attendance of several engineers, Director of Quality Assurance and other participatory peers. 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 coauthored *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



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

CURRENT CLIENT SERVICES

Alan M. Ebert, a Professional Engineer, is 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 hundreds 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 Reserve Specialist (RS) - Community Associations Institute Professional Reserve Analyst (PRA) - Association of Professional Reserve Analysts



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

CURRENT CLIENT SERVICES

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

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

- **Amelia Surf & Racquet Club** This oceanfront condominium community comprises 156 units in three mid rise buildings. This Fernandina Beach, Florida development contains amenities such as clay tennis courts, two pools and boardwalks.
- **Ten Museum Park** This boutique, luxury 50-story high rise building in downtown Miami, Florida consists of 200 condominium units. The amenities comprise six pools including resistance and plunge pools, a full-service spa and a state-of-the-art fitness center. The property also contains a multi-level parking garage.
- **3 Chisolm Street Homeowners Association** This historic Charleston, South Carolina community was constructed in 1929 and 1960 and comprises brick and stucco construction with asphalt shingle and modified bitumen roofs. The unique buildings were originally the Murray Vocational School. The buildings were transformed in 2002 to 27 high-end condominiums. The property includes a courtyard and covered parking garage.
- **Lakes of Pine Run Condominium Association** This condominium community comprises 112 units in 41 buildings of stucco construction with asphalt shingle roofs. Located in Ormond Beach, Florida, it has a domestic water treatment plant and wastewater treatment plant for the residents of the property.
- **Rivertowne on the Wando Homeowners Association** This exclusive river front community is located on the Wando River in Mount Pleasant, South Carolina. This unique Association includes several private docks along the Wando River, a pool and tennis courts for use by its residents.
- **Biltmore Estates Homeowners Association** This private gated community is located in Miramar, Florida, just northwest of Miami, Florida and consists of 128 single family homes. The lake front property maintains a pool, a pool house and private streets.
- **Bellavista at Miromar Lakes Condominium Association** Located in the residential waterfront resort community of Miromar Lakes Beach & Golf Club in Fort Myers, Florida, this property comprises 60 units in 15 buildings. Amenities include a clubhouse and a pool.

PRIOR RELEVANT EXPERIENCE

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

EDUCATION

West Virginia University - B.S. Civil Engineering

PROFESSIONAL AFFILIATIONS / DESIGNATIONS

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



LOUISE L. HEFFERNAN, RS Responsible Advisor

CURRENT CLIENT SERVICES

Louise L. Heffernan, a Biosystems and Bioproducts Engineer, is an Advisor for Reserve Advisors. Ms. Heffernan is responsible for the inspection and analysis of the condition of clients' property, and recommending engineering solutions to prolong the lives of the components. She also forecasts capital expenditures for the repair and/or replacement of the property components and prepares technical reports on assignments. She is responsible for conducting Life Cycle Cost Analysis and Capital Replacement Forecast services and the preparation of Reserve Study Reports for condominiums, townhomes and homeowners associations. Ms. Heffernan frequently serves as the Quality Assurance Review Coordinator for all types of developments.

The following is a partial list of clients served by Louise Heffernan demonstrating her breadth of experiential knowledge of community associations in construction and related buildings systems.

- **Heritage Glen Condominium Association, Inc.** This quiet wooded community of 121 condominiums in 43 buildings is located in the historic and charming town of Simsbury, Connecticut. The buildings were constructed in the late 1960's. The community features private asphalt pavement streets, detached garages, a clubhouse, pool, retaining walls and ponds.
- **Oviedo Forest Master Homeowners' Association, Inc.** Located in Oviedo, Florida, this Association maintains the common elements shared by 125 single family homes in both gated and non-gated communities. The buildings were built from 2006 to 2014. The development contains asphalt pavement streets, playground equipment, ponds and retaining walls.
- Heritage Place Condominium Association Located in the heart of Kentucky's Bluegrass Region in Lexington, Kentucky, this condominium style development contains 120 units in 30 buildings. The exteriors of the buildings comprise brick veneer, vinyl siding and asphalt shingle roofs. The buildings were built from 2000 to 2003. The property contains asphalt pavement streets, concrete flatwork and retaining walls.
- **Hanover Homeowners Association** This townhome style development located in Houston, Texas is comprised of 148 units in 41 buildings. The exteriors of the buildings comprise fiber cement siding and asphalt shingle roofs. The buildings were constructed from 2006 to 2014. The development contains concrete flatwork, fences, a pool house and pool.
- **Hidden Terrace Townhomes Association** Nestled among the rolling terrain of Plymouth, Minnesota, this townhome style development consists of 32 units in 16 buildings. The buildings were built from 2003 to 2006. The exteriors of the buildings comprise wood balconies and porches, asphalt shingle roofs and vinyl siding. The Association is responsible for asphalt pavement driveways, concrete sidewalks and stone retaining walls.
- Woodcliff Carriage Homes Situated east of Saint Paul, Minnesota this condominium style development of 56 units in seven buildings is located in the valleys of Woodbury, Minnesota. These carriage homes were built in the early 1980's. The exteriors of the buildings comprise aluminum siding and asphalt shingle roofs. The community includes asphalt pavement streets and parking areas, and concrete flatwork.

PRIOR RELEVANT EXPERIENCE

Before joining Reserve Advisors, Ms. Heffernan attended the University of Minnesota in Minneapolis, Minnesota, where she attained her Bachelor of Science degree in Biosystems and Bioproducts Engineering. Her studies focused on environmental engineering and water resources. At the University of Minnesota, Ms. Heffernan worked as a Research Assistant for the Biosystems and Bioproducts Engineering department where she supervised projects in the fields of hydrology, soil science and agricultural engineering. Before joining *Reserve Advisors*, Ms. Heffernan worked with Metropolitan Council analyzing water treatment processes.

EDUCATION

University of Minnesota, Twin-Cities - B.S. Biosystems and Bioproducts Engineering

PROFESSIONAL AFFILIATIONS

Reserve Specialist (RS) - Community Associations Institute



MOLLY A. GARROW, RS Review Coordinator

CURRENT CLIENT SERVICES

Molly A. Garrow, a Biological Systems Engineer, is an Advisor for Reserve Advisors. Ms. Garrow is responsible for the inspection and analysis of the condition of clients' property, and recommending engineering solutions to prolong the lives of the components. She also forecasts capital expenditures for the repair and/or replacement of the property components and prepares technical reports on assignments. She is responsible for conducting Life Cycle Cost Analysis and Capital Replacement Forecast services and the preparation of Reserve Study Reports for condominiums, townhomes and homeowner associations. Ms. Garrow frequently serves as the Quality Assurance Review Coordinator for all types of developments.

The following is a partial list of clients by Molly Garrow demonstrating her breadth of experiential knowledge of community associations in construction and related buildings systems.

- **Brookview Garden Homes Homeowner Association** Located in Woodbury, Minnesota, this inviting community comprises 96 townhomes in 14 buildings. The buildings feature aluminum siding, masonry veneer and asphalt shingle roofs. The development includes asphalt driveways, a pond and concrete sidewalks.
- **Cashion Woods Community Association, Inc.** This community of 69 homes is located in Huntersville, North Carolina. Homeowners enjoy the use of a central park, play equipment and picnic areas. Located throughout the property are walking paths and an irrigation system.
- **Southwood Residential Community Association, Inc.** Located in Tallahassee, Florida, this community development district consists of 252 townhomes amongst three unique sub-Associations. The residents' amenities include a clubhouse, tennis courts, pool and play equipment.
- **Marwood Condominium Association, Inc.** This this mid-rise located in Minneapolis, Minnesota contains 27 units and an underground parking garage. Built in 1979, the exterior of the building comprises masonry, an asphalt shingle roof and common windows and doors. The interior contains common areas and various mechanical equipment.
- **Leeds Square Condominiums** This townhome style development located in Warrenton, Virginia contains 169 units in 19 buildings. Built in the 1970's, the buildings comprise asphalt shingle and metal roofs, vinyl siding, masonry and balconies. The development contains a pool, pool house, playground and tennis courts.
- **Tamarack Condominiums** Built in 1968, this townhome style development is located in Columbus, Ohio. Built in 1968, the building exteriors comprise masonry, vinyl siding and mansard style- asphalt shingle roofs. The Association maintains a community building, asphalt pavement, wood fences and concrete flatwork.

PRIOR RELEVANT EXPERIENCE

Before joining Reserve Advisors, Ms. Garrow attended the University of Wisconsin in Madison, Wisconsin where she attained her Bachelor of Science degree in Biological Systems Engineering. Her studies focused on environmental engineering and natural resources. While attending the University of Wisconsin, Ms. Garrow led a team of her peers in developing a storm water management and erosion control system for the Office of Lakes and Watersheds in Dane County, Wisconsin.

EDUCATION

University of Wisconsin – B.S. Biological Systems Engineering

PROFESSIONAL AFFILIATIONS

Engineer In Training (E.I T.) Registration — Wisconsin Reserve Specialist (RS) — Community Associations Institute



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.

<u>Community Associations Institute</u>, (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.

<u>Marshall & Swift / Boeckh</u>, (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.

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