

**Precision 20/20  
Full Reserve Study  
for  
Creekside Homeowners  
Association  
Tucson, Arizona  
February 6, 2013**





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## TABLE OF CONTENTS

<b>RESERVE STUDY EXECUTIVE SUMMARY</b> .....	Page 1.1
<b>RESERVE STUDY REPORT</b> .....	Page 2.1
IDENTIFICATION OF PROPERTY .....	Page 2.2
RESERVE EXPENDITURES and FUNDING PLAN .....	Page 3.1
CONDITION ASSESSMENT .....	Page 4.1
Property Site Elements .....	Page 4.1
Asphalt Pavement, Crack Repair, Patch and Seal Coat .....	Page 4.1
Asphalt Pavement, Repaving .....	Page 4.3
Concrete Gutters .....	Page 4.5
Perimeter Walls, Concrete Block and Stucco .....	Page 4.6
Ramada and Rest Room Elements .....	Page 4.7
Doors, Front Entrances .....	Page 4.7
Rest Rooms .....	Page 4.7
Shower Area .....	Page 4.7
Roofs, Flat .....	Page 4.8
Pool Elements .....	Page 4.8
Concrete Deck .....	Page 4.8
Fence, Metal .....	Page 4.9
Furniture .....	Page 4.9
Light Fixtures .....	Page 4.10
Mechanical Equipment .....	Page 4.10
Plaster Finish .....	Page 4.10
Pool Shade .....	Page 4.11
Structure .....	Page 4.11
Reserve Study Update .....	Page 4.12
PHOTOGRAPHS .....	Page 5.1
SUPPLEMENTARY INFORMATION FOR FINANCIAL STATEMENTS .....	Page 6.1
METHODOLOGY .....	Page 7.1
DEFINITIONS .....	Page 8.1
CONDITIONS OF OUR SERVICE .....	Page 9.1
ASSUMPTIONS .....	Page 9.1
PROFESSIONAL SERVICE CONDITIONS .....	Page 9.2
CREDENTIALS .....	Page 10.1

## RESERVE STUDY EXECUTIVE SUMMARY

**Client:** Creekside Homeowners Association (Creekside)

**Location:** Tucson, Arizona

**Reference:** 060699

**Property Basics:** Creekside Homeowners Association is a homeowners association which is responsible for the common elements shared by 151 individual units. The development was built from 1983 to 1987 and contains asphalt pavement, perimeter walls, a ramada and a pool.

**Reserve Components Identified:** 16 Reserve Components.

**Inspection Date:** February 6, 2013. We conducted previous Reserve Studies on December 7, 2006 and October 21, 2010.

**Funding Goal:** The Funding Goal of this Reserve Study is to maintain reserves above an adequate, not excessive threshold during one or more years of significant expenditures. Our recommended Funding Plan recognizes this threshold funding year in 2031 due to replacement of the asphalt pavement.

**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
- 1.0% annual rate of return on invested reserves
- 1.2% 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.

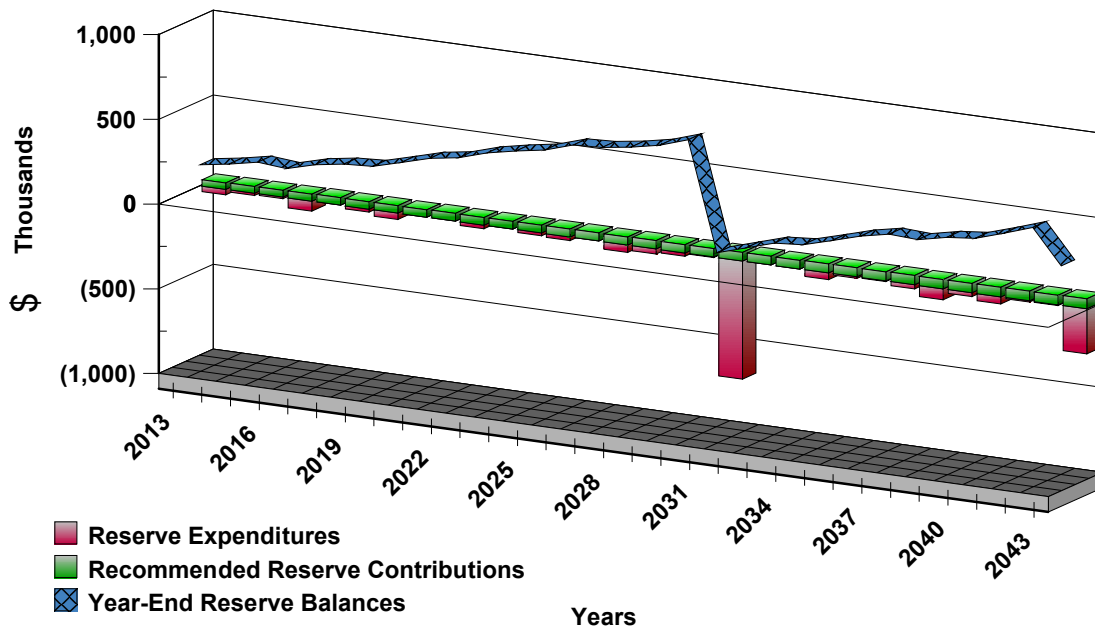
**Cash Status of Reserve Fund:** \$163,784 as of January 1, 2013.

**Recommended Reserve Funding:** The Association budgeted \$37,284 for Reserve Contributions in 2013. We recommend that the Association budget annual phased increases in Reserve Contributions of approximately \$1,600 from 2014 through 2016. Afterwards, the Association should budget gradual annual increases in reserve funding, that in part consider the effects of inflation. The recommended year 2014 Reserve Contribution of \$38,900 is \$1,616 more than the prior budgeted amount and represents a one percent (1.3%) adjustment in the 2013 total Operating Budget of \$121,404. This initial adjustment of \$1,616 is equivalent to an average monthly increase of \$0.89 per unit owner.

**Certification:** This *Precision 20/20 Full Reserve Study* exceeds the Community Associations Institute (CAI) and Association of Professional Reserve Analysts (APRA) standards fulfilling the requirements of a "Level I Full Reserve Study."

Creekside  
Recommended Reserve Funding Table and Graph

Year	Reserve Contributions (\$)	Reserve Balances (\$)	Year	Reserve Contributions (\$)	Reserve Balances (\$)	Year	Reserve Contributions (\$)	Reserve Balances (\$)
2014	38,900	198,923	2024	46,100	509,033	2034	52,100	193,072
2015	40,500	232,525	2025	46,700	539,515	2035	52,700	239,081
2016	42,100	219,121	2026	47,300	592,447	2036	53,300	291,733
2017	42,600	264,125	2027	47,900	602,395	2037	53,900	323,963
2018	43,100	292,373	2028	48,500	627,622	2038	54,500	317,319
2019	43,600	301,441	2029	49,100	663,391	2039	55,200	353,601
2020	44,100	348,776	2030	49,700	716,896	2040	55,900	372,409
2021	44,600	397,087	2031	50,300	74,729	2041	56,600	424,595
2022	45,100	425,599	2032	50,900	126,631	2042	57,300	482,877
2023	45,600	475,683	2033	51,500	179,655	2043	58,000	279,174



Respectfully submitted on April 2, 2013 by  
RESERVE ADVISORS, INC.

*Jayne Radomski*

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

<sup>2</sup> RS (Reserve Specialist) is the reserve provider professional designation of the Community Associations Institute (CAI) representing America's more than 300,000 condominium, cooperative and homeowners associations.



## RESERVE STUDY REPORT

At the direction of the Board that recognizes the need for proper reserve planning, we have conducted a *Precision 20/20 Full Reserve Study* of

### **Creekside Homeowners Association**

### **Tucson, Arizona**

and submit our findings in this report. The effective date of this study is the date of our visual, noninvasive inspection, February 6, 2013. We conducted previous Reserve Studies on December 7, 2006 and October 21, 2010.

We present our findings and recommendations in the following report sections and spreadsheets:

- **Identification of Property** - Segregates all property into several areas of responsibility for repair or replacement
- **Reserve Expenditures** - Identifies reserve components and related quantities, useful lives, remaining useful lives and future reserve expenditures during the next 30 years
- **Reserve Funding Plan** - Presents the recommended Reserve Contributions and year-end Reserve Balances for the next 30 years
- **Condition Assessment** - Describes the reserve components, documents conditions with photographs, describes our recommendations for repairs or replacement, and includes detailed solutions and procedures for replacements for the benefit of current and future board members
- **Supplementary Information for Financial Statements** - Contains significant unaudited information about existing reserves from the Reserve Components and Expenditures, and estimated current and future replacement costs
- **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
- **Conditions of our Service** - Describes Assumptions and Professional Service Conditions
- **Credentials**
- **Resources**



## IDENTIFICATION OF PROPERTY

Creekside Homeowners Association is a homeowners association which is responsible for the common elements shared by 151 individual units. The development was built from 1983 to 1987 and contains asphalt pavement, perimeter walls, a ramada and a pool. We identify 16 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 Representatives of the Association. These classes of property include:

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

We advise that 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:

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

Long-Lived Property Elements do not have predictable Remaining Useful Lives. 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
- Foundation, Ramada
- Pipes, Interior Building, Water and Sewer, Ramada
- Pipes, Subsurface Utilities
- Structural Frame, Ramada

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 \$2,500 (*These relatively minor expenditures have a limited effect on the recommended Reserve Contributions.*)
- Canvas Awnings
- Concrete Sidewalks
- Fence, Pool, Paint Finishes
- Irrigation Drip System
- Landscape
- Paint Finishes, Touch Up
- Pool Gate, Lock and Keys
- Pool Heater (Abandoned)
- Ramada, Paint Finishes and Partial Wood Replacements
- Signage (Includes Solar Panel)





- Other Repairs normally funded through the Operating Budget

Property Maintained by Homeowners relates to unit:

- Driveways
- Homes and Lots

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

Property Maintained by Others relates to:

- Mailbox Stations (United States Postal Service)
- Perimeter Wall, East Side (Pima County)

## **RESERVE EXPENDITURES and FUNDING PLAN**

The tables following this introduction present:

### **Reserve Expenditures**

- Line item numbers
- Total quantities replaced during the next 30 years
- Quantities replaced per phase (in a single year)
- Reserve component inventory
- Estimated first year of replacement
- Life analysis showing
  - useful life
  - remaining useful life
- Unit cost of replacement
- 2013 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

**RESERVE EXPENDITURES**

for  
**Creekside Homeowners  
 Association**  
 Tucson, Arizona

Explanatory Notes:

- 1) **1.2%** is the estimated future Inflation Rate for estimating Future Replacement Costs.
- 2) FY 2013 is Fiscal Year beginning January 1 and ending December 31.

Line Item	Quantities:		Units	Reserve Component Inventory	Estimated 1st Year of Replacement	Life Analysis, Years		Unit Cost, \$	2013 Cost of Replacement per Phase, \$	Total Future Costs of Replacement, \$	(See Notes 1 & 2)																				
	30-Year Total	Per Phase				Useful	Remaining				RUL = 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
<b>Property Site Elements</b>																															
4.020	193,500	19,350	Square Yards	Asphalt Pavement, Crack Repair, Patch and Seal Coat	2013	3 to 5	0	0.96	18,576	222,760	18,420		19,253		19,954		20,681		21,435		22,216										
4.045	19,350	19,350	Square Yards	Asphalt Pavement, Total Replacement, Phased	2031	15 to 20	18	24.00	464,400	575,627															575,627						
4.110	3,480	3,480	Linear Feet	Concrete Gutters, Partial	2031	to 65	18	28.00	97,440	120,778															120,778						
4.640	9,690	3,230	Linear Feet	Perimeter Walls, Concrete Block and Stucco, Inspections, Paint Finishes and Capital Repairs	2016	8 to 15	3	11.50	37,145	132,445			38,498								43,896										
<b>Ramada and Rest Room Elements</b>																															
5.133	3	3	Each	Doors	2018	to 35	5	1,600.00	4,800	5,095				5,095																	
5.233	2	2	Each	Rest Rooms, Renovations	2038	to 35	25	2,800.00	5,600	7,546																					
5.266	1	1	Allowance	Shower Area, Renovation	2018	to 35	5	2,500.00	2,500	2,654				2,654																	
5.333	20	10	Squares	Roofs, Flat	2018	12 to 18	5	680.00	6,800	16,059				7,218																	
<b>Pool Elements</b>																															
6.200	12,090	4,030	Square Feet	Concrete Deck, Inspections, Coatings, Partial Replacements and Repairs	2019	8 to 12	6	4.05	16,322	59,542					17,532										19,754						
6.400	260	260	Linear Feet	Fence, Metal	2040	30 to 35	27	42.00	10,920	15,069																					
6.500	5	1	Allowance	Furniture, Phased	2018	to 12	5	2,500.00	2,500	15,389				2,654					2,851						3,062						
6.553	2	1	Allowance	Light Fixtures	2013	to 12	0	5,000.00	5,000	11,737	5,000																				
6.600	3	1	Allowance	Mechanical Equipment	2015	to 15	2	6,000.00	6,000	21,700			6,145											7,176							
6.800	3,855	1,285	Square Feet	Plaster Finish	2014	8 to 12	1	10.10	12,979	44,605		13,134							14,798												
6.853	1	1	Allowance	Pool Shade, Proposed	2013	N/A	0	8,000.00	8,000	8,000	8,000																				
6.900	1,285	1,285	Square Feet	Structure, Total Replacement	2043	to 60	30	130.00	167,050	238,925																					
		1	Allowance	Reserve Study Update with Site Visit	2015	2	2	2,900.00	2,900	2,900		2,900																			
<b>Anticipated Expenditures, By Year</b>										\$1,500,831	31,420	13,134	9,045	57,751	0	17,621	37,486	0	0	20,681	0	17,649	21,435	0	43,896	29,392	19,754	3,062	696,405	0	0

**RESERVE EXPENDITURES**

for  
**Creekside Homeowners  
 Association**  
 Tucson, Arizona

Line Item	Reserve Component Inventory	21 2034	22 2035	23 2036	24 2037	25 2038	26 2039	27 2040	28 2041	29 2042	30 2043
<b>Property Site Elements</b>											
4.020	Asphalt Pavement, Crack Repair, Patch and Seal Coat	23,864			24,733			25,635			26,569
4.045	Asphalt Pavement, Total Replacement, Phased										
4.110	Concrete Gutters, Partial										
4.640	Perimeter Walls, Concrete Block and Stucco, Inspections, Paint Finishes and Capital Repairs					50,051					
<b>Ramada and Rest Room Elements</b>											
5.133	Doors										
5.233	Rest Rooms, Renovations					7,546					
5.266	Shower Area, Renovation										
5.333	Roofs, Flat		8,841								
<b>Pool Elements</b>											
6.200	Concrete Deck, Inspections, Coatings, Partial Replacements and Repairs						22,256				
6.400	Fence, Metal							15,069			
6.500	Furniture, Phased			3,289						3,533	
6.553	Light Fixtures					6,737					
6.600	Mechanical Equipment								8,379		
6.800	Plaster Finish	16,673									
6.853	Pool Shade, Proposed										
6.900	Structure, Total Replacement										238,925
<b>Reserve Study Update with Site Visit</b>											
<b>Anticipated Expenditures, By Year</b>		40,537	8,841	3,289	24,733	64,334	22,256	40,704	8,379	3,533	265,494

## RESERVE FUNDING PLAN

**CASH FLOW ANALYSIS**  
**Creekside Homeowners**  
**Association**

Tucson, Arizona		<u>Individual Reserve Budgets &amp; Cash Flows for the Next 30 Years</u>															
		FY2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
<b>Reserves at Beginning of Year (Note 1)</b>		163,784	171,315	198,923	232,525	219,121	264,125	292,373	301,441	348,776	397,087	425,599	475,683	509,033	539,515	592,447	602,395
<b>Total Recommended Reserve Contributions (Note 2)</b>		<b>37,284</b>	<b>38,900</b>	<b>40,500</b>	<b>42,100</b>	<b>42,600</b>	<b>43,100</b>	<b>43,600</b>	<b>44,100</b>	<b>44,600</b>	<b>45,100</b>	<b>45,600</b>	<b>46,100</b>	<b>46,700</b>	<b>47,300</b>	<b>47,900</b>	<b>48,500</b>
Plus	<b>Estimated Interest Earned, During Year (Note 3)</b>	1,667	1,842	2,147	2,247	2,404	2,769	2,954	3,235	3,711	4,093	4,484	4,899	5,217	5,632	5,944	6,119
Less	<b>Anticipated Expenditures, By Year</b>	(31,420)	(13,134)	(9,045)	(57,751)	0	(17,621)	(37,486)	0	0	(20,681)	0	(17,649)	(21,435)	0	(43,896)	(29,392)
<b>Anticipated Reserves at Year End</b>		<u>\$171,315</u>	<u>198,923</u>	<u>232,525</u>	<u>219,121</u>	<u>264,125</u>	<u>292,373</u>	<u>301,441</u>	<u>348,776</u>	<u>397,087</u>	<u>425,599</u>	<u>475,683</u>	<u>509,033</u>	<u>539,515</u>	<u>592,447</u>	<u>602,395</u>	<u>627,622</u>

(continued)

		<u>Individual Reserve Budgets &amp; Cash Flows for the Next 30 Years, Continued</u>														
		2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043
<b>Reserves at Beginning of Year</b>		627,622	663,391	716,896	74,729	126,631	179,655	193,072	239,081	291,733	323,963	317,319	353,601	372,409	424,595	482,877
<b>Total Recommended Reserve Contributions</b>		<b>49,100</b>	<b>49,700</b>	<b>50,300</b>	<b>50,900</b>	<b>51,500</b>	<b>52,100</b>	<b>52,700</b>	<b>53,300</b>	<b>53,900</b>	<b>54,500</b>	<b>55,200</b>	<b>55,900</b>	<b>56,600</b>	<b>57,300</b>	<b>58,000</b>
Plus	<b>Estimated Interest Earned, During Year</b>	6,423	6,867	3,938	1,002	1,524	1,854	2,150	2,641	3,063	3,190	3,338	3,612	3,965	4,515	3,791
Less	<b>Anticipated Expenditures, By Year</b>	(19,754)	(3,062)	(696,405)	0	0	(40,537)	(8,841)	(3,289)	(24,733)	(64,334)	(22,256)	(40,704)	(8,379)	(3,533)	(265,494)
<b>Anticipated Reserves at Year End</b>		<u>663,391</u>	<u>716,896</u>	<u>74,729</u>	<u>126,631</u>	<u>179,655</u>	<u>193,072</u>	<u>239,081</u>	<u>291,733</u>	<u>323,963</u>	<u>317,319</u>	<u>353,601</u>	<u>372,409</u>	<u>424,595</u>	<u>482,877</u>	<u>279,174</u>
		(NOTE 5)														(NOTE 4)

**Explanatory Notes:**

- 1) Year 2013 reserves are as of January 1, 2013; FY 2013 starts January 1 and ends December 31.
- 2) Reserve Contributions for 2013 are budgeted; 2014 is the first year of recommended contributions.
- 3) 1.0% is the estimated annual rate of return on invested reserves.
- 4) Accumulated year 2043 ending reserves consider the age, size, overall condition and complexity of the property.
- 5) Threshold Funding Year (reserve balance at critical point).



## CONDITION ASSESSMENT

The Condition Assessment of this *Precision 20/20 Full Reserve Study* includes *Enhanced Solutions and Procedures (ESP)* 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 19,350 square yards of streets and parking areas throughout the community. The pavement was replaced in 2007 and is in good to fair overall condition. We note areas of fatigue cracks, transverse cracks and previous patching. Representatives of the Association inform us that the Association applied a seal coat and conducted pavement repairs in December 2010. The Association should plan future applications and repairs every three- to five-years. 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. Seal coat applications, crack repairs and patching minimize the damaging effects of vehicle fluids, maintain a uniform and positive appearance, and maximize the useful life of the pavement. Asphalt pavement is susceptible to isolated areas of accelerated deterioration in areas

such as the centerlines of streets and at high traffic areas such as intersections. Depressions often appear at areas where vehicles park such as driveways and parking areas. Isolated areas of depressions, cracks and deterioration indicate the need for crack repairs and area patches. 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.

Creekside should repair any isolated areas of deteriorated pavement prior to seal coat applications. Proposals for seal coat applications should include both crack repair and area

patching. These activities reduce water infiltration and the effects of inclement weather. The contractor should only apply seal coat applications after remedial crack and surface 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 both crack repair and area patching.

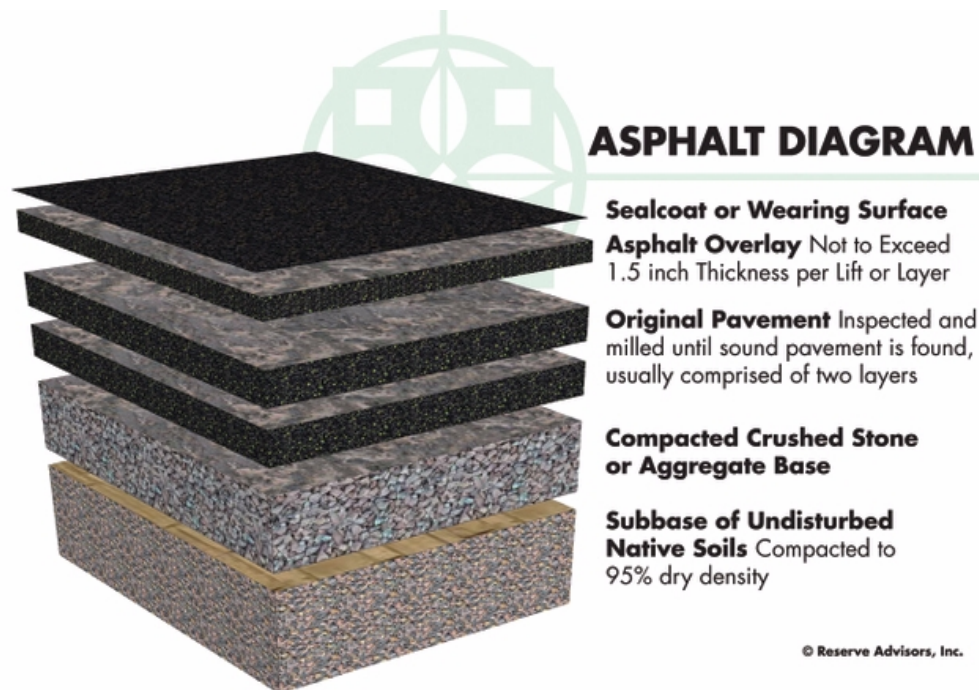
Based on information provided by representatives of the Association, we include an allowance for application of a seal coat in 2013 and subsequent applications every three years thereafter except when repaving occurs. Line Item 4.020 of *Reserve Expenditures* notes our estimate of future costs and anticipated times of these subsequent seal coat applications. Our cost reflects bid information provided by the Board.

**Asphalt Pavement, Repaving** - As previously mentioned, asphalt pavement comprises 19,350 square yards of streets and parking areas throughout the community. The pavement is in good to fair overall condition at an age of six years. We note areas of fatigue cracks, transverse cracks and previous patching. Pages 5.2 through 5.4 of *Photographs* depict these conditions. The useful life of pavement in Tucson is from 15- to 20-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. 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 *total replacement* method of repaving at Creekside.

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 of 15- to 20-years 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. Creekside should repair any isolated areas of deteriorated pavement concurrent with periodic seal coat applications. We recommend the Association plan for a total replacement of the asphalt pavement by 2031. We depict this information on Line Item 4.045 of *Reserve Expenditures*. The Association should coordinate asphalt repaving with related activities such as partial replacement of concrete curbs and gutters.

**Concrete Gutters** - The Association maintains the concrete gutters that line the pavement of Creekside. These gutters comprise 11,600 linear feet and are in fair condition

overall. We note areas of cracked gutters and previous partial replacements as depicted on Pages 5.4 and 5.5 of *Photographs*. We estimate that up to 3,480 linear feet of gutters, or thirty percent (30%) of the total, will require replacement in conjunction with the repaving event by 2031. We depict this information on Line Item 4.110 of *Reserve Expenditures*. We assume the use of 3,500 psi (pounds per square inch) concrete.

**Perimeter Walls, Concrete Block and Stucco** - The Association maintains approximately 3,230 linear feet of concrete block and stucco perimeter walls that comprise approximately 35,530 square feet of surface area. This quantity includes both sides of the walls. The stucco and concrete block are original and in good to fair condition. We note isolated areas of cracks and stucco deterioration as depicted on Pages 5.5 and 5.6 of *Photographs*.

Stucco is Portland cement plaster that is applied directly to a solid base such as masonry or concrete. The inherent composition of stucco along with proper installation results in stucco wall systems having indefinitely long useful lives with periodic finish applications and proper maintenance. The useful life of these finish applications is from 8- to 10-years. Periodic paint finish applications to stucco help prevent water infiltration and spalling from weather exposure, maintain a good appearance and maximize the useful life of the system. We advise that Creekside budget for paint applications, partial stucco replacements and crack repairs by 2016 and every 11 years thereafter. Our estimate of cost anticipates repair or replacement of 1,420 square feet, or up to four percent (4%), of the stucco and up to one percent (1%) of the concrete block in coordination with each paint finish application. The exact amount of area in need of repair will be discretionary based on the actual future conditions and the desired appearance.



Each paint product has the limited ability to bridge (cover and seal) cracks but we recommend repair of all cracks which exceed the ability of the paint product to seal. We depict this information on Line Item 4.640 of *Reserve Expenditures*.

### **Ramada and Rest Room Elements**

**Doors** - Creekside maintains doors at the ramada rest rooms and pool mechanical room. These doors are original and in fair overall condition. The useful life of these doors is up to 35 years. We suggest that the Association budget for an aggregated replacement of the doors by 2018. We include this information on Line Item 5.133 of *Reserve Expenditures*.

**Rest Rooms** - The Association maintains two rest rooms located at the ramada. The plumbing fixtures were replaced in 2011 and are in good overall condition. Representatives of the Association inform us that a floor coating may be applied in the near term. We recommend the Association fund this activity through the operating budget. The useful life of rest room components varies up to 35 years. Periodic renovations of the rest rooms are an astute practice to maintain a positive overall appearance of the Association. We recommend the Association budget for renovation of the rest rooms by 2038. We note this information on Line Item 5.233 of *Reserve Expenditures*. The Association should verify the rest room renovations comply with the Americans with Disability Act (ADA).

**Shower Area** - Creekside maintains a shower area at the ramada that is in fair overall condition. The shower fixture and ceramic tile have a useful life of up to 35 years. We

recommend the Association budget for replacement of the shower fixture and ceramic tile by 2018. We depict this information on Line Item 5.266 of *Reserve Expenditures*.

**Roofs, Flat** - The ramada and mechanical room flat roofs comprise 10 *squares*<sup>1</sup> of wood sheathing and thin membrane. The roofs are in fair condition at an age of 12 years. The useful life of a flat roof of this type is from 12- to 18-years. We recommend the Association anticipate complete replacement of the flat roofs by 2018 and again by 2035. We note this information on Line Item 5.333 of *Reserve Expenditures*.

### **Pool Elements**

**Concrete Deck** - A concrete deck with a textured coating surrounds the pool and comprises approximately 4,030 square feet. The deck is original and in good to fair condition. The textured coating is in good condition at an age of two- to three-years. The useful life of a concrete pool deck is up to 60 years or more with regular coating applications and repairs. We recommend the Association conduct inspections, partial replacements and repairs to the deck every 8- to 12-years in conjunction with coating replacements.

Inadequate subsurface preparation, improper concrete mixtures, poor finishing techniques, soil movement and water infiltration underneath the concrete deck can cause significant settlement and cracks in the concrete. The pool deck should also be free of trip hazards for the safety of residents and their guests. We recommend the Association budget for the following by 2019 and every 10 years thereafter:

- Selective cut out and replacements of up to ten percent (10%) of concrete

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

- Crack repairs as needed
- Mortar joint repairs
- Caulk replacement
- Coating replacement

The times, amounts and related costs of these repairs and replacements may vary. However, we judge the amounts shown on Line Item 6.200 of *Reserve Expenditures* sufficient to budget appropriate reserves.

**Fence, Metal** - Approximately 260 linear feet of metal fence is found at the pool. The fence is in good condition at an age of three years. The protective finishes are original and in fair overall condition. Page 5.10 of *Photographs* depicts isolated finish deterioration and rust. The Association should fund periodic paint finishes through the operating budget. Fences of this type have a useful life of 30- to 35-years. We anticipate replacement of the fence by 2040. We depict this information on Line Item 6.400 of *Reserve Expenditures*.

**Furniture** - Associated furniture and fixtures around the pool include the following:

- Chairs (12)
- Lounges (8)
- Tables (2)

These items vary in age and condition. The Association recently purchased 16 new pieces of furniture. Pool furniture has a useful life of up to 12 years. We recommend the Association budget an allowance for replacement of up to fifty percent (50%) of the pool furniture and fixtures by 2018 and every six years thereafter. The times and costs of these replacements may vary. However, we judge the amounts shown on Line Item 6.500 of *Reserve Expenditures* sufficient to budget appropriate reserves. We recommend interim re-strapping,

refinishing, cushion replacements, reupholstering and other repairs to the furniture as normal maintenance to maximize its useful life.

**Light Fixtures** - The Association uses column and wall mounted light fixtures to illuminate the pool area. Representatives of the Association inform us of plans to replace the light fixtures in 2013 at a cost of \$5,000. Exterior light fixtures have useful lives of up to 25 years. The Association should anticipate the need for a subsequent replacement by 2038. We note this information on Line Item 6.553 of *Reserve Expenditures*.

**Mechanical Equipment** - The pool mechanical equipment comprises the following:

- Automatic chlorinators
- Controls
- Filter
- Pump

The pool mechanical equipment is in fair overall condition. Pool mechanical equipment has a useful life of up to 15 years. We recommend the Association anticipate replacement of the pool mechanical equipment by 2015 and every 13 years thereafter. We consider interim replacement of motors and minor repairs as normal maintenance. We note this information on Line Item 6.600 of *Reserve Expenditures*.

**Plaster Finish** - The pool wall and floor surfaces have a plaster finish of 1,285 square feet based on the horizontal surface area. The pool plaster appears in fair to poor overall condition. This type of pool finish deteriorates with time and requires periodic maintenance and replacement. We recommend the Association anticipate the need to replace the plaster finish and conduct related repairs every 8- to 12-years to maintain the integrity of the pool structure.

Removal and replacement provides the opportunity to inspect the pool structure and to allow for partial repairs of the underlying concrete surfaces as needed. We recommend the Association budget for the following in 2014 and every 10 years thereafter:

- Removal and replacement of the plaster finish
- Partial replacements of the scuppers and coping as needed
- Replacement of up to ten percent (10%) of the tiles
- Replacement of joint sealants as needed
- Concrete structure repairs as needed

We include this information on Line Item 6.800 of *Reserve Expenditures*.

**Pool Shade** - Representatives of the Association inform us of plans to install pool shade in 2013. Based on cost information provided by representatives of the Association, we include an allowance of \$8,000 for pool shade installation in 2013. We depict this information on Line Item 6.853 of *Reserve Expenditures*.

**Structure** - The concrete pool structure is original and visually appears in fair condition. The concrete floor and walls have a plaster finish. This finish makes it difficult to thoroughly inspect the concrete structure during a noninvasive visual inspection. We note evidence of previous crack repairs but we are not aware of a recent history or any active leaks, nor do we note excessive settlement of the surrounding concrete deck.

We anticipate a total useful life of up to 60 years for the pool structure. The need to replace a pool structure depends on the condition of the concrete structure, the condition of the embedded or concealed water circulation piping, possible long term uneven settlement of the structure, and the increasing cost of repair and maintenance. Deterioration of any one of these



component systems could result in complete replacement of the pool. For example, deferral of a deteriorated piping system could result in settlement and cracks in the pool structure. This mode of failure is more common as the system ages and deterioration of the piping system goes undetected. For reserve budgeting purposes, we recommend Creekside plan to replace the following components by 2043.

- Concrete deck
- Mechanical Equipment
- Pool structure
- Subsurface piping

The time and cost of this project may vary. However, we judge the amount shown on Line Item 6.900 of *Reserve Expenditures* sufficient to budget appropriate reserves.

**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.



The Association can expense the fee for an Update with site visit from the reserve account. This fee is included in the Reserve Funding Plan. We base this budgetary amount on updating the same property components and quantities of this Reserve Study report. Budgeting for an Update demonstrates the Board's objective to continue fulfilling its fiduciary responsibility to maintain the commonly owned property and to fund reserves appropriately.

## PHOTOGRAPHS

*Photographs* document the conditions of various property components as of the date of our visual inspection, February 6, 2013. The Condition Assessment contains references to these photographs.

The following is an overview image of the subject property:



The next pages contain the photographs related to Section 4 - Condition Assessment



Asphalt pavement overview



Asphalt pavement overview,  
Bullrush Lane



Cave Creek Drive overview



Previous patching at Bull Rush Lane



Fatigue cracks at East Dianthus Place



Transverse crack at East Dianthus Place



Transverse crack at Brookhaven Lane



Fatigue cracks at Catalina Avenue



Concrete gutter crack at Cave Creek Drive



Previously replaced and original concrete gutters



Perimeter wall overview



Cracks in perimeter wall corner



Stucco crack



Step cracks and stucco deterioration



Hairline crack and paint finish deterioration at concrete blocks





Ramada overview



Deteriorated wood frame member  
at Ramada

*Replace through operating budget*



Rest room



Shower area



Ramada roof



Pool overview



Concrete deck crack, note recent coating application



Hairline deck crack



Metal pool fence



Rust at fence fastener

*Fund paint finishes through the operating budget*



Rust at base of metal fence post

*Fund paint finishes through the operating budget*



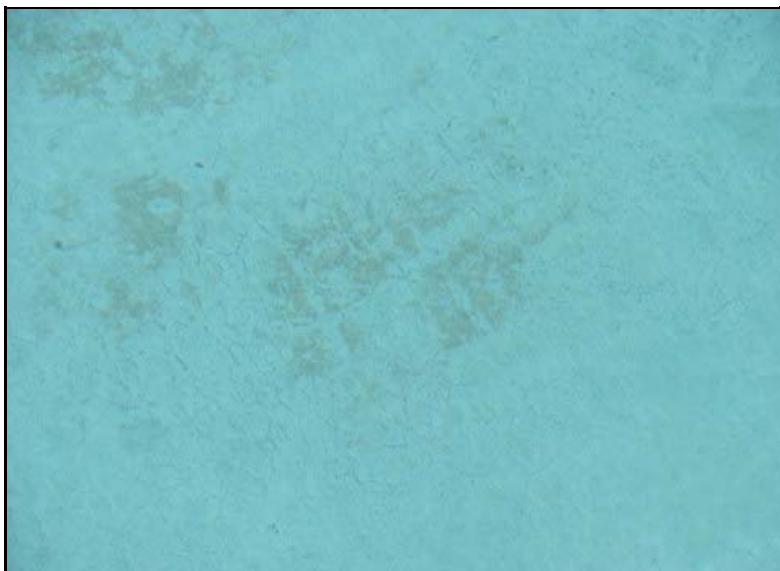
Pool furniture



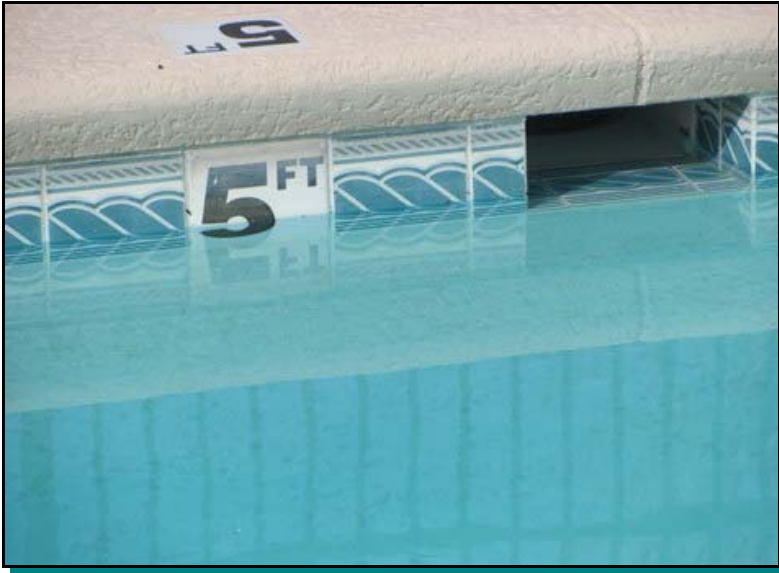
Light fixture



Mechanical equipment



Plaster cracks



Tile coping



**SUPPLEMENTARY INFORMATION FOR FINANCIAL STATEMENTS**

The Reserve Funding Plan uses the Cash Flow Method to determine an appropriate funding plan with the following unaudited financial information furnished by the Association.

**Unaudited Supplemental Information on Future Major Repairs and Replacements**

<i>Reserve Component Categories</i>	<i>Total Current Replacement Costs</i>	<i>Total Future or Inflated Replacement Costs</i>	<i>% of Total Future Replacements</i>	<i>Component of Projected 2013 YE Fund Balance</i>
Property Site Elements	\$859,035	\$1,051,610	70.1%	\$120,038
Ramada and Rest Room Elements	\$26,500	\$31,354	2.1%	\$3,579
Pool Elements	\$314,370	\$414,967	27.6%	\$47,367
Reserve Study Update	\$2,900	\$2,900	0.2%	\$331
<b>Totals</b>	<b>\$1,202,805</b>	<b>\$1,500,831</b>	<b>100%</b>	<b>\$171,315</b>

The *Audit and Accounting Guide for Common Interest Realty Associations* presents recommendations on Supplementary Information on Future Major Repairs and Replacements in end of fiscal year Audits of Financial Statements for community associations<sup>1</sup>. Accountants use discretion and judgment on how to present the Supplementary Information on Future Major Repairs and Replacements. However, the Supplementary Information on Future Major Repairs and Replacements often references and includes excerpts from our Reserve Studies. The following table excerpts significant unaudited information from the Reserve Expenditures about Reserve Component categories and estimated current and future replacement costs based on inflation at an annual rate of 1.2%.

The information included in the table above may be included as part of the Supplementary Information on Future Major Repairs and Replacements. *However, Reserve*

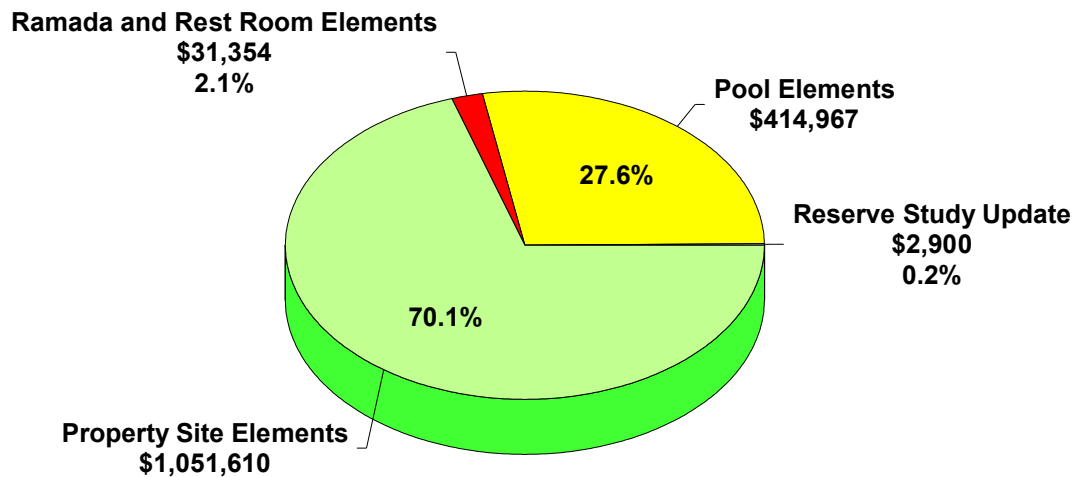
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<sup>1</sup> American Institute of Certified Public Accountants (AICPA) Audit and Accounting Guide - *Common Interest Realty Associations*; American Institute of Certified Public Accountants, Inc.; 2003

*Advisors, Inc. does not certify that the information in the table will fully satisfy the recommendations of the AICPA guideline.*

The most important category of Reserve Components noted in *Reserve Expenditures* is the Property Site Elements. The following chart illustrates the relative importance of the Reserve Expenditures and relative funding during the next 30 years.

### **Future Expenditures Relative Cost Illustration Creekside Homeowners Association**





## 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.

Creekside 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 standards<sup>1</sup> set forth by 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:

<b>Information Furnished by the Association</b>	
January 1, 2013 unaudited Cash Status of the Reserve Fund	\$163,784
2013 Budgeted Reserve Contributions	\$37,284
Anticipated Interest on Reserve Fund	\$1,667
Less Anticipated Reserve Expenditures	(\$31,420)
Projected 2013 Year-End Reserve Balance	\$171,315

The Cash Flow Method to compute, project and illustrate the 30-year Reserve Funding Plan

Local<sup>2</sup> costs of material, equipment and labor

Current and future costs of replacement for the Reserve Components

Costs of demolition as part of the cost of replacement

Local economic conditions and a historical perspective to arrive at our estimate of long term future inflation for *construction costs* in Tucson, Arizona at an annual inflation rate of 1.2%. 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 Creekside and their effects on remaining useful lives

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

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



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 1.0% (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. Slight increases exist in the savings rates of one, two or three-year CDs. 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 table summarizes rates of inflation and key rates for government securities, generally considered as safe investment alternatives.

Interest Rate and Inflation Data								
Average or Last Actual = (A)	2011:1 (A)	2011:2 (A)	2011:3 (A)	2011:4 (E)	2012:1 (A)	2012:2 (A)	2012:3 (A)	2012:4 (E)
90-Day Treasury Bill	0.050%	0.40%	0.20%	0.20%	0.05%	0.10%	0.1%	0.1%
1-Year Treasury Bill	0.30	0.15	0.10	0.10	0.30	0.19	0.18	0.18
10-Year Treasury Note	2.50	2.25	2.20	1.85	2.50	1.50	1.45	1.70
30-Year Treasury Bond	4.50	4.50	3.60	2.80	4.50	2.55	2.50	2.90
Consumer Price Index (annualized rate)	0.02	3.6%	3.8%	3.2%	2.1%	2%	2%	2%
"Residential Construction" Producer Price Index-Inflation Rate, Bureau of Labor Statistics (BLS - 12 months)								2.3%
<b>National Market Savings Rates as found in</b>	0.10%	for Money Market Savings			0.8%	for 2-Year Certificate of Deposit		
<a href="http://www.bankrate.com">http://www.bankrate.com</a>	0.4%	for 1-Year Certificate of Deposit			1.2%	for 3-Year Certificate of Deposit		
<b>Estimated Near Term Yield Rate for Reserve Savings</b> . . . . .					<b>1.0%</b>			
<b>Est. Near Term Local Inflation Rate for Future Capital Expenditures</b> . . . . .					<b>1.2%</b>			

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

## DEFINITIONS<sup>1</sup>

**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 Creekside 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) Creekside 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.

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<sup>1</sup> 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.



## **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.



## 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. We will consider any additional information made available to us in the interest of promptly issuing a Final Report (if requested). However, the Report represents a valid opinion of our findings and recommendations and is deemed complete and final if no Final Report or changes are requested within six months of our inspection. We retain the right to withhold the Report or Final 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 our Report(s) 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 can not 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 ***can not 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.



## 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 bachelors 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 a 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, Inc., 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, a Review Coordinator, 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, Inc. 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 100-story John Hancock Center 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 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.





**THEODORE J. SALGADO, P.E., PRA**  
**Principal**

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, defect identification transition studies, and consulting services for a nationwide portfolio of more than 5,000 clients. Under his direction, the firm conducts reserve study services for apartment complexes, churches, hotels, resorts, office towers and vintage architecturally ornate buildings.



**PRIOR RELEVANT EXPERIENCE**

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

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

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

**EXPERT WITNESS**

Mr. Salgado has testified successfully before the Butler County Board of Tax Revisions in Ohio. His depositions in pretrial discovery proceedings relating to reserve studies of Crestview Estates Condominium Association in Wauconda, Illinois 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** - Senior Designated Member and Certified Construction Inspector

**Association of Professional Reserve Analysts** - Past President, and Professional Reserve Analyst (PRA)

**Community Associations Institute** - Member and Volunteer Leader of multiple chapters throughout the United States

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

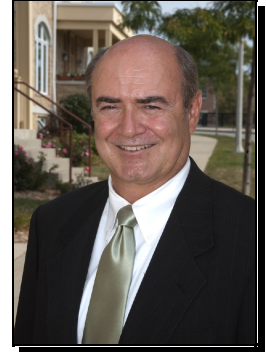
**Milwaukee School of Engineering** - Member, Corporation Board

**Professional Engineer, Wisconsin** - Registered in 1982

**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 exhibiting, and direct mail promotions. 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.



Mr. Poehlmann served on the national Board of Trustees of Community Associations Institute. Community Associations Institute (CAI) is a national, nonprofit 501(c)(6) trade association created in 1973 to provide education and resources to America's 305,000 residential condominium, cooperative and homeowner associations and related professionals and service providers. The Institute is dedicated to fostering vibrant, responsive, competent community associations that promote harmony, community, and responsible leadership.

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 Planning for Replacement of Property Doesn't Have to Be Like a Trip to the Dentist, Reserve Studies for the First Time Buyer, Sound Association Planning Parallels Business Concepts, and Reserve Studies Minimize Liability. He has worked with a variety of publications, including the Chicago Tribune, The Milwaukee Journal/Sentinel, Common Ground, Common Interest, and Condo Management. He also co-authored "Reserves", an educational videotape produced by Reserve Advisors on the subject of Reserve Studies and the benefits of maintaining appropriate reserves. The videotape is available through Reserve Advisors or CAI's website, [www.caionline.org](http://www.caionline.org) and libraries in the State of Virginia.

#### **INDUSTRY SERVICE AWARDS**

CAI National Rising Star Award - To an individual whose leadership abilities and professional contributions have earmarked them for even greater accomplishments in the future.

CAI Michigan Chapter Award - "Given to the individual who contributed their time, expertise, and resources toward improving the quality of services offered by the chapter. Mr. Poehlmann was unanimously selected as the winner of the 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



**QUALIFICATIONS**  
**Jayme R. Radomski, P.E., PRA, RS**  
**Director of Quality Assurance**

**CURRENT CLIENT SERVICES**

Jayme R. Radomski, an Architectural Engineer, is the Director of Quality Assurance for *Reserve Advisors, Inc.* Ms. Radomski is responsible for the management, review and quality assurance of all 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. Radomski has been involved with hundreds of Reserve Study assignments. The following is a partial list of clients served by Jayme Radomski demonstrating her breadth of experiential knowledge of community associations in construction and related buildings systems.

**Sun City Community Association of Huntley, Inc.** This planned unit development is located in Huntley, Illinois. The development features common elements shared by 5,481 homeowners. Common elements include a 114,000-square foot community center, a 19,000-square foot clubhouse, an aquatic center, a woodshop, a tennis center, ponds and other amenities. The buildings comprise complex asphalt shingle and flat roof assemblies, complex mechanical systems, furnishings, fixtures and kitchen equipment. The development comprises single family homes and eight townhome style neighborhoods.

**Carroll House Condominium** This unique architectural development located in historic Baltimore, Maryland comprises 23 residential units in four unique buildings. The buildings were constructed in the mid-1800s. The development comprises two mid-rise buildings and two single-story carriage homes.

**Ballston Park Condominium** This 137 unit, nine story, high rise building is located in Arlington, Virginia. This development features flat roof assemblies, brick masonry walls, balconies, mechanical systems, interior finishes, a parking garage and an elevated terrace.

**Church of the Resurrection** Located in New Albany, Ohio, this recently expanded church includes a church, and a social hall and classrooms. These two unique buildings comprise asphalt shingle and metal roof assemblies, brick masonry walls, complex mechanical systems, audio visual and sound equipment, and a kitchen.

**Brookfield Academy** This five building campus is located in Brookfield, Wisconsin. This independent school consists of students from levels K4 to 12. The campus includes various buildings and an athletic complex.

**Turnberry Village Condominium Association** A townhome style condominium development of 90 units in 13 buildings located in Ann Arbor, Michigan. The buildings feature complex roof designs, masonry veneer, and wood and aluminum siding.

**PRIOR RELEVANT EXPERIENCE**

Before joining *Reserve Advisors, Inc.*, Ms. Radomski was a Designer for Ahern Fire Protection in Menomonee Falls, WI. She was responsible for designing and drafting of fire protection systems in accordance with all applicable codes while selecting the most efficient fabrication, installation and stocklisting techniques, and performing hydraulic calculations to ensure proper flow and pressure of sprinkler systems.

**EDUCATION**

Milwaukee School of Engineering - M.S. Environmental Engineering, B.S. Architectural Engineering  
University of Wisconsin-Madison - B.S. Consumer Science

**PROFESSIONAL AFFILIATIONS**

*Professional Engineering License (P.E.)* - Wisconsin 2008  
*Reserve Specialist (RS)* - Community Associations Institute  
*Professional Reserve Analyst (PRA)* - Association of Professional Reserve Analysts  
*American Society of Civil Engineers (ASCE)*



**QUALIFICATIONS**  
**Matthew R. Beilman, RS**  
**Responsible Advisor**

**CURRENT CLIENT SERVICES**

Matthew Beilman, a Civil Engineer, is an Advisor for *Reserve Advisors, Inc.* Mr. Beilman is responsible for the inspection and analysis of the condition of clients' property, and recommending engineering solutions to prolong the lives of the components. He also forecasts capital expenditures for the repair and/or replacement of the property components and prepares technical reports on assignments. He is responsible for conducting Life Cycle Cost Analysis and Capital Replacement Forecast services and the preparation of Reserve Study Reports for condominiums, townhomes and homeowner associations.

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

**Hedingham Community Association** Located in Raleigh, North Carolina, this unique townhome association comprises 759 units in 379 buildings. The exteriors of the buildings include masonry veneer, vinyl siding and asphalt shingle roofs

**Runnymede Farms Association** Located in Newton Square, Pennsylvania, this attractive master association includes an extensive landscape, a swimming pool, tennis courts, retaining walls, entrance monuments, asphalt pavement and a pavilion containing a concrete balcony and pool mechanical equipment.

**Beaumont Residential Association** This expansive master association, located in the rolling hills of Lexington, Kentucky, is responsible for several miles of asphalt trails, miles of horse fencing, street signs, numerous and elaborate entrance monuments, and light poles and fixtures.

**Fairfield Village Community Association** A unique community association located in Cypress, Texas, comprises nine lakes, perimeter fences, retaining walls and tennis courts. A fitness center with gymnasium, daycare center and a pool provide additional amenities to more than 5,000 residents.

**Arboretum Village** Located in Chanhassen, Minnesota, this extensive development includes four separate townhome associations which contain 342 units in 85 buildings. Detailed architectural exteriors utilize a variety of building materials while interior components include complex fire suppression systems.

**The Point and Townhouses at River Shores** This attractive community in West Bend, Wisconsin comprises a townhome association and a mid-rise community association. The mid-rise building is constructed of various wall finishes, flat roofs and balconies, and contains heating and cooling systems, elevators, an indoor parking garage, life safety system and various interior finishes.

**Smithfield Greene Condominium Association** Located in Louisville, Kentucky, this association contains 28 units in four buildings. Characteristic of upscale architectural design, the exteriors of the buildings include masonry veneer and complex roof designs. The development encompasses attractive landscape, large retaining walls supporting asphalt pavement, masonry perimeter walls and brick pavers.

**Villas of Crimson Oaks** A distinguished community located in Lake St. Louis, Missouri, this association contains 44 units in 23 buildings. The custom buildings involve steep and elaborate roofing assemblies, masonry, vinyl siding, patios, and wood and composite decks including complex multistory framing. Features of the site involve several large retaining walls, pavement, fences and a large retention pond.

**PRIOR RELEVANT EXPERIENCE**

Before joining Reserve Advisors, Inc., Mr. Beilman attended the University of Wisconsin in Madison, Wisconsin where he attained his Bachelor of Science degree in Civil Engineering with a second major in Economics. His studies focused on construction engineering, project estimating and structural analysis.

**EDUCATION** - University of Wisconsin - B.S. Civil Engineering

**PROFESSIONAL AFFILIATIONS**

*Reserve Specialist (RS)* - Community Associations Institute



**QUALIFICATIONS**  
**Justin J. Maier, P.E., RS, PRA**  
**Review Coordinator**

**CURRENT CLIENT SERVICES**

Justin Maier, an Architectural / Structural Engineer, is an Advisor for *Reserve Advisors, Inc.* Mr. Maier is responsible for the inspection and analysis of the common property's current condition, recommending engineering solutions to prolong the lives of building components, forecasting capital expenditures for the repair and/or replacement of the property components, and technical report preparation on assignments. Justin Maier frequently serves as the *Quality Assurance Review Coordinator* for all types of developments.

The following is a partial list of clients served by Justin Maier demonstrating his breadth of experiential knowledge of community associations in architecture, civil construction and related buildings systems.

**Park Row at Burnham Place** Elegant, historicist townhome development exemplifying the city's redevelopment efforts in the South Loop of Chicago. Part of the Mayor's effort to "cul-de-sac the city."

**Valley Ranch** Home of the Dallas Cowboys and Dallas Stars, Valley Ranch has almost 4,000 single family homes and 21 apartment communities. Residents of this attractive community enjoy nearly five miles of lushly landscaped canal walkways, association parks and an extravagant irrigation system.

**Crystal Mountain Resort** Family resort development of 232 condominiums, townhomes and hotel suites within 33 buildings. Multiple building styles, materials and functions. Resort Property located in the shadow of Crystal Mountain in Northern Michigan.

**St. Andrews** Located in the heart of the St. Andrews Country Club in Delray Beach, Florida, this multiple Association development embraces both townhomes and condominium units. Homes boast views of either the intercoastal waterway or the Atlantic Ocean.

**Shaker Courts** Historic development from the early 1940's within walking distance of Cleveland's historic Shaker Square. Stately buildings with elegant rooftop gardens and first floor garage parking.

**Whitehall** Community of exclusive townhomes and high rise buildings overlooking a swimming pool located within the northwest Washington, D.C. Beltway. Homes are conditioned by centralized boilers and cooling towers.

**Fishhawk Lake Recreation Club, Inc.** Located in Northwest Oregon, this man-made lake development includes 305 platted lots on approximately 300 acres of land. Components of the property maintained by the Association include a sewage treatment plant, potable water treatment plant, earthen dam and site amenities.

**860-880 Lake Shore Drive** Designed by Ludwig Mies van der Rohe and built between 1949 and 1951, this twin 26-story Chicago Landmark is said to have set the standard by which all subsequent glass and steel high rises are judged.

**Southwood Shores** Quiet luxury on the man-made Lake of the Ozarks. Fronted by a seawall, this development prizes townhomes, multiple swimming pools, a clubhouse, boat docks, recreational facilities and maintains its own lift stations, water treatment plant and water softener equipment.

**PRIOR RELEVANT EXPERIENCE**

Before joining *Reserve Advisors, Inc.*, Mr. Maier was an Assistant Engineer for Crest Consulting Engineers, P.C., in Oak Brook, Illinois. He was responsible for the evaluation and analysis of construction defects, design of remedial construction repairs and implementation of the repairs by the contractor. Mr. Maier has designed structural and architectural repairs for projects throughout the greater Chicago area.

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

**PROFESSIONAL AFFILIATIONS**

*Professional Engineering License* - WI, MI, IL, PA, VA, OH, MD, NY, DC, MN, TX

*Professional Reserve Analyst (PRA)* - Association of Professional Reserve Analysts

*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 <http://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 <http://www.ashrae.org>. Reserve Advisors, Inc. actively participates in its local chapter and holds individual memberships.

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

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

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