



# Implementing and Utilizing

Your Reserve Study

Presented by:

Michelle Baldry, PE, RS



# \$27B

Annual assessment dollars contributed to association reserve funds for the **repair, replacement, and enhancement** of common property.

Based on data from the Foundation for Community Association Research:  
[foundation.caionline.org](https://foundation.caionline.org)

# Agenda

1

## Report deliverables

What are the different pieces of a reserve study?

2

## Report distribution

Who should get what?

3

## Using the report

How to leverage the information contained in the report.

4

## Keeping the report current

How to make minor updates, create what-if scenarios, and other changes.



# 1

## Report Deliverables

Understand the different pieces that comprise a reserve study

# Report Deliverables

## One

### Executive summary

High level details of the associations funding status and long-term needs

## Two

### Expenditure spreadsheets

Containing prioritized replacement schedule and itemized estimated costs

## Three

### Funding plan

Customized to offset the cost of future capital projects

## Four

### Report Narratives

Component specific details on replacement, construction methodology and more



# Executive Summary

- »Funding goal and methodology
- »Sources of costs
- »Reserve fund status
- »Funding recommendations

**Client:** Scenic Ridge Association (Scenic Ridge)  
**Location:** Madison, USA  
**Reference:** 123456

**Property Basics:** Scenic Ridge Association is a condominium style development of 75 units in 37 buildings. The buildings were built from 2003 to 2005.

**Reserve Components Identified:** 27 Reserve Components

**Inspection Date:** July 1, 2019

**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 2026 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
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- 2.5% future Inflation Rate for estimating Future Replacement Costs

**Sources for Local Costs of Replacement:** Our proprietary database, historical costs and published sources, i.e., R.S. Means, Incorporated and Marshall & Swift, "The Building Cost People."

**Cash Status of Reserve Fund:**

- \$467,289 as of January 1, 2019
- 2019 Reserve Contributions of \$92,000

**Project Prioritization:** We note anticipated Reserve Expenditures for the next 30 years in the *Reserve Expenditures* tables and include a *Five-Year Outlook* table following the *Reserve Funding Plan* in Section 3. We recommend the Association prioritize the following projects in the next five years based on the conditions identified:

- Paint finish applications to the stucco, trim, soffits and fascia, including repairs and partial replacements to maintain a uniformly clean and consistent appearance of the buildings
- Partial sealant replacement to limit water infiltration
- Replacement of the roofs as deferral may lead to further water infiltration and cost

**Recommended Reserve Funding:**

- Phased increases in Reserve Contributions of approximately \$3,500 from 2020 through 2024
- Inflationary increases through 2049, the limit of this study's Cash Flow Analysis
- Initial adjustment in Reserve Contributions of \$3,500 represents about a one percent (1.4%) adjustment in the 2019 total Operating Budget of \$248,600 and is equivalent to an average monthly increase of \$3.89 per unit owner.

# Executive Summary - Funding Goal

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# Executive Summary - Recommendation

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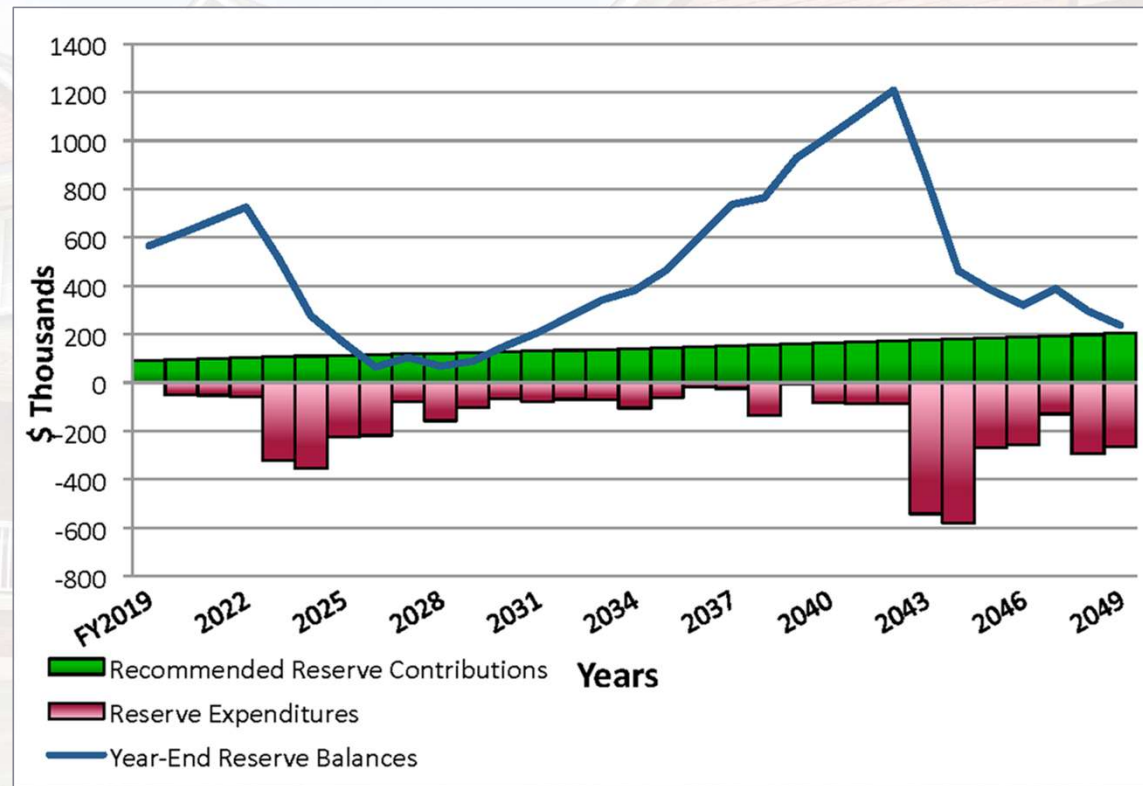
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## 1

# Executive Summary - Graphs

Year	Reserve Contributions (\$)	Reserve Balances (\$)	Year	Reserve Contributions (\$)	Reserve Balances (\$)
2020	95,500	616,749	2030	126,900	151,156
2021	99,000	670,898	2031	130,100	206,055
2022	102,500	724,646	2032	133,400	273,390
2023	106,000	515,245	2033	136,700	341,698
2024	109,500	275,912	2034	140,100	381,143
2025	112,200	166,436	2035	143,600	466,709
2026	115,000	64,302	2036	147,200	601,259
2027	117,900	104,010	2037	150,900	735,959
2028	120,800	67,853	2038	154,700	763,718
2029	123,800	88,431	2039	158,600	928,536





## Expenditure Spreadsheets

- » Itemization of each common element
- » Useful and remaining lives
- » Project timing and costs
- » Big picture understanding



## 2

## Expenditure Spreadsheets

**Explanatory Notes:**

1) 2.5% is the estimated future Inflation Rate for estimating Future Replacement Costs.

2) FY2019 is Fiscal Year beginning January 1, 2019 and ending December 31, 2019.

**Scenic Ridge Association**

Madison, USA

# 3

## Funding Plan

- »Details contributions and expenses by year
- »Highlights critical years
- »Provides content regarding funding needs

## 3

## Funding Plan

## CASH FLOW ANALYSIS

Scenic Ridge  
Association  
Madison, USA

## Individual Reserve Budgets &amp; Cash Flows for the Next 30 Years

FY2019 2020 2021 2022 2023 2024 2025 2026 2027 2028

Reserves at Beginning of Year (Note 1) 467,289 565,448 616,749 670,898 724,646 515,245 275,912 166,436 64,302 104,010

Total Recommended Reserve Contributions (Note 2) 92,000 95,500 99,000 102,500 106,000 109,500 112,200 115,000 117,900 120,800

Plus Estimated Interest Earned, During Year (Note 3) 6,159 7,051 7,680 8,323 7,395 4,719 2,638 1,376 1,004 1,025

Less Anticipated Expenditures, By Year 0 (51,250) (52,531) (57,075) (322,796) (353,552) (224,314) (218,510) (79,196) (157,982)

Anticipated Reserves at Year End \$565,448 \$616,749 \$670,898 \$724,646 \$515,245 \$275,912 \$166,436 \$64,302 \$104,010 \$67,853

(NOTE 5)

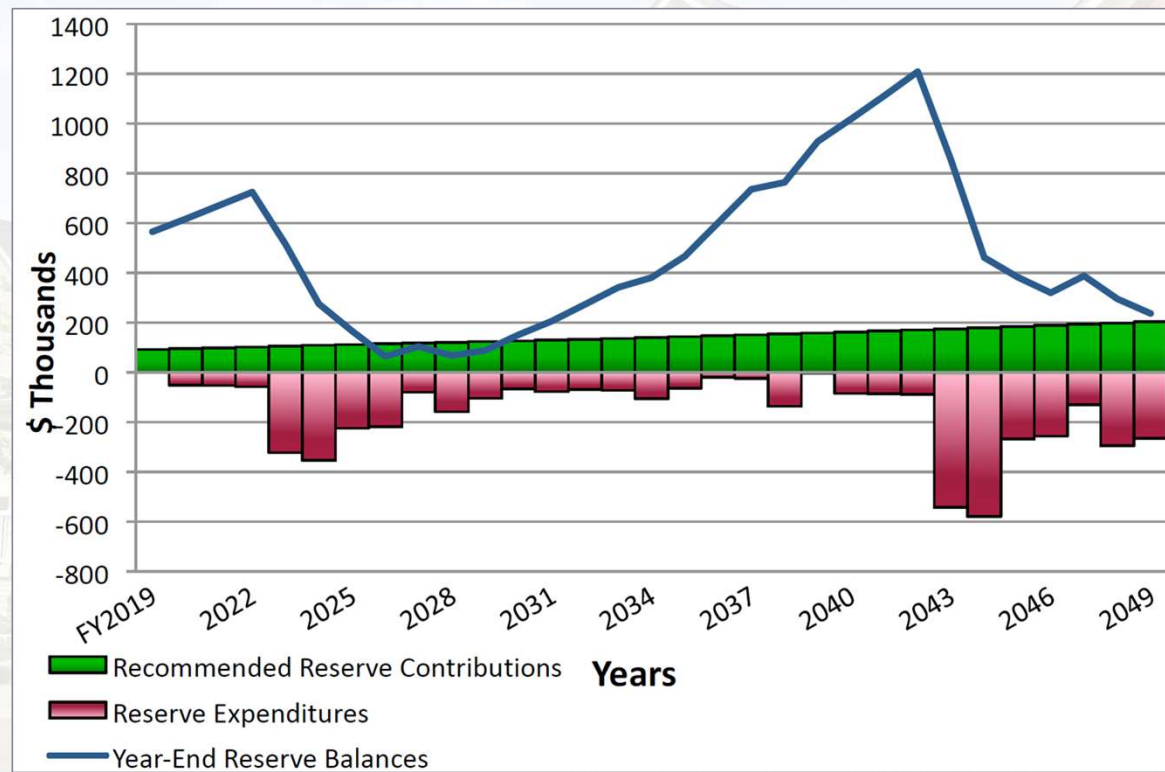
Predicted Reserves based on 2019 funding level of: \$92,000 565,448 613,228 660,293 703,351 479,610 222,244 91,803 (34,364) (21,896)

## Explanatory Notes:

- 1) Year 2019 starting reserves are as of January 1, 2019; FY2019 starts January 1, 2019 and ends December 31, 2019.
- 2) Reserve Contributions for 2019 are budgeted; 2020 is the first year of recommended contributions.
- 3) 1.2% is the estimated annual rate of return on invested reserves.
- 4) Accumulated year 2049 ending reserves consider the age, size, overall condition and complexity of the property.
- 5) Threshold Funding Year (reserve balance at critical point).

## 3

## Funding Plan





- »Quantities
- »Component history
- »Conditions and photographs

## Walls, Fiber Cement Siding and Trim, Paint Finishes

**Line Items:** 1.759 and 1.760

**Quantity:** Approximately 31,000 square feet of fiber cement siding and composite wood trim, and 160 linear feet of wood railings and associated wood columns at the front stoops. This quantity excludes the aluminum soffit and fascia.

**History:** The finish at the fiber cement siding is original, and the trim and railings were painted in 2013.

**Condition:** Fair overall with locations of peeling finish, discoloration, sealant deterioration, wood rot and cracks evident



Fiber cement siding



Sealant deterioration and peeling finish at fiber cement, Unit 100



Discolored finish at Unit 200



Peeling paint finish at Unit 300

## »Quantities

- » Provides further detail on the quantities of elements beyond what can be listed on the expenditures table

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## » Component history

- » Only location in the report where useful details on the history of capital repairs and replacement can be found

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## » Conditions and photographs

- » written and photographic details on the conditions of the elements help justify the timing and costs of replacement

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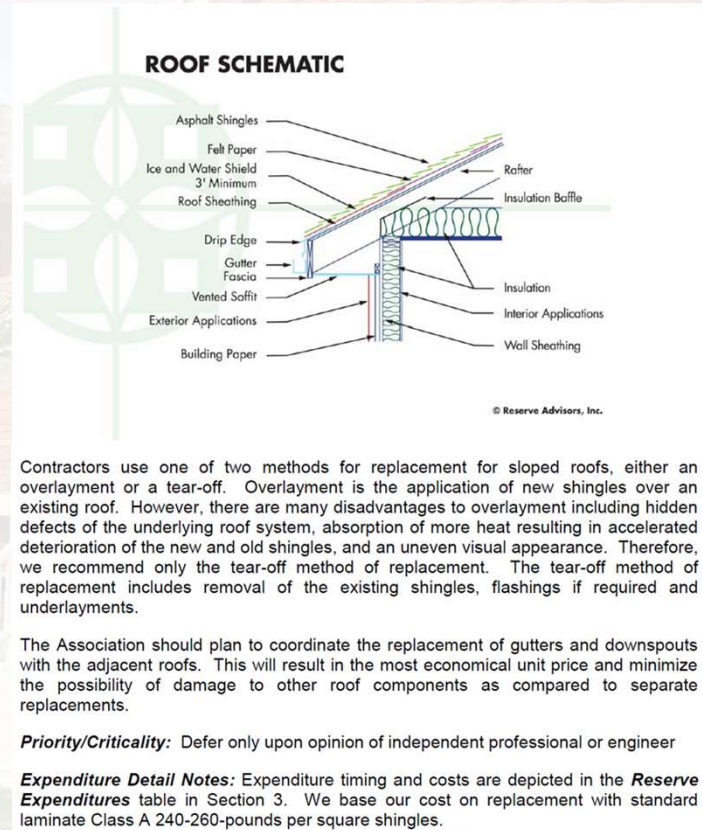
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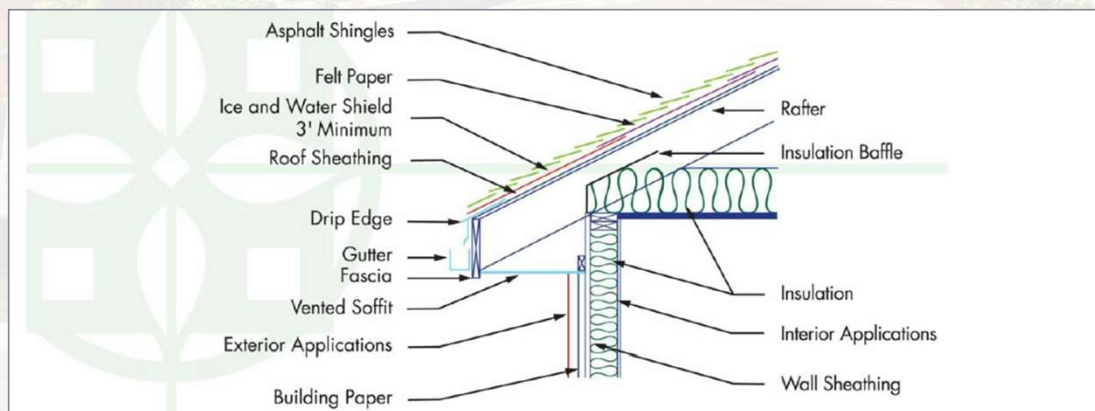


- » Schematics
- » Scope and best practices
- » Detail of expenditures

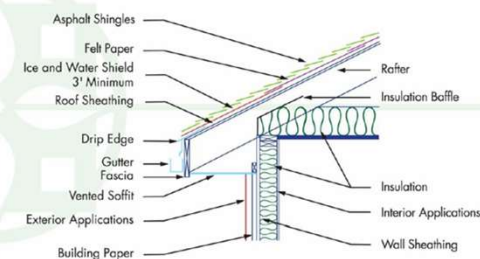


## » Schematics

» drawings which improve basic understanding of construction methods for those who are unfamiliar



**ROOF SCHEMATIC**



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

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

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

**Expenditure Detail Notes:** Expenditure timing and costs are depicted in the *Reserve Expenditures* table in Section 3. We base our cost on replacement with standard laminate Class A 240-260-pounds per square shingles.

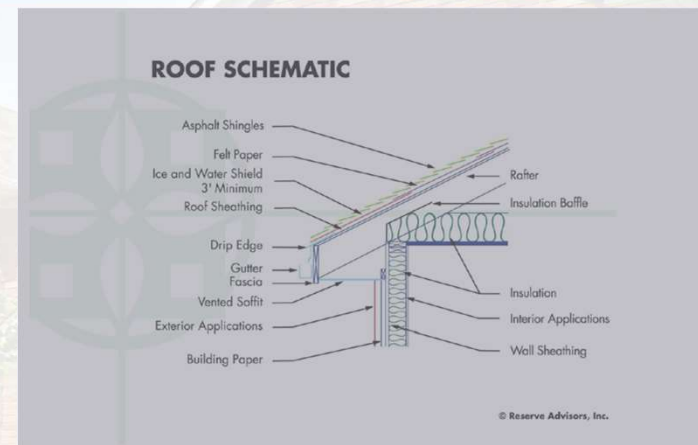


## » Scope and best practices

» defines what is included or excluded and details general best practices of construction

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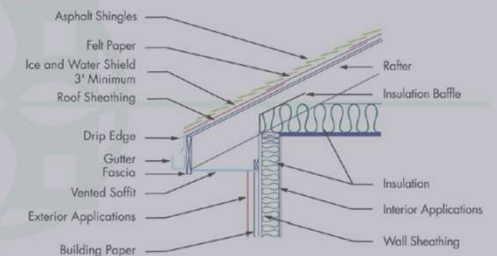
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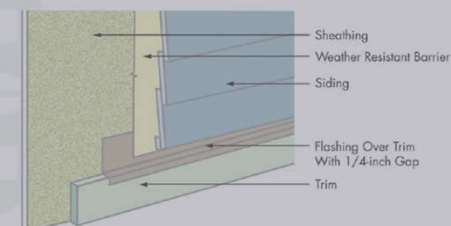
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- Paint finish application to the siding, soffits and fascia, trim and garage doors
  - Replacement of up to two percent (2%) of the siding and up to ten percent (10%) of the trim (The exact amount of material in need of replacement will depend on the actual future conditions and desired appearance. We recommend replacement wherever cracks, delamination and deterioration impair the ability of the material to prevent water infiltration.)
- Replacement of up to fifty percent (50%) of the sealants

### FIBER CEMENT SIDING DETAIL



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# 2

## Report Distribution

Who should get what?

# Report Distribution



## Executive Summary

Homeowners  
Prospective buyers



## Entire Report

Management  
Board  
Committees

## Near-term projects

30-year plan, 5-year focus

## Funding plan

Holistic understanding





# Report Distribution - Near-term Projects

## FIVE-YEAR OUTLOOK

Scenic Ridge  
Association  
Madison, USA

Line Item	Reserve Component Inventory	RUL = 0 FY2019	1 2020	2 2021	3 2022	4 2023	5 2024
<u>Exterior Building Elements</u>							
1.280	Roofs, Asphalt Shingles, Phased					228,696	234,414
1.400	Roofs, Flat, Phased					71,748	73,542
1.540	Sealants, Windows and Doors, Phased					12,418	
1.860	Walls, Stucco, Paint Finishes and Capital Repairs	38,438	39,398	40,383			
1.910	Walls, Trim, Soffits and Fascia, Paint Finishes	12,812	13,133	13,461			
<u>Interior Building Elements</u>							
2.200	Floor Coverings, Carpet, Hallways						24,891
2.800	Paint Finishes, Hallways						20,705
<u>Building Services Elements</u>							
3.060	Air Handling Unit, Rooftop Heating and Cooling Unit					9,934	
<u>Garage Elements</u>							
7.400	Door and Operator				3,231		
Anticipated Expenditures, By Year		0	51,250	52,531	57,075	322,796	353,552

**Project Prioritization:** We note anticipated Reserve Expenditures for the next 30 years in the **Reserve Expenditures** tables and include a **Five-Year Outlook** table following the **Reserve Funding Plan** in Section 3. We recommend the Association prioritize the following projects in the next five years based on the conditions identified:

- Asphalt pavement repairs and seal coat applications to extend the useful life of the pavement
- Complete inspection of the stone masonry facades to identify all areas of deterioration and performance of the necessary repairs. Left unaddressed, areas of water infiltration will increase, which may result in damage to the building structures and increase future repair costs.
- Coordinated paint finish applications to the building exteriors, including partial wood trim and fiber cement siding replacement, along with partial sealant replacement, to ensure a watertight barrier exists between weather elements and the building structure. Interim to these coordinated paint projects, the Association should anticipate the need to perform minor repairs and paint finish touch up, funded through the operating budget, due to the varied breakdown of these components, and commonly associated with the variation in the quality of the workmanship.



# Report Distribution - Funding Plan

## CASH FLOW ANALYSIS

Scenic Ridge  
Association  
Madison, USA

### Individual Reserve Budgets & Cash Flows for the Next 30 Years

	FY2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Reserves at Beginning of Year (Note 1)	467,289	565,448	616,749	670,898	724,646	515,245	275,912	166,436	64,302	104,010	67,853	88,431	151,156	206,055	273,390	341,698
Total Recommended Reserve Contributions (Note 2)	92,000	95,500	99,000	102,500	106,000	109,500	112,200	115,000	117,900	120,800	123,800	126,900	130,100	133,400	136,700	140,100
Plus Estimated Interest Earned, During Year (Note 3)	6,159	7,051	7,680	8,323	7,395	4,719	2,638	1,376	1,004	1,025	932	1,429	2,130	2,860	3,669	4,311
Less Anticipated Expenditures, By Year	0	(51,250)	(52,531)	(57,075)	(322,796)	(353,552)	(224,314)	(218,510)	(79,196)	(157,982)	(104,154)	(65,604)	(77,331)	(68,925)	(72,061)	(104,966)
Anticipated Reserves at Year End	\$565,448	\$616,749	\$670,898	\$724,646	\$515,245	\$275,912	\$166,436	\$64,302 (NOTE 5)	\$104,010	\$67,853	\$88,431	\$151,156	\$206,055	\$273,390	\$341,698	\$381,143
Predicted Reserves based on 2019 funding level of:	\$92,000	565,448	613,228	660,293	703,351	479,610	222,244	91,803	(34,384)	(1,896)						

critical years  
reserve balance at low threshold



(continued)

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

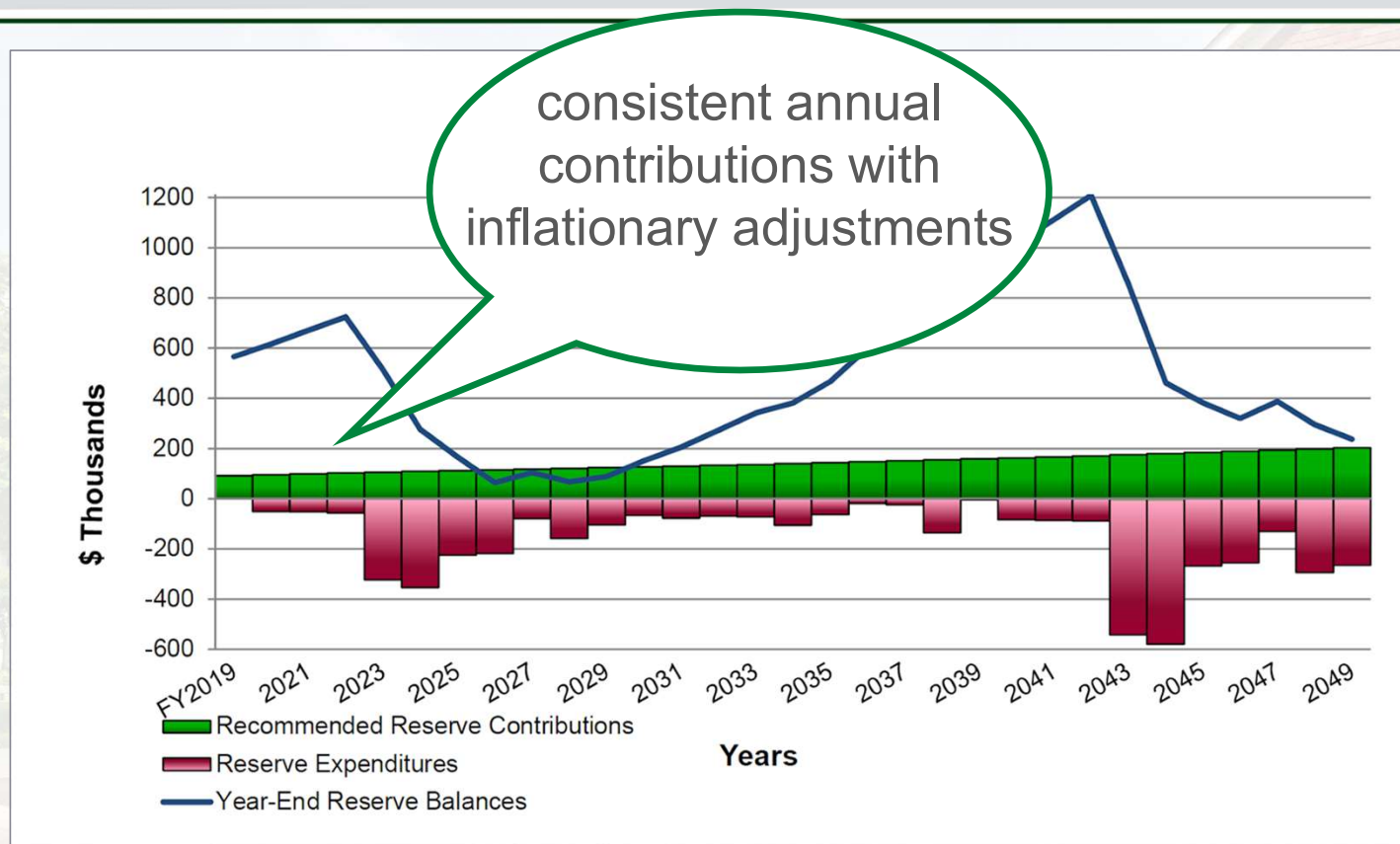
	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049
Reserves at Beginning of Year	381,143	466,709	601,259	735,959	763,718	928,536	1,018,771	1,112,101	1,208,611	853,607	461,718	383,057	320,156	388,008	295,603
Total Recommended Reserve Contributions	143,600	147,200	150,900	154,700	158,600	162,600	166,700	170,900	175,200	179,600	184,100	188,700	193,400	198,200	203,200
Plus Estimated Interest Earned, During Year	5,057	6,370	7,975	8,944	10,093	11,614	12,709	13,841	12,300	7,845	5,038	4,194	4,224	4,077	3,176
Less Anticipated Expenditures, By Year	(63,091)	(19,020)	(24,175)	(135,885)	(3,875)	(83,979)	(86,079)	(88,231)	(542,504)	(579,334)	(267,799)	(255,795)	(129,772)	(294,682)	(265,059)
Anticipated Reserves at Year End	\$466,709	\$601,259	\$735,959	\$763,718	\$928,536	\$1,018,771	\$1,112,101	\$1,208,611	\$853,607	\$461,718	\$383,057	\$320,156	\$388,008	\$295,603	\$236,920 (NOTE 4)

### Explanatory Notes:

- 1) Year 2019 starting reserves are as of January 1, 2019; FY2019 starts January 1, 2019 and ends December 31, 2019.
- 2) Reserve Contributions for 2019 are budgeted; 2020 is the first year of recommended contributions.
- 3) 1.2% is the estimated annual rate of return on invested reserves.
- 4) Accumulated year 2049 ending reserves consider the age, size, overall condition and complexity of the property.
- 5) Threshold Funding Year (reserve balance at critical point).



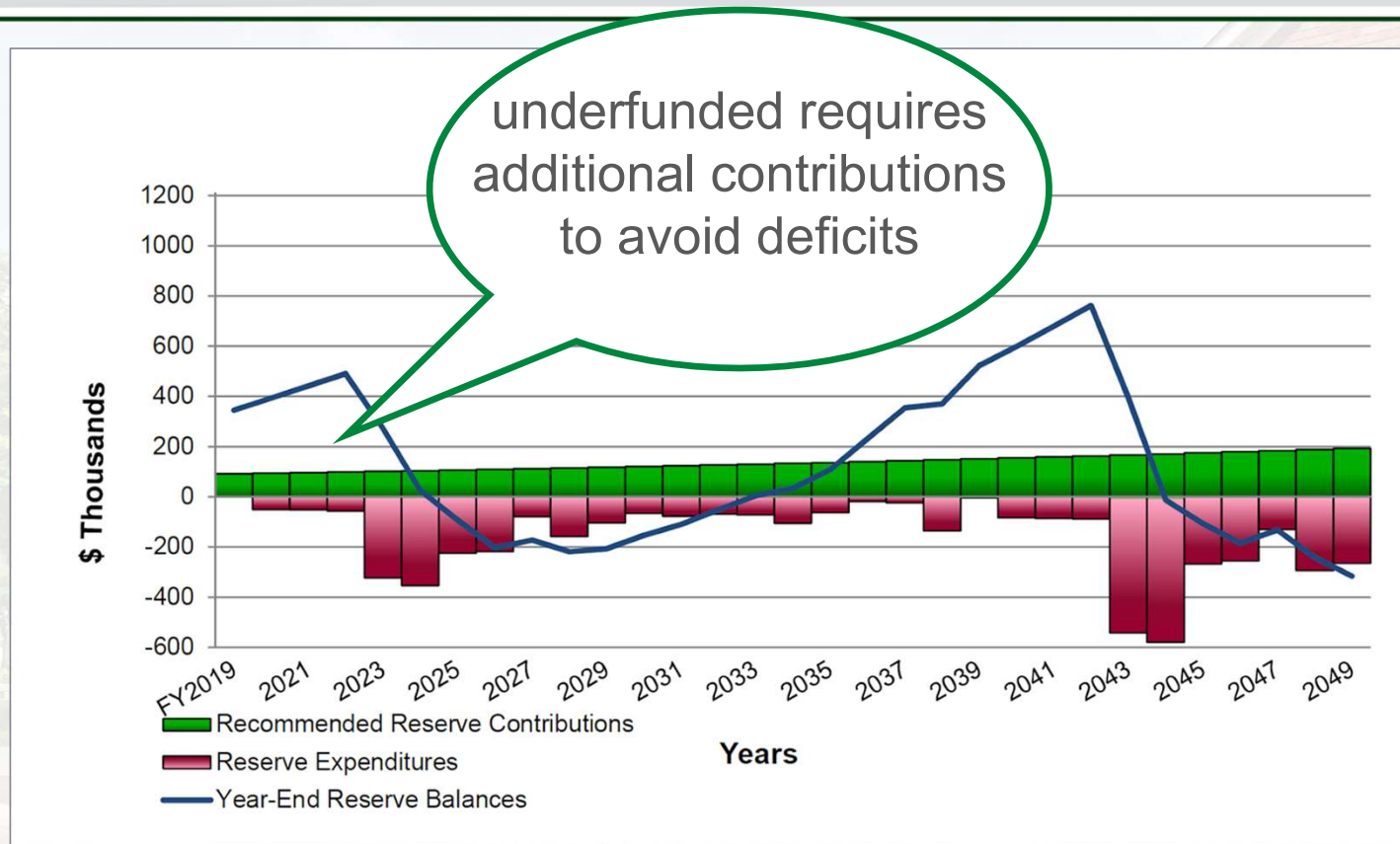
# Report Distribution - Funding Plan





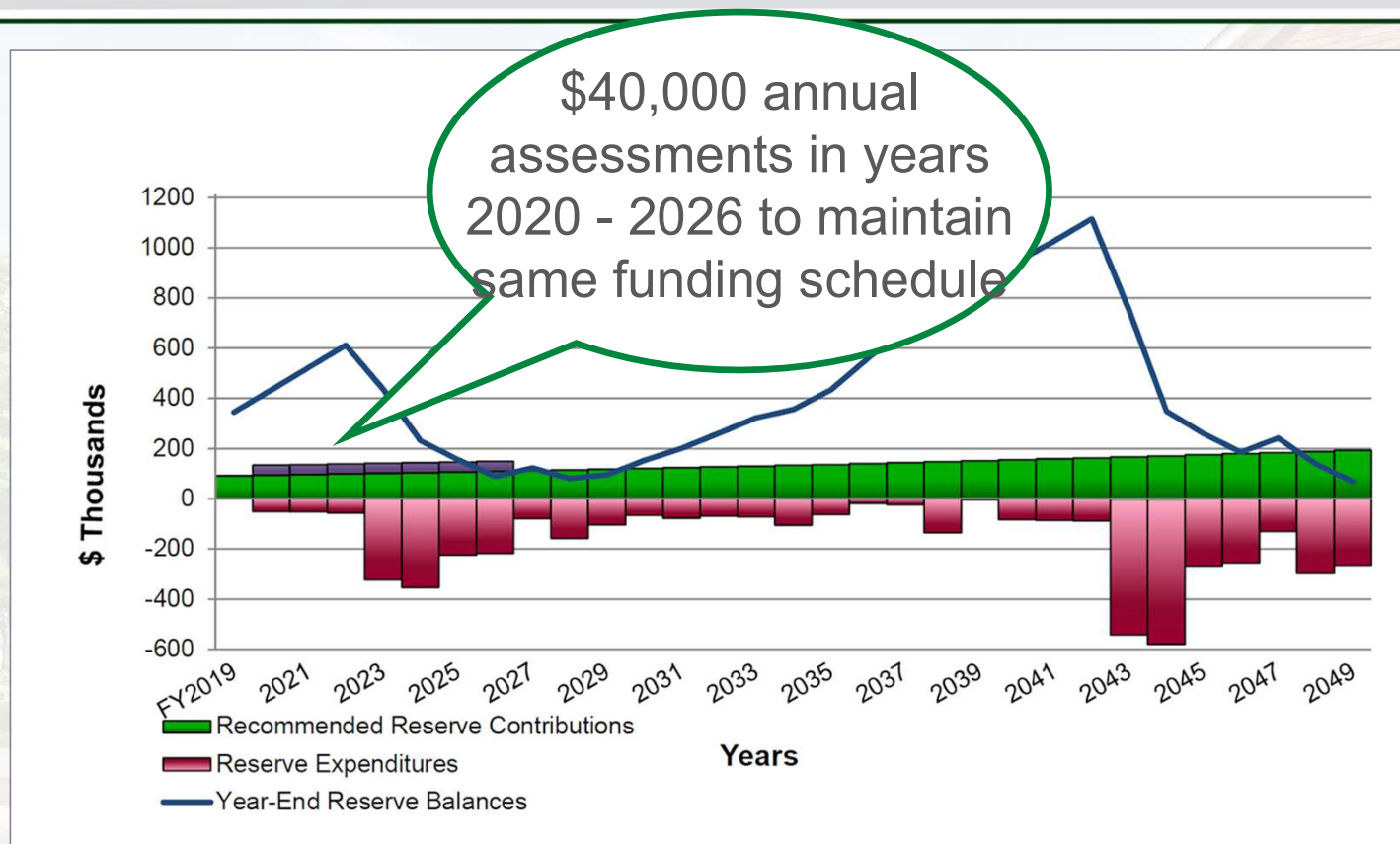


# Report Distribution - Funding Plan





# Report Distribution - Funding Plan





# 3

## Using the Report

How to leverage the information contained in the report.



# Using the Report



Guidance for annual funding levels as well insight into project management

**Budget**



Useful during special assessments or bank loans

**Funding**



Help define the scope and provide an expected project cost

**Bids**



Compliance with state or local laws and codes

**Regulatory**

# Using the Report

- » Annual dues
- » Project prioritization
- » Project scheduling

CASH FLOW ANALYSIS Scenic Ridge Association Madison, USA						
	FY2019	2020	2021	2022	2023	2024
Reserves at Beginning of Year (Note 1)	467,289	565,448	616,749	670,898	724,646	515,245
Total Recommended Reserve Contributions (Note 2)	92,000	95,500	99,000	102,500	106,000	109,500
Plus Estimated Interest Earned, During Year (Note 3)	6,159	7,051	7,680	8,323	7,395	4,719
Less Anticipated Expenditures, By Year	0	(51,250)	(52,531)	(57,075)	(322,796)	(353,552)
Anticipated Reserves at Year End	\$565,448	\$616,749	\$670,898	\$724,646	\$515,245	\$275,912
Predicted Reserves based on 2019 funding level of:	\$92,000	565,448	613,228	660,293	703,351	479,610

## FIVE-YEAR OUTLOOK

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1.860	Walls, Stucco, Paint Finishes and Capital Repairs		38,438	39,398	40,383	
1.910	Walls, Trim, Soffits and Fascia, Paint Finishes		12,812	13,133	13,461	

# Using the Report

- » Annual dues
- » Project prioritization
- » Project scheduling

## RESERVE FUNDING PLAN

### CASH FLOW ANALYSIS

Individual Reserve Budgets & Cash Flows for the Next 30 Years						
	FY2019	2020	2021	2022	2023	2024
Reserves at Beginning of Year (Note 1)	128,785	136,443	134,986	136,104	144,932	132,376
Total Recommended Reserve Contributions (Note 2)	5,423	12,300	19,200	26,100	33,000	33,700
Plus Estimated Interest Earned, During Year (Note 3)	2,235	2,288	2,285	2,369	2,337	2,136
Less Anticipated Expenditures, By Year	0	(16,045)	(20,367)	(19,641)	(47,893)	(47,106)
Anticipated Reserves at Year End	\$136,443	\$134,986	\$136,104	\$144,932	\$132,376	\$121,106

Reserve Component Inventory		Estimated 1st Year of Event	RUL = 0 FY2019	1 2020	2 2021	3 2022	4 2023	5 2024
<u>Pool Elements</u>								
Concrete Deck, Textured Coating, Partial Replacements and Repairs	2021			8,460				
Fence, Steel, Paint Finishes	2020			3,270				
Fence, Steel, Replacement	2046							
Furniture	2023						8,182	
Mechanical Equipment, Phased	2025							
Pool Finish, Plaster	2022					19,641		



# Using the Report



## Funding

- ✓ Special assessments
- ✓ Bank loans



## Bids

- ✓ scope of work
- ✓ alternate solutions
- ✓ cost comparisons



## Regulatory

- ✓ state law
- ✓ local ordinances
- ✓ association requirements



# 4

## Keeping the Report Current

How to make minor updates, create what-if scenarios, and other changes.

# Keeping the Report Current

- » Reserve studies are a **snapshot** in time
- » Communities need the most **up-to-date** picture of your association's needs
- » Keeping the report current allows boards to make the most **informed decisions**



# Keeping the Report Current

1

## Deferral or acceleration

of replacement can occur for numerous reasons; a few being accelerated deterioration, replacement due to an insurance claim, or condition exceeding expectations.

2

## Adding or removing items

either due to the construction of a new elements or the abandonment of an existing element.

3

## Project coordination

adjustments can take many shapes; possibly coordinating different elements into one project or splitting a large project into smaller replacement events.

4

## Use of alternate materials

or products can occur; many times due to advancements in technology/materials or for aesthetic reasons.

# Keeping the Report Current



## **Solid framework**

for maintaining property in excellent condition



## **Avoid surprises**

from unexpected assessments or loans



## **Minimize complaints**

from owners due to declining condition of common elements



## **Reduce cost of ownership**

through proactive repairs to achieve full useful lives

# Keeping the Report Current



## Promoting harmony within the community

- ✓ building trust in management & board decisions while providing confidence in long-term outlook
- ✓ increased curb appeal, property values and demand for association living



## Enhanced accuracy of future reserve study updates

- ✓ incorporation of actual replacement schedule
- ✓ inclusion of preferred contractor costs





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