



ASSOCIATION
RESERVES™

Capital Replacement Reserves

Presented by Bryan Farley, RS



ASSOCIATION RESERVES™

Bryan Farley is the President of Association Reserves – Colorado. A Reserve Specialist, Bryan has completed ~3,000 Capital Reserve Studies and has been a frequent speaker on the topic of Reserve Studies.

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Things you will learn in this presentation:

Part I

- What is a Capital Reserve Study
 - How Reserve Health is Determined
 - Which Components Belong on a Reserve Study
 - Reserve Strength

Part II

- Consequences of Underfunding
- Funding Ideas

Part III

- How to read a Capital Reserve Study in 5 minutes
 - Frequency of Updating Reserve Study updates
 - Importance of a Capital Reserve Study
-

Part I

- What is a Capital Reserve Study?



Reserves are for the Here & Now



A Reserve Study is a Map and a Guideline



How are Reserves Defined?

Operating	Reserves
Recurring Expense	Recurring Expense
Month to Month & Year to Year	Longer Term Timeline
Less Than 1% of Annual Budget	Greater Than 1% of Annual Budget
As Needed	Planned Expense



What Isn't a Reserve Study?

- Engineering Report
- Structural Report
- Appraisal
- Insurance Audit



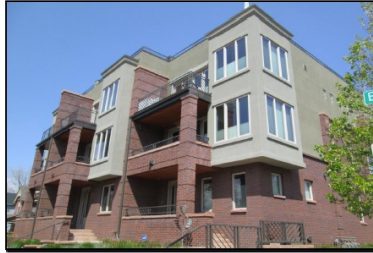
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**ASSOCIATION
RESERVES**
Est. 1986
Over 30,000 Reserve Studies nationwide

Regional Offices
Arizona
California
Colorado
Florida
Hawaii
Nevada
Washington

Sample Reserve Study



Sample Condominium Anywhere, USA

Report #: 28695-0
For Period Beginning: January 1, 2016
Expires: December 31, 2016

Date Prepared: June 5, 2015



Reserve Study Structure



RESERVE STUDY RESULTS



RESERVE STUDY RESULTS

Based on a visual site inspection & research



RESERVE COMPONENT "THREE-PART TEST"



RESERVE STUDY RESULTS

Component List Definitions

- Description
 - ▣ The repair & replacement project
 - Useful Life (UL)
 - ▣ Estimate of how long component was designed to fulfill its intended function
 - Remaining Useful Life (RUL)
 - ▣ Estimate of how much longer component will perform its intended function
 - Replacement Cost
 - ▣ Current cost of repair/replacement
-

Reserve Component List

Description	UL	RUL	Cost
Pool Furniture - Replace	5	0	\$4,600
Pool - Resurface	10	5	\$10,000
Roof - Replace	20	18	\$80,000
Asphalt - Seal	5	2	\$5,000
Asphalt - Resurface	20	2	\$25,000
Building - Repaint	10	1	\$50,000
Elevator - Modernize	20	5	\$80,000
Hallways - Refurbish	8	6	\$24,000

SCOPE

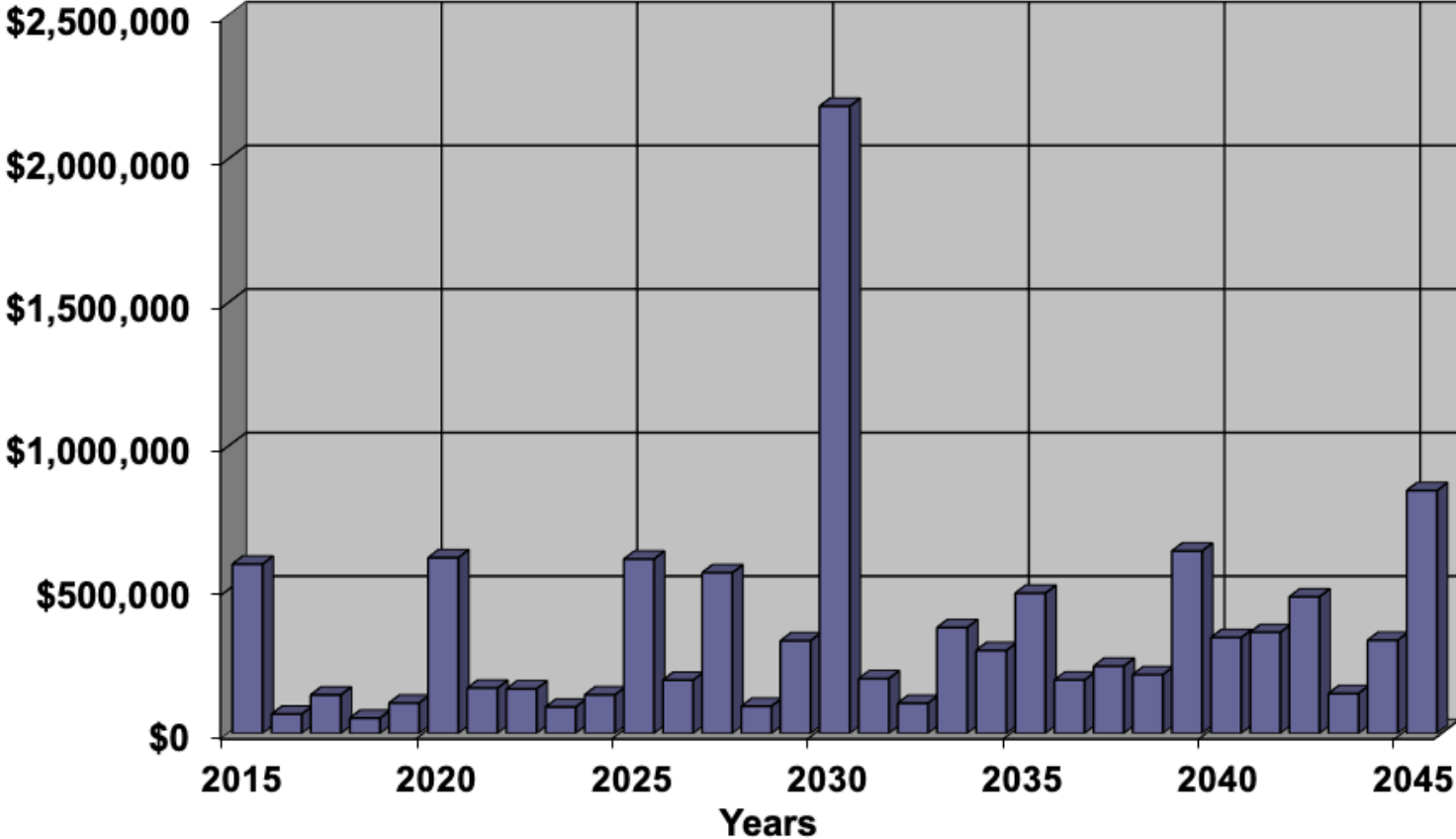
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SCHEDULE

Reserve Component List

Annual Reserve Expenses





RESERVE STUDY RESULTS

Is There Enough Money To Cover Expenses?



$$\% \text{ Funded} = \frac{\$ \text{ in Reserve Fund}}{\$ \text{ in Accumulated Deterioration}}$$

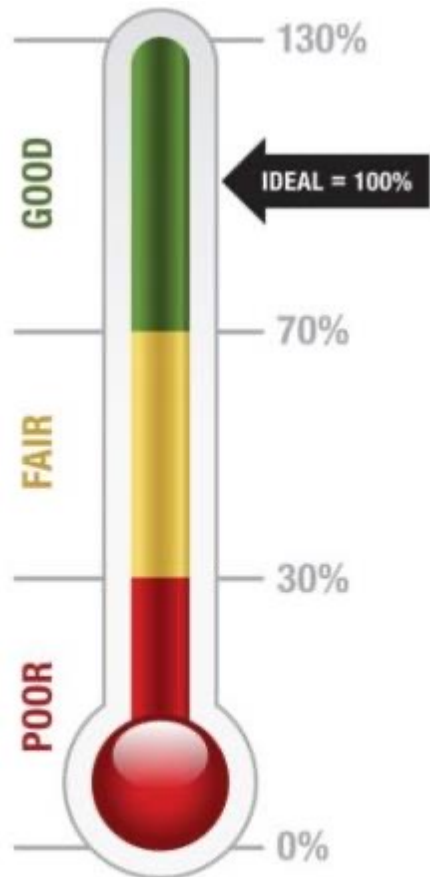
Percent Funded is a statistical measuring tool to determine "health"



$$\% \text{ Funded} = \frac{\$ \text{ in Reserve Fund}}{\$ \text{ in Accumulated Deterioration}}$$

Year	1	2	3	4	5	6	7	8	9	10
Accumulated \$ Value	\$1k	\$2k	\$3k	\$4k	\$5k	\$6k	\$7k	\$8k	\$9k	\$10k

Reserve Fund Strength

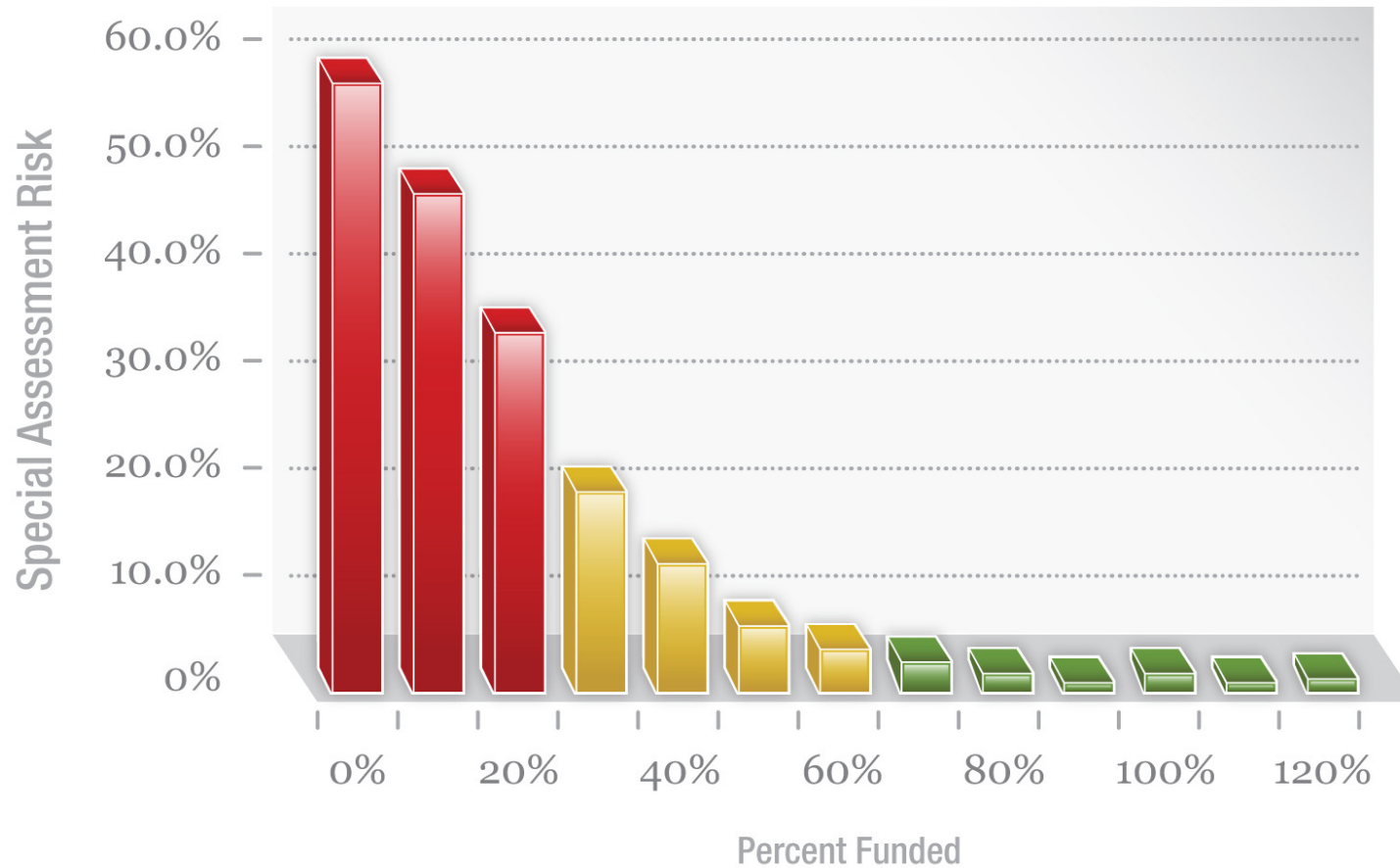


aka “0% Funded”

Provides a clear indication how financially prepared you are to make timely repair and replacement, where 100% funded is “ideal”.

RESERVE FUND STRENGTH

NATIONAL SPECIAL ASSESSMENT RISK



Risk of cash-flow problems & deferred maintenance increase

Part II

Consequences of Underfunding



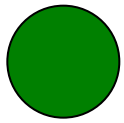
Deferred Maintenance

- Capital Reserve Expenses get more expensive when ignored/deferred

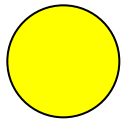


Deferred Maintenance

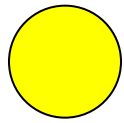
5 Failure Modes



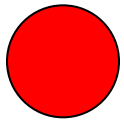
Inconsequential



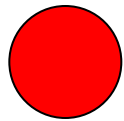
Re-Evaluate



Obsolescence



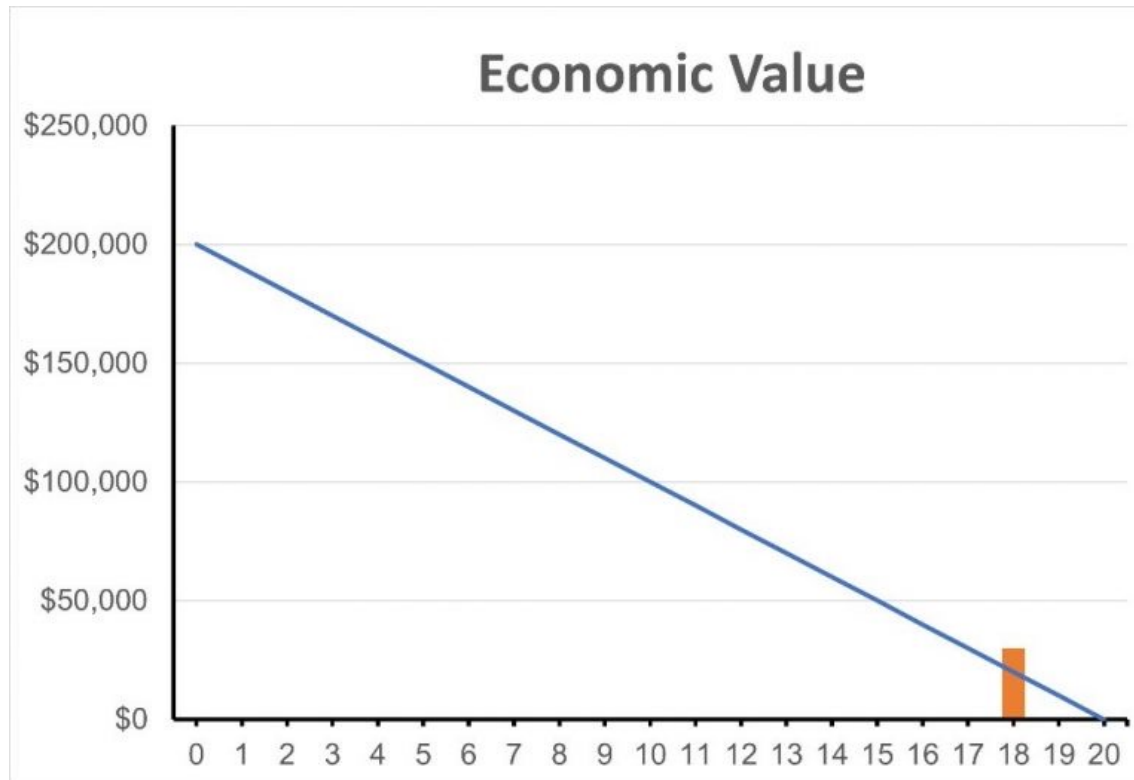
Protection



Catastrophic



Repair or Replace?



$$\text{Economic Value} = \text{Replacement Cost} \times \frac{(\text{Useful Life} - \text{Age})}{\text{Useful Life}}$$



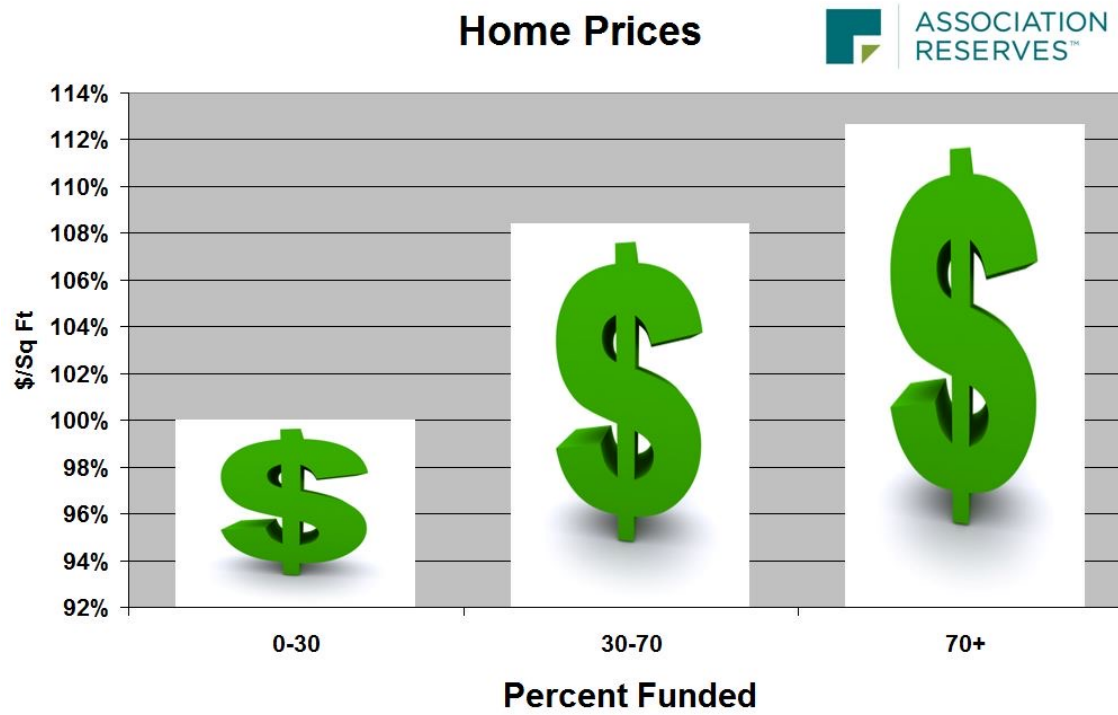


Lower Property Values



Lower Property Values

- A well funded property will increase the home value by 12.6%

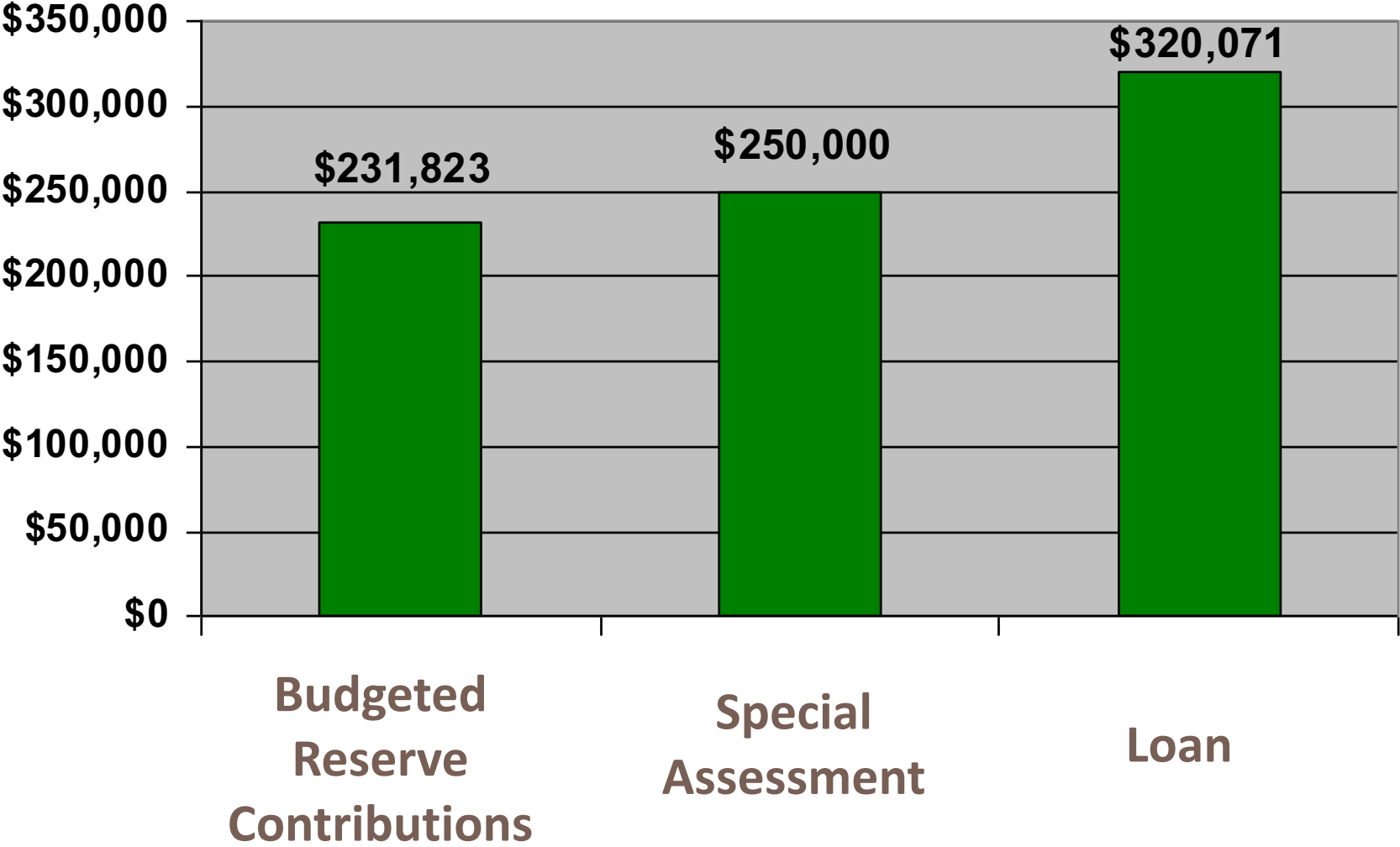


Special Assessments & Loans



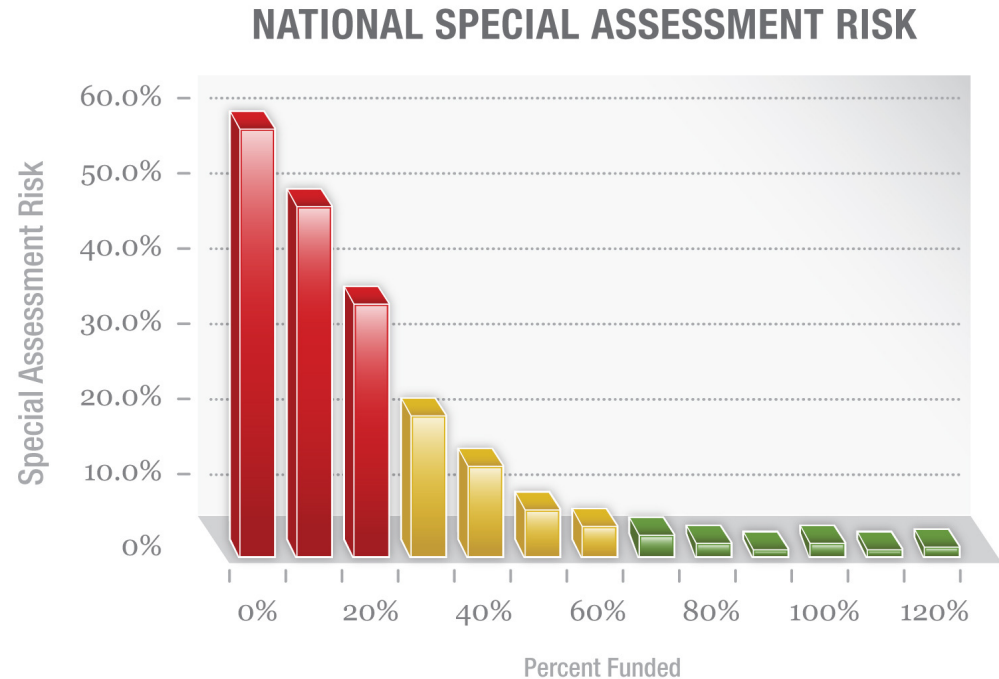
- Unfair to New Residents
- Unfair to Future Residents

Funding 15-Year \$250,000 Project @1%



Costly Upkeep

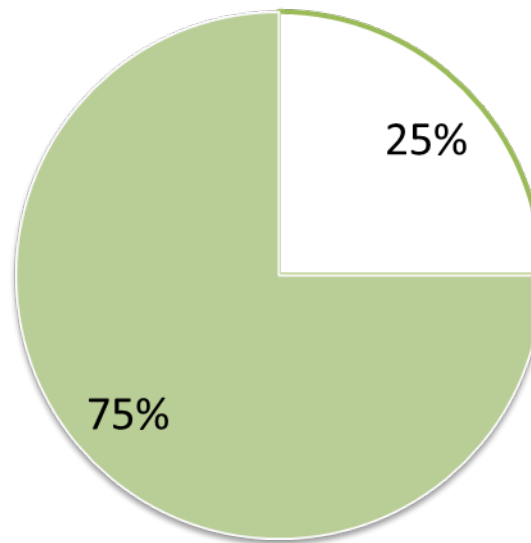
- A Poorly funded property will cost more to upkeep
 - Costly Surprises (that should have been planned for)
 - Reserve Expenses get more expensive when ignored/deferred
 - Unstable budgets
 - Inflation



How Much Money?

Budget

□ Reserves ■ Operating





RESERVE STUDY RESULTS

Funding Ideas

- Offset Annual Cost of Deterioration & Build Reserves
 - At a minimum, match the rate of deterioration
 - Build Reserves to insure future
 - Future economic conditions are unknown
 - Plan for worst
-

Funding Ideas

Office Building Interiors				
24010	Interior Surfaces - Repaint	10	\$20,550	\$2,055
24030	Interior Lights - Replace	20	\$9,000	\$450
24070	Tile Flooring - Replace	30	\$26,700	\$890
24080	Carpeting - Replace	10	\$93,450	\$9,345
24110	Resilient Flooring - Replace	20	\$7,650	\$383

385 Total Funded Components

\$12,495,178

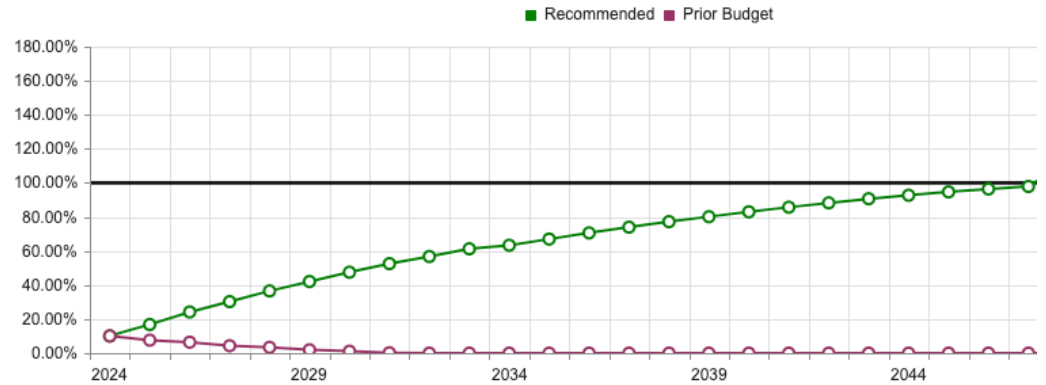
$$\text{Annual Deterioration Cost} = \frac{\text{Current Replacement Value}}{\text{Useful Life}}$$

Funding Ideas

Percent Funded

Reserve Fund Strength: as-of Fiscal Year Start Date

Year	Starting Reserve Balance	Fully Funded Balance	Percent Funded
2024	\$30,000,000	\$297,331,506	10.1%
2025	\$52,342,007	\$311,178,886	16.8%
2026	\$79,668,879	\$329,743,889	24.2%
2027	\$104,533,459	\$345,600,930	30.2%
2028	\$133,724,474	\$366,049,203	36.5%
2029	\$162,045,966	\$385,272,616	42.1%
2030	\$193,678,083	\$407,504,329	47.5%
2031	\$226,191,269	\$430,278,170	52.6%
2032	\$254,673,506	\$448,572,273	56.8%
2033	\$290,281,720	\$473,700,530	61.3%
2034	\$300,507,876	\$474,177,465	63.4%
2035	\$332,319,839	\$496,016,557	67.0%
2036	\$368,352,888	\$521,693,840	70.6%
2037	\$405,562,722	\$548,119,284	74.0%
2038	\$445,232,799	\$576,585,452	77.2%
2039	\$482,687,606	\$602,320,419	80.1%
2040	\$524,859,524	\$632,341,562	83.0%
2041	\$569,294,495	\$664,162,200	85.7%
2042	\$615,911,380	\$697,690,780	88.3%
2043	\$664,262,022	\$732,459,929	90.7%
2044	\$711,805,722	\$767,408,195	92.8%
2045	\$759,463,257	\$801,933,755	94.7%
2046	\$809,172,726	\$839,207,416	96.4%
2047	\$853,916,468	\$872,131,443	97.9%
2048	\$79,189,189	\$70,137,808	112.9%



Part III

- **Using A Reserve Study**



How To Read A Reserve Study

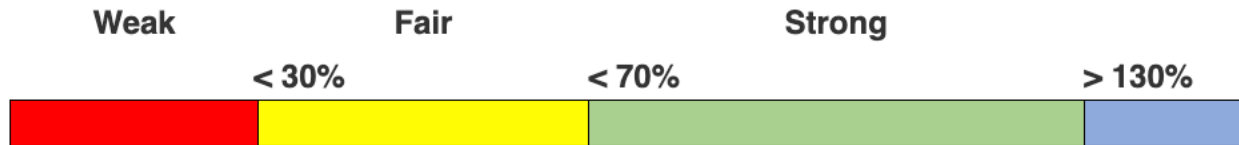
Findings & Recommendations

as of January 1, 2024

Starting Reserve Balance	\$30,000,000
Fully Funded Reserve Balance	\$297,331,506
Annual Rate (Cost) of Deterioration	\$12,495,178
Percent Funded	10.1 %
Recommended 2024 Annual "Fully Funding" Contributions	\$22,000,000
Alternate/Baseline Annual Minimum Contributions to Keep Reserves Above \$0	\$21,000,000
Recommended 2024 Special Assessments for Reserves	\$6,345,000
Most Recent Annual Reserve Contribution Rate	\$0

Reserve Fund

Strength: 10.1%



Risk of Special Assessment:

High

Medium

Low



How To Read A Reserve Study

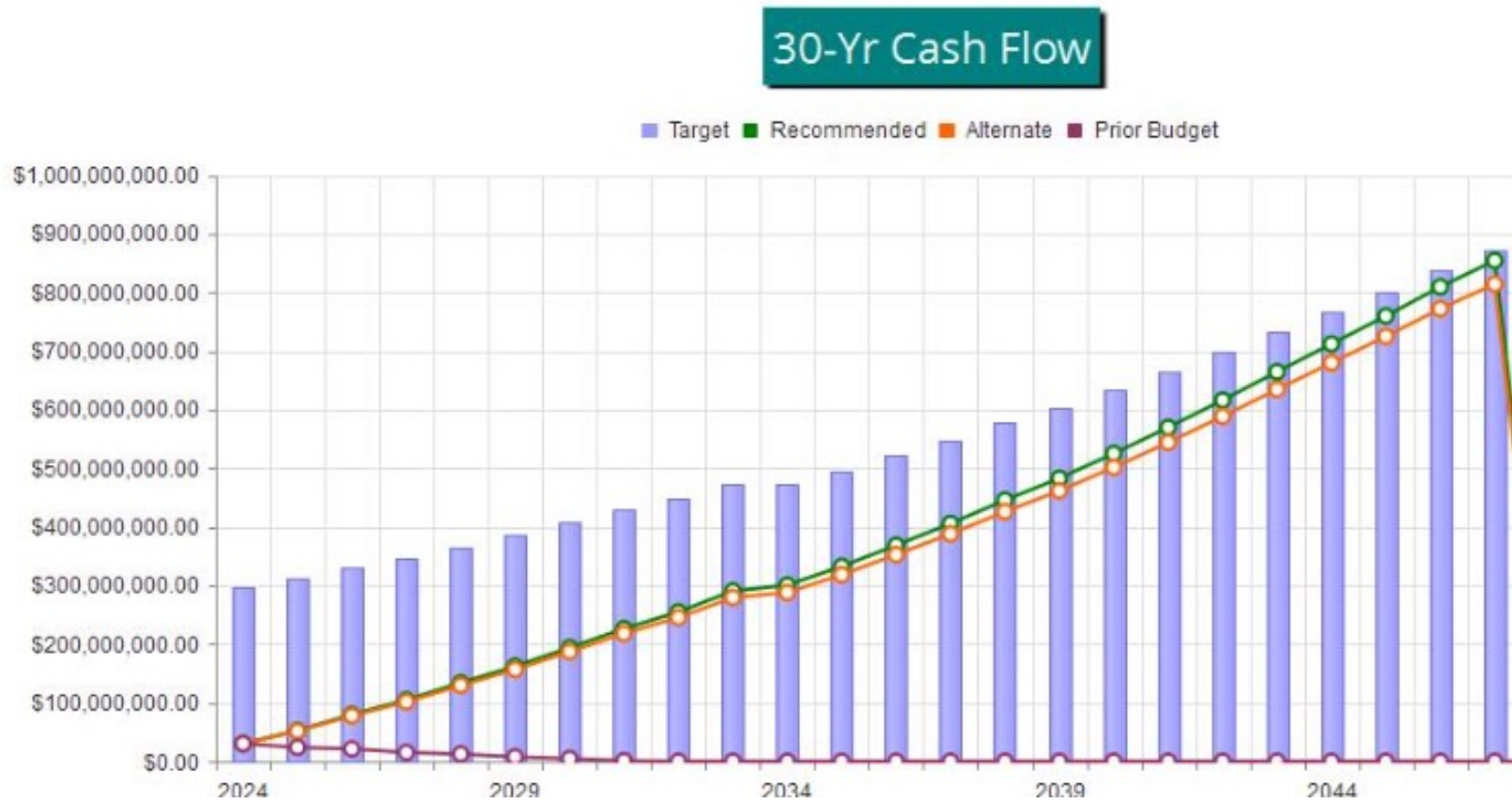
Executive Summary Table

Report #

Full

# Component	Useful Life (yrs)	Rem. Useful Life (yrs)	Current Average Cost
Distribution Assets			
25270 PRVs - Allowance	1	0	\$250,000
25280 Pumps - Annual Repairs	1	0	\$150,000
25400 Fire Hydrants - Allowance - 2.5%	1	0	\$960,000
25470 Master Meters - Upgrade	10	9	\$200,000
25520 Piping System - Replace	70	23	\$415,000,000
25560 Gate Valves - Annual Allowance	1	0	\$1,050,000

How To Read A Reserve Study



How To Read A Reserve Study

Comp #: 23540 Roof: Ballasted EPDM - Replace

Quantity: ~ 48400 GSF

Location: Building Exteriors

Funded?: Yes.

History: Reportedly replaced in 2014

Comments: Our inspection is limited to a visual evaluation of accessible areas and is not a substitute for a comprehensive inspection including destructive testing sub-surface moisture evaluation core sampling etc. The typical useful life of a flat (AKA "low-slope") roof will vary depending on the quality of the roof system installed weather/storm activity and the maintenance receives throughout its life. As routine maintenance many manufacturers recommend professional roofing inspections at least twice annually and after storms. We generally recommend consideration of ongoing roof maintenance contracts with professional vendors. Ongoing routine inspections by maintenance personnel are also advisable to remove accumulated debris clear drains and inspect for minor problems. Keep all drainage elements (scuppers drains gutters/downspouts etc.) clear to allow proper drainage and prevent the ponding of water on the roof surface. We also recommend using walk pads or extra roofing material to provide pathways in high-traffic areas such as around any HVAC units or other equipment. Take care to minimize any penetrations in the roof system. Rooftop satellite dishes or other equipment should not be permanently mounted into the roof if avoidable; most equipment can instead be weighed down by concrete blocks or other ballast. All penetrations including drains vent pipes conduit etc. should be carefully flashed and waterproofed. For more information we recommend consulting with independent roofing consultants or with organizations such as the Roof Consultant Institute <http://www.rci-online.org/> and the National Roofing Contractors client (NRCA) <http://www.nrca.net/>. If the roof has a warranty be sure to review terms and conduct proper inspections/repairs as needed to keep warranty in force.

Useful Life:
20 years

Remaining Life:
10 years



Benefits from a Reserve Study?

- Avoid Surprises
 - Save Money
 - Clear Communication on Repair & Replacement Priorities
 - Preserve Property Values
-

Cost Increases

- 400k BTU Boiler = ~ 80% increase since 2020
- Asphalt Overlay = ~ 60% increase since 2020
- Asphalt Seal = ~ 60% increase since 2020
- Comp Shingle Roof = ~30% increase since 2020
- Siding Paint = ~50% increase since 2020
- Wood Fencing = ~ 25% increase since 2020
- Traction Elevators = ~ 25% increase since 2020



Updating a Reserve Study

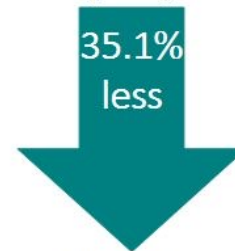
Updating a Reserve Study:

- Have demonstrably fewer special assessments
- Have a stable budget
- Ensure all everyone pay their fair share
- Receive cost savings on Reserve Studies and projects

Annual Reserve Studies reduce your Special Assessment Risk!

Update
Every 5 yrs?

35.1%
less



Update
annually

Update
Every 3 yrs?

28.5%
less



Update
annually

Remember...

- Have a Reserve Study Completed
 - Reserve Expenses are inevitable & predictable
 - Reserve Expenses get more expensive when ignored/deferred
 - Everyone will eventually pay the cost - one way or another
-

Reserve for the Here & Now



Thank You

**Please e-mail any follow-up
questions or comments to:**

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