PROTECT, PRESERVE AND ENHANCE

REPLACEMENT RESERVES AND FINANCIALLY SUSTAINABLE COMMUNITIES

JULY 19, 2017

Peter B. Miller, RS, EBP

millerdodson ASSOCIATES | Capital Reserve Consultants

Housekeeping Note …

www.mdaReserves.com

"Perhaps the greatest Duty of the Board of Directors is to **Protect, Preserve and Enhance** the value of the homes within the community!"

Robert Lyles, Esq. Charleston, SC

Why do people choose CIC's

- **Lifestyle**
  - Amenities / Activities
  - Same age group
  - Security
- **Convenience** – Maintenance Free
- **Location** – proximity to _____
- **Stability of Property Values**

Why Do We Plan For Reserves

- Legal
- Practical/Financial
- Ethical

Food for Thought:

Almost all CIC financial disasters result, not from an event, but from <u>lack of planning</u>!

Meet Betty Jones!

- Retired school teacher;
- Lives on a fixed income;
- Has lived in her HOA for 20 years;
- She is the ideal neighbor! Almost family!
- As a member of the Board of Directors, **you are foreclosing on her home!**

How Could This Happen?

Lack of Planning on the part of the Board!

Resulted in a Special Assessment,

or

Resulted in precipitous increases in Normal Assessments!

Unintended Consequences!

Betty's low-ball price is now the RE Comp for everyone else's home in the community!

"Perhaps the greatest Duty of the Board of Directors is to **Protect, Preserve and Enhance** the value of the homes within the community!"

Robert Lyles, Esq. Charleston, SC

Why Do We Plan For Reserves

- **Legal**
- **Practical**
- **Ethical**

Legal Considerations

- State Statutes
- Governing Documents
- IRS Guidelines
- FHA Requirements
- Bank Loan Requirements
- Fiduciary Duty of Board

Practical Considerations

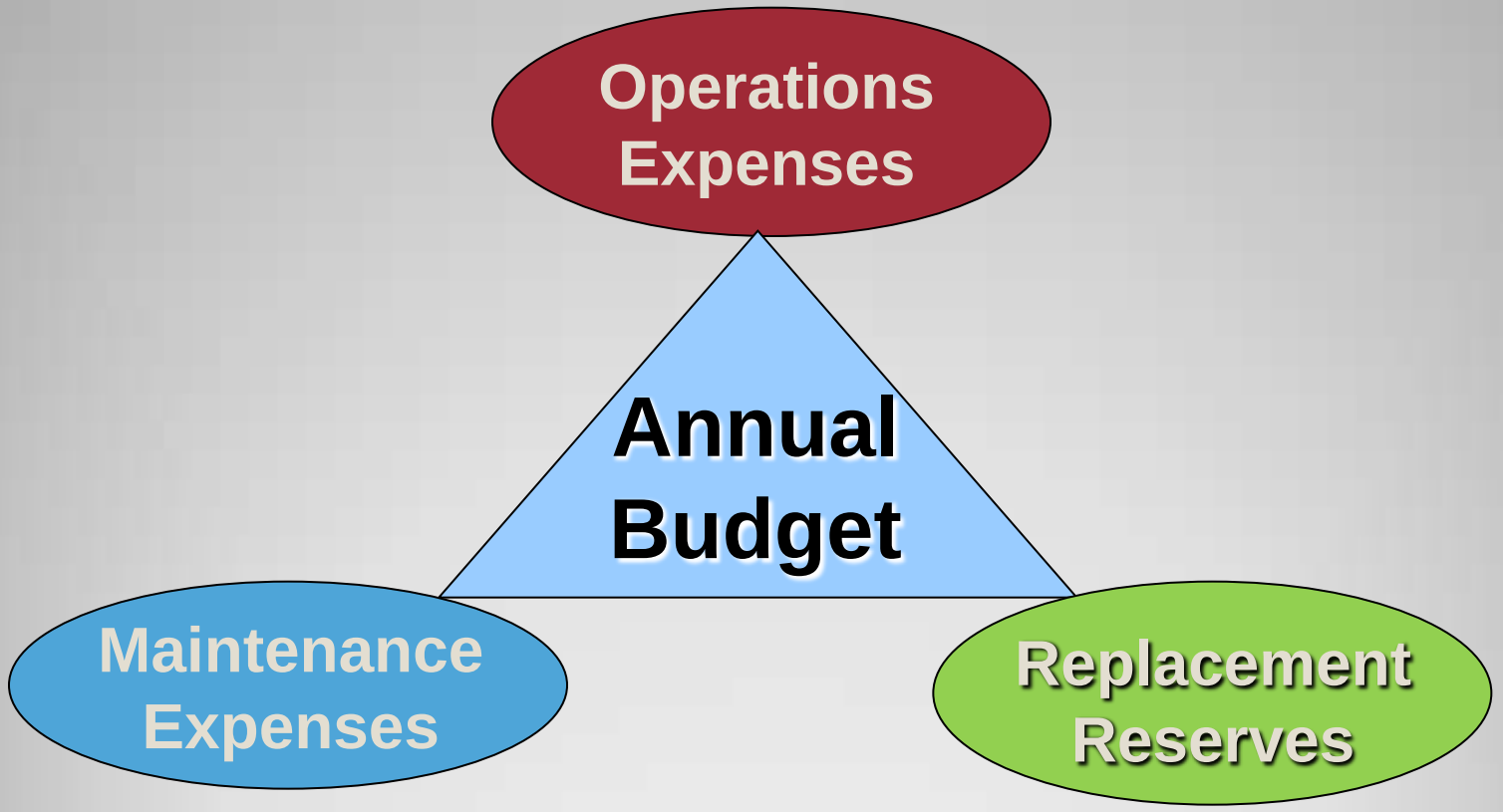
- 10% - 40% of Annual Budget !
- Sound Financial Planning!
- Equitable Distribution of costs over time!
- Avoid Special Assessments!

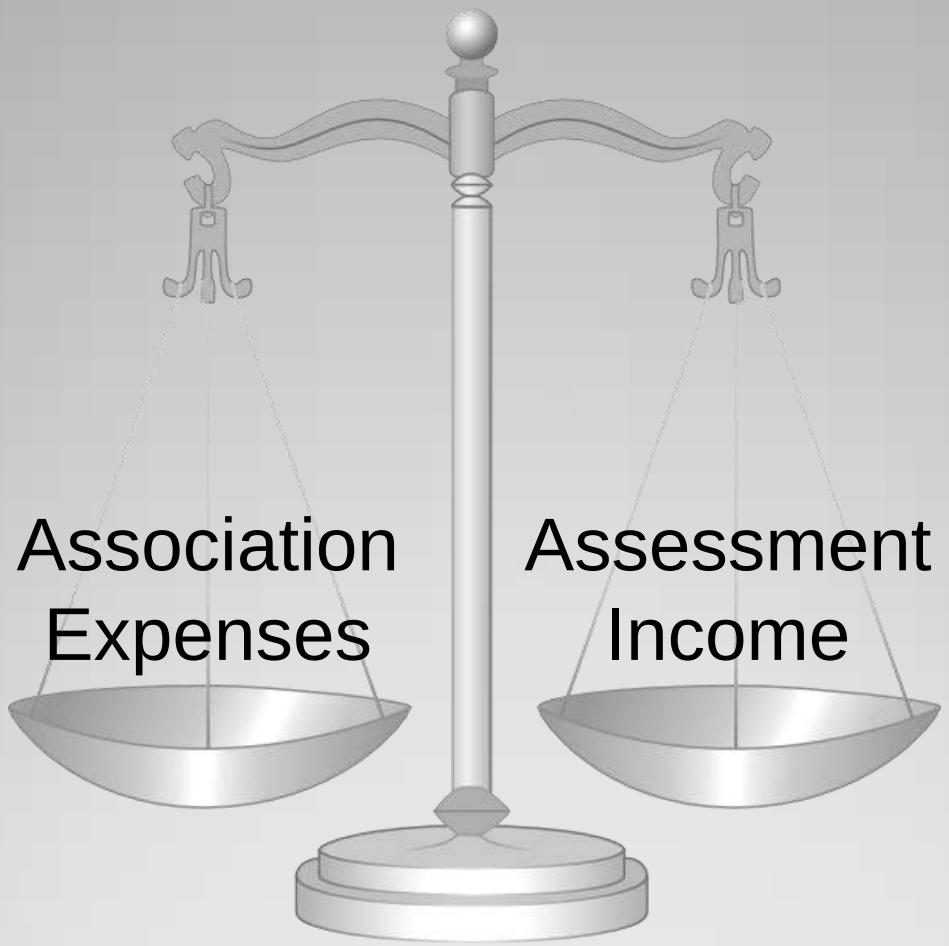
Ethical Considerations

- Avoids "kicking the can down the road" (future financial obligations) to future new or long-term owners!
- Equitable Distribution of costs over time! "Everybody pays their fair share!"*

*Not an easy sell among some demographics!

Financially Sustainable Community





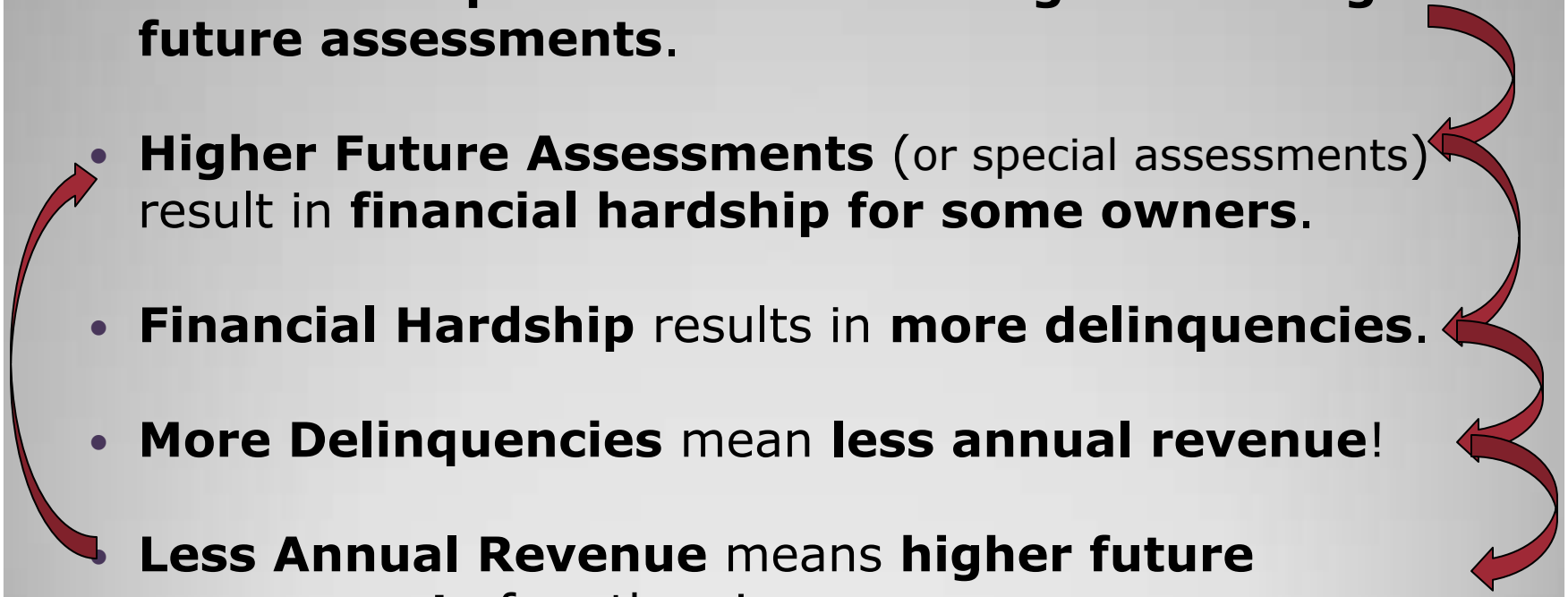
Property Values

Food for Thought:

Almost all CIC financial disasters result, not from an event, but from <u>lack of planning</u>!

Reserve Funding Pitfall Cycle

- **Lack of Adequate Reserve Funding** result in **higher future assessments**.
- **Higher Future Assessments** (or special assessments) result in **financial hardship for some owners**.
- **Financial Hardship** results in **more delinquencies**.
- **More Delinquencies** mean **less annual revenue**!
- **Less Annual Revenue** means **higher future assessments** for others!



Financially Sustainable Community

- **Annual Budget is balanced and adequate…**
- **Normal Assessments are stable…, not stagnant!**
- **Normal Assessments increase appropriately each year with Inflation (PPI).**
- **Property Values are Protected, Preserved & Enhanced!**
- **Your community is Financially Sustainable!**

Financially Sustainable Community

- Acknowledges and functions within the economic realities of the present without limiting the financial abilities of the future.
- Balances the need for adequate budget (assessments) against the exigencies of the housing market.

She has spent $9,000 on condo association fees over five years.

effective! Leonard

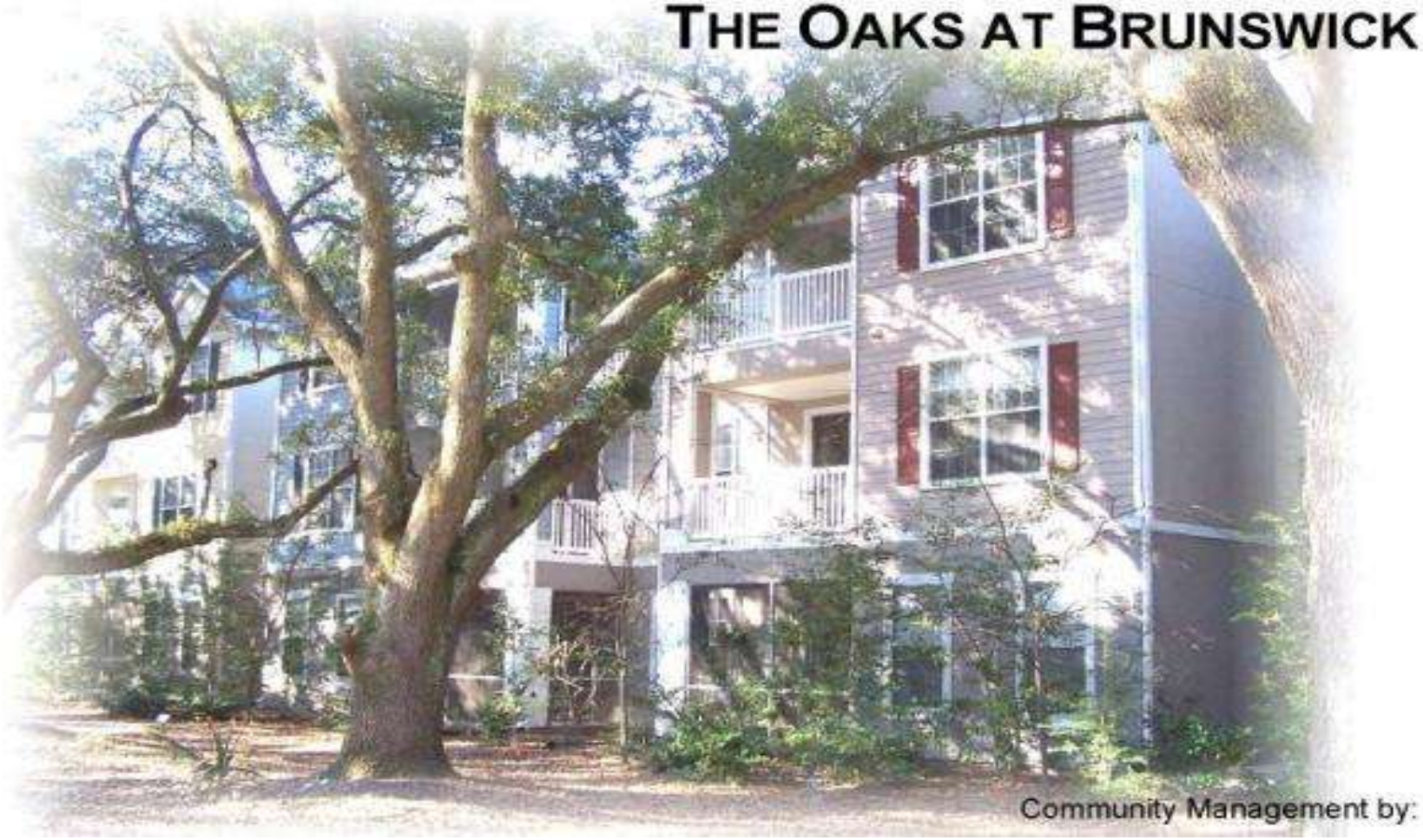
She had to come up with $12,000 more in three months. She couldn't.

Module 4

Sample Reserve Study

REPLACEMENT RESERVE REPORT FY 2015

THE OAKS AT BRUNSWICK



EXECUTIVE SUMMARY

The Oaks at Brunswick Replacement Reserve Analysis uses the Cash Flow Method (CFM) to calculate Replacement Reserve funding for the periodic replacement of the 103 Projected Replacements identified in the Replacement Reserve Inventory.

$149,507 **RECOMMENDED REPLACEMENT RESERVE FUNDING FOR THE STUDY YEAR, 2015**
$57.68 Per unit (average), minimum monthly funding of Replacement Reserves

We recommend the Association adopt a Replacement Reserve Funding Plan based on the annual funding recommendation above. Inflation adjusted funding for subsequent years is shown on Page A5.

Oaks at Brunswick reports a Starting Balance of $77,240 and Annual Funding totaling $90,000. Current funding is inadequate to fund the $5,616,122 of Projected Replacements scheduled in the Replacement Reserve Inventory over the 40-year Study Period. See Page A3 for a more detailed evaluation.

GENERAL SITE IMPROVEMENTS
PROJECTED REPLACEMENTS

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST ($)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST ($)
1	Asphalt road and parking area	sf	157,053	$1.30	20	15	$204,169
2	Seal coat asphalt	sf	157,053	$0.16	5	none	$25,128
3	Concrete curb & gutter (20%)	lf	1,072	$34.00	54	6	$36,448
4	Concrete flatwork (6%)	sf	817	$8.50	60	6	$6,945
	Repoint masonry entrance feature	sf	20				
5	Sandblasted wood signage	ls	1	$1,200.00	15	10	$1,200
6	Segmental retaining wall, 30%	sf	697	$45.00	40	35	$31,361
7	Mailboxes	ls	1	$18,000.00	25	15	$18,000
8	Dumpster pad	sf	816	$10.00	25	20	$8,160
9	Dumpster enclosure stucco repair	sf	805	$12.75	50	45	$10,264
10	Dumpster trellace	ls	1	$1,500.00	20	15	$1,500
11	Dumpster gates	pr	1	$1,000.00	10	5	$1,000
12	Site lighting	ea	26	$2,100.00	30	25	$54,600
13	Sanitary sewer - mains (10%)	unit	216	$155.00	20	15	$33,480
14	Domestic water - mains (10%)	unit	216	$95.00	20	15	$20,520
15	Storm water - structure & pipe (10%)	unit	216	$185.00	20	15	$39,960
16	Storm water pond dredging	ls	1	$50,000.00	20	15	$50,000
				GENERAL SITE IMPROVEMENTS - Replacement Costs - Subtotal			$542,734

CONDOMINIUM BUILDING EXTERIORS, Con't (CB)

PROJECTED REPLACEMENTS

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST ($)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST ($)
34	CB Windows, 20%	sf	2,232	$35.00	30	21	$78,120
35	CB Windows, 20%	sf	2,232	$35.00	30	23	$78,120
36	CB Windows, 20%	sf	2,232	$35.00	30	25	$78,120
37	CB Windows, 20%	sf	2,232	$35.00	30	27	$78,120
38	CB Windows, 20%	sf	2,232	$35.00	30	29	$78,120
39	CB Window shutters	pr	160	$100.00	15	10	$16,000
40	CB Doors, 20%	ea	43	$950.00	25	18	$41,040
41	CB Doors, 20%	ea	43	$950.00	25	19	$41,040
42	CB Doors, 20%	ea	43	$950.00	25	20	$41,040
43	CB Doors, 20%	ea	43	$950.00	25	21	$41,040
44	CB Doors, 20%	ea	43	$950.00	25	22	$41,040
45	CB Patio doors, 20%	ea	12	$1,470.00	25	18	$17,640
46	CB Patio doors, 20%	ea	12	$1,470.00	25	19	$17,640
47	CB Patio doors, 20%	ea	12	$1,470.00	25	20	$17,640
48	CB Patio doors, 20%	ea	12	$1,470.00	25	21	$17,640
49	CB Patio doors, 20%	ea	12	$1,470.00	25	22	$17,640
	CONDOMINIUM BUILDING EXTERIORS, Con't (CB) - Replacement Costs - Subtotal						$700,000

SWIMMING POOL
PROJECTED REPLACEMENTS

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST ($)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST ($)
66	Swimming pool - structure	sf	990	$70.00	45	40	$69,300
67	Swimming pool - finish	sf	990	$3.50	10	4	$3,465
68	Swimming pool - waterline tile	ft	135	$40.00	15	10	$5,400
69	Swimming pool pump (2 - 5 hp)	ea	1	$3,200.00	10	5	$3,200
70	Swimming pool filter/chlorinator	sf	990	$4.00	20	15	$3,960
71	Swimming pool valves & plumbing	sf	990	$2.00	20	15	$1,980
72	Swimming pool - concrete deck, 25%	sf	480	$10.25	30	5	$4,920
73	Swimming pool - concrete deck, 25%	sf	480	$10.25	30	10	$4,920
74	Swimming pool - concrete deck, 25%	sf	480	$10.25	30	15	$4,920
75	Swimming pool - concrete deck, 25%	sf	480	$10.25	30	20	$4,920
76	Swimming pool deck coating	sf	1,920	$10.00	10	6	$19,200
77	Swimming pool furniture (50%)	ls	1	$1,950.00	8	1	$1,950
78	Swimming pool furniture (50%)	ls	1	$1,950.00	8	3	$1,950
79	Spa structure	sf	50	$100.00	45	40	$5,024
80	Spa finish	sf	50	$10.00	10	4	$500
81	Spa waterline tile	lf	25	$40.00	15	10	$1,005
82	Spa filter/chlorinator	ls	1	$2,500.00	20	15	$2,500
83	Swimming pool lighting	ea	7	$900.00	30	25	$6,300
84	Pool perimeter fence - 6' (metal)	ft	186	$55.00	30	25	$10,230
85	Swimming pool retaining wall	sf	165	$40.00	35	30	$6,600
				SWIMMING POOL - Replacement Costs - Subtotal			$162,244

PROJECTED REPLACEMENTS - YEARS 4 TO 6

Item	2018 - YEAR 4	$
78	Swimming pool furniture (50	$1,950
	Total Scheduled Replacements	$1,950

Item	2019 - YEAR 5	$
67	Swimming pool - finish	$3,465
80	Spa finish	$500
	Total Scheduled Replacements	$3,965

Item	2020 - YEAR 6	$
2	Seal coat asphalt	$25,128
11	Dumpster gates	$1,000
27	CB EIFS coating	$344,960
69	Swimming pool pump (2 - 5	$3,200
72	Swimming pool - concrete d	$4,920
88	CO EIFS coating	$10,836
95	FC EIFS coating	$3,864
99	FC HVAC system	$2,500
	Total Scheduled Replacements	$396,408

PROJECTED REPLACEMENTS - YEARS 25 TO 27

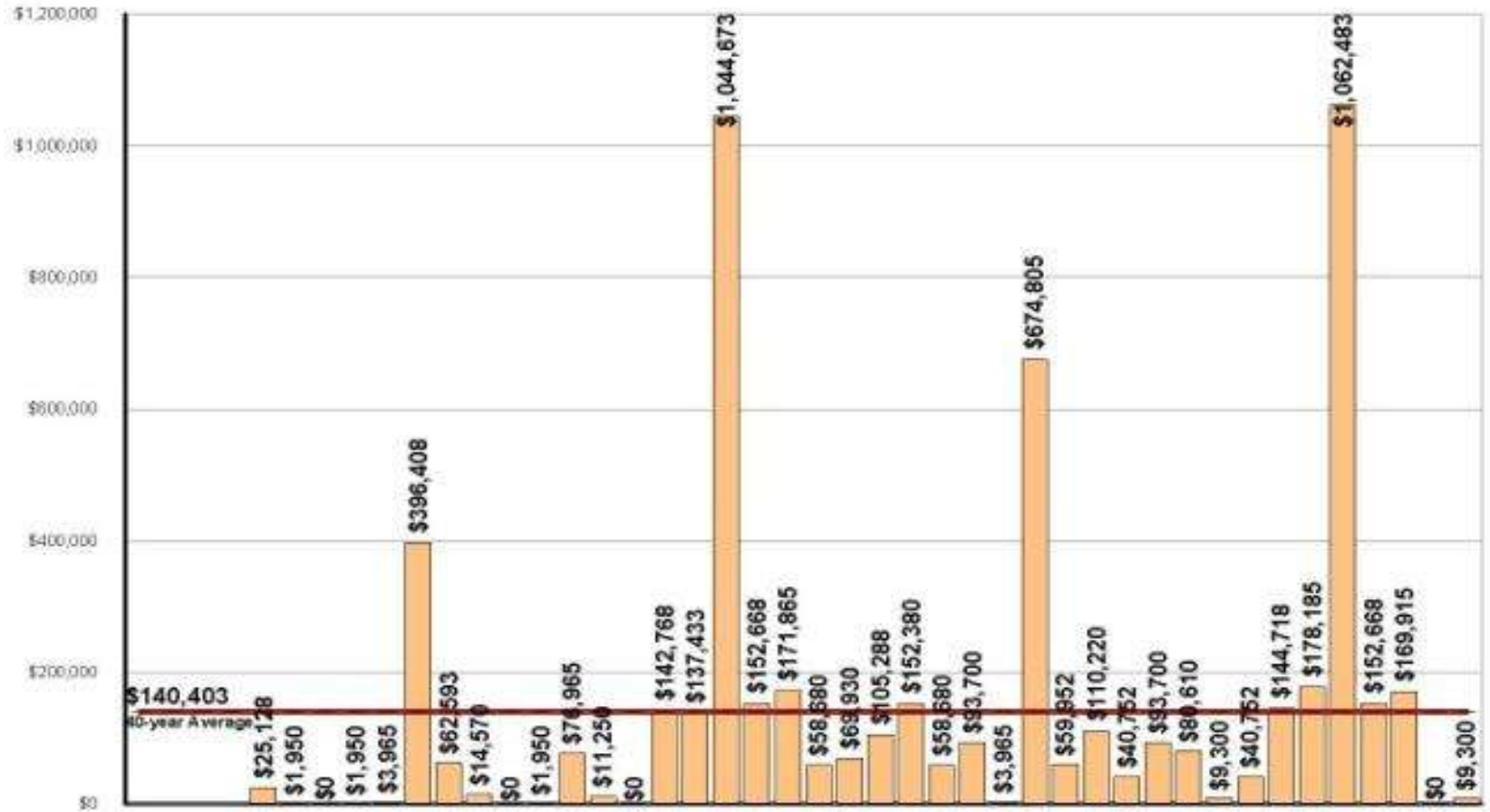
Item	2039 - YEAR 25	$
67	Swimming pool - finish	$3,465
80	Spa finish	$500
	Total Scheduled Replacements	$3,965

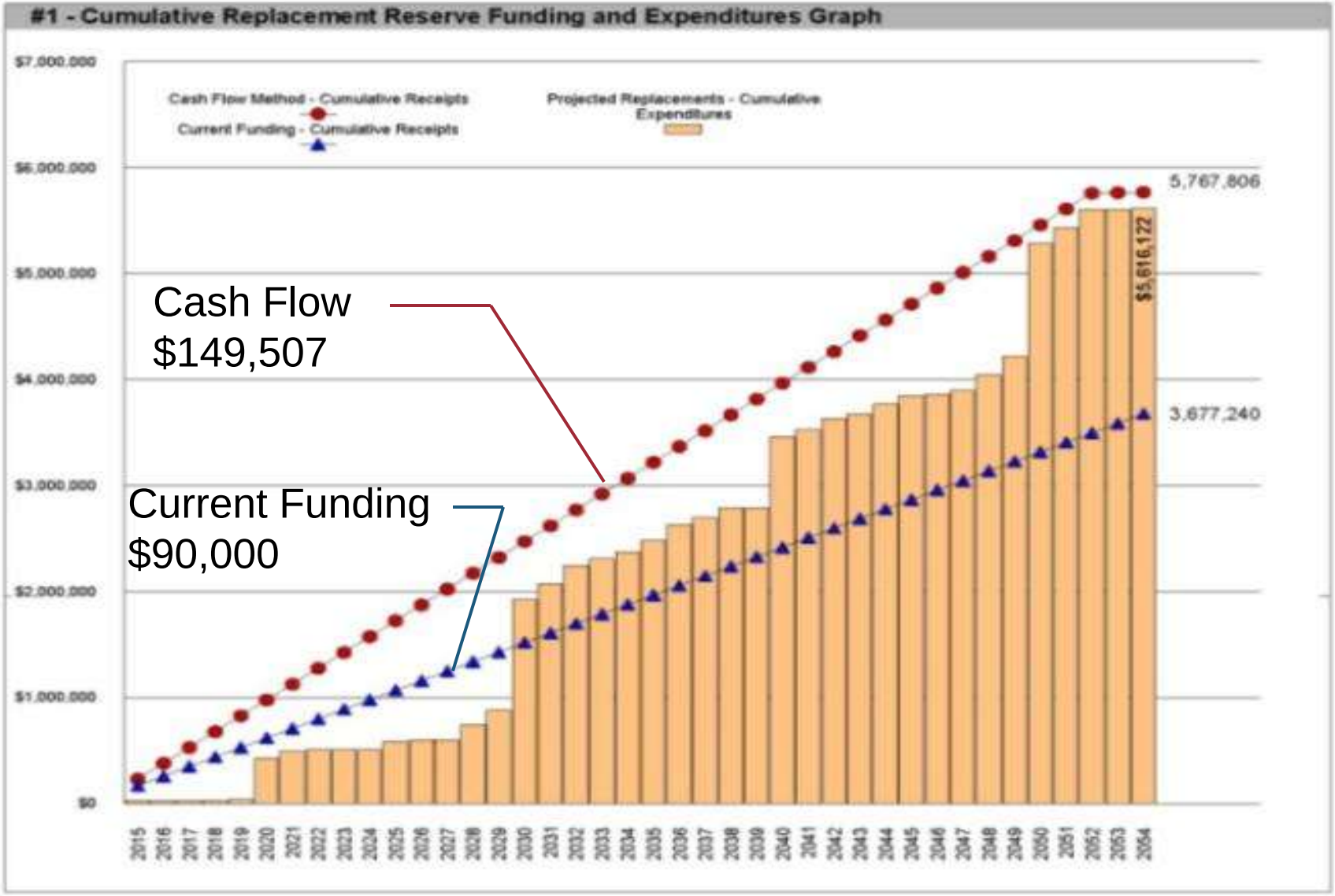
Item	2040 - YEAR 26	$
2	Seal coat asphalt	$25,128
5	Sandblasted wood signage	$1,200
11	Dumpster gates	$1,000
12	Site lighting	$54,600
27	CB EIFS coating	$344,960
36	CB Windows, 20%	$78,120
39	CB Window shutters	$16,000
55	CB Balcony structure	$58,800
56	CB Balcony surface	$21,112
60	CB Stairs, 20%	$15,580
65	CB Exit lights	$4,500
68	Swimming pool - waterline ti	$5,400
69	Swimming pool pump (2 - 5	$3,200
77	Swimming pool furniture (50	$1,950
81	Spa waterline tile	$1,005
83	Swimming pool lighting	$6,300
84	Pool perimeter fence - 6' (m	$10,230
88	CO EIFS coating	$10,836
90	CO Windows	$8,820
91	CO Window shutters	$1,000
95	FC EIFS coating	$3,864
100	FC HVAC condensing unit	$1,200
	Total Scheduled Replacements	$674,805

Item	2041 - YEAR 27	$
29	CB Vinyl siding, 20%	$40,752
76	Swimming pool deck coating	$19,200
	Total Scheduled Replacements	$59,952

#2 - Annual Expenditures for Projected Replacements Graph

This graph shows annual expenditures for Projected Replacements over the 40-year Study Period. The red line shows the average annual expenditure of $140,403. Section C provides a year by year Calender of these expenditures.




#1 - Cumulative Replacement Reserve Funding and Expenditures Graph
$7,000,000
$6,000,000
$5,000,000
$4,000,000
$3,000,000
$2,000,000
$1,000,000
$0
Cash Flow Method - Cumulative Receipts
Current Funding - Cumulative Receipts
Projected Replacements - Cumulative Expenditures
5,767,806
$5,616,122
3,677,240
Cash Flow
$149,507
Current Funding
$90,000
2015
2016
2017
2018
2019
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2054

What's the Next Step?

- You as the Manager…
- You as a Board Member…
- You as a Finance Committee Member…

What's the Next Step?

You just were handed this report!

It says to increase the Reserve Funding from $90K to $150K!

What?

That's a $60K annual increase!

Holy Cr@p!

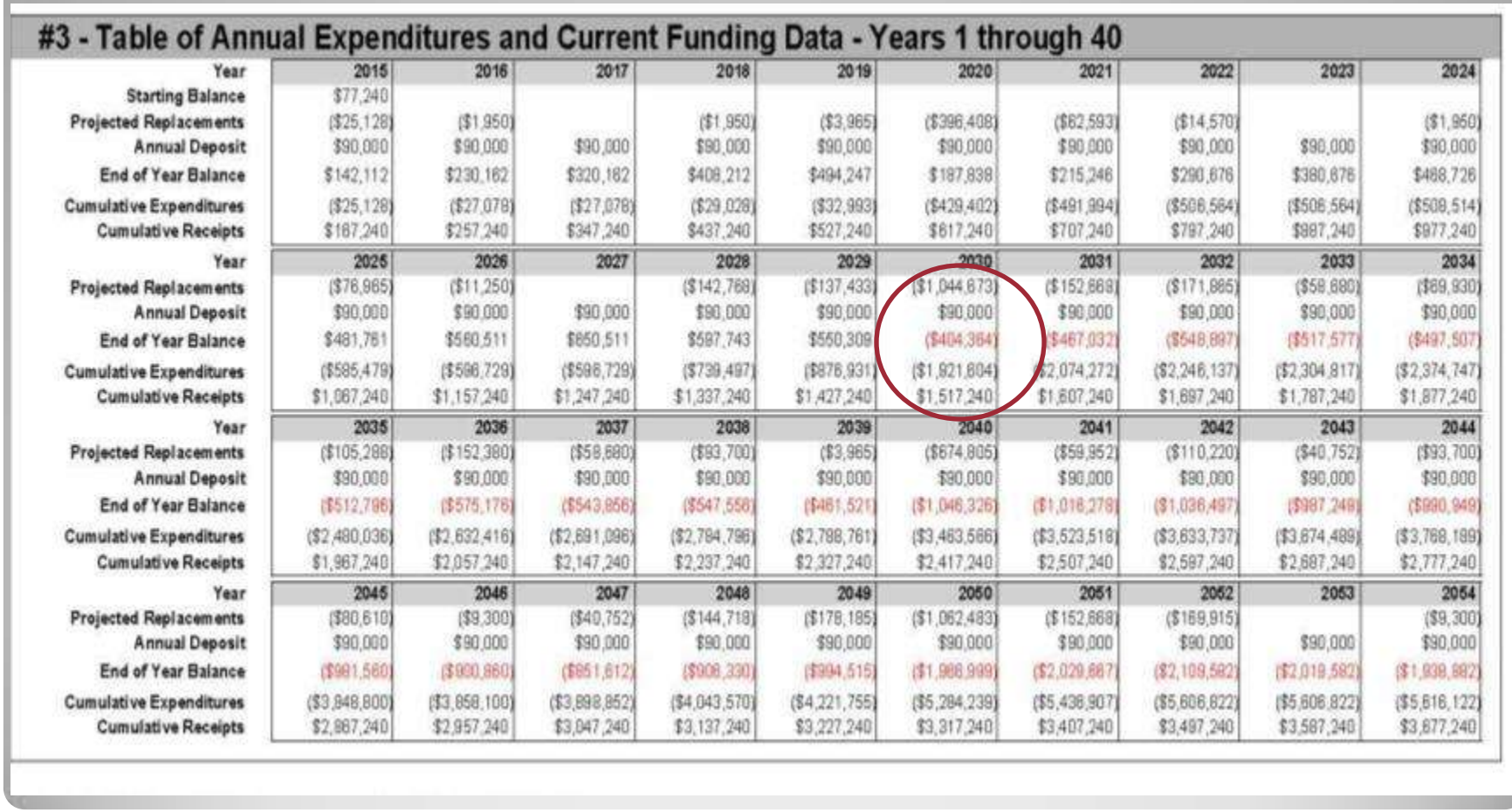
What Are Your Alternatives?

- Increase Normal Assessments
- Special Assessment
- Commercial Bank Loan
- Combination of two or more

Next Step:

- Review inventory data.
- Re-think replacement priorities.
- Check Cash Flow margins.
- Develop Strategic Funding Plan.

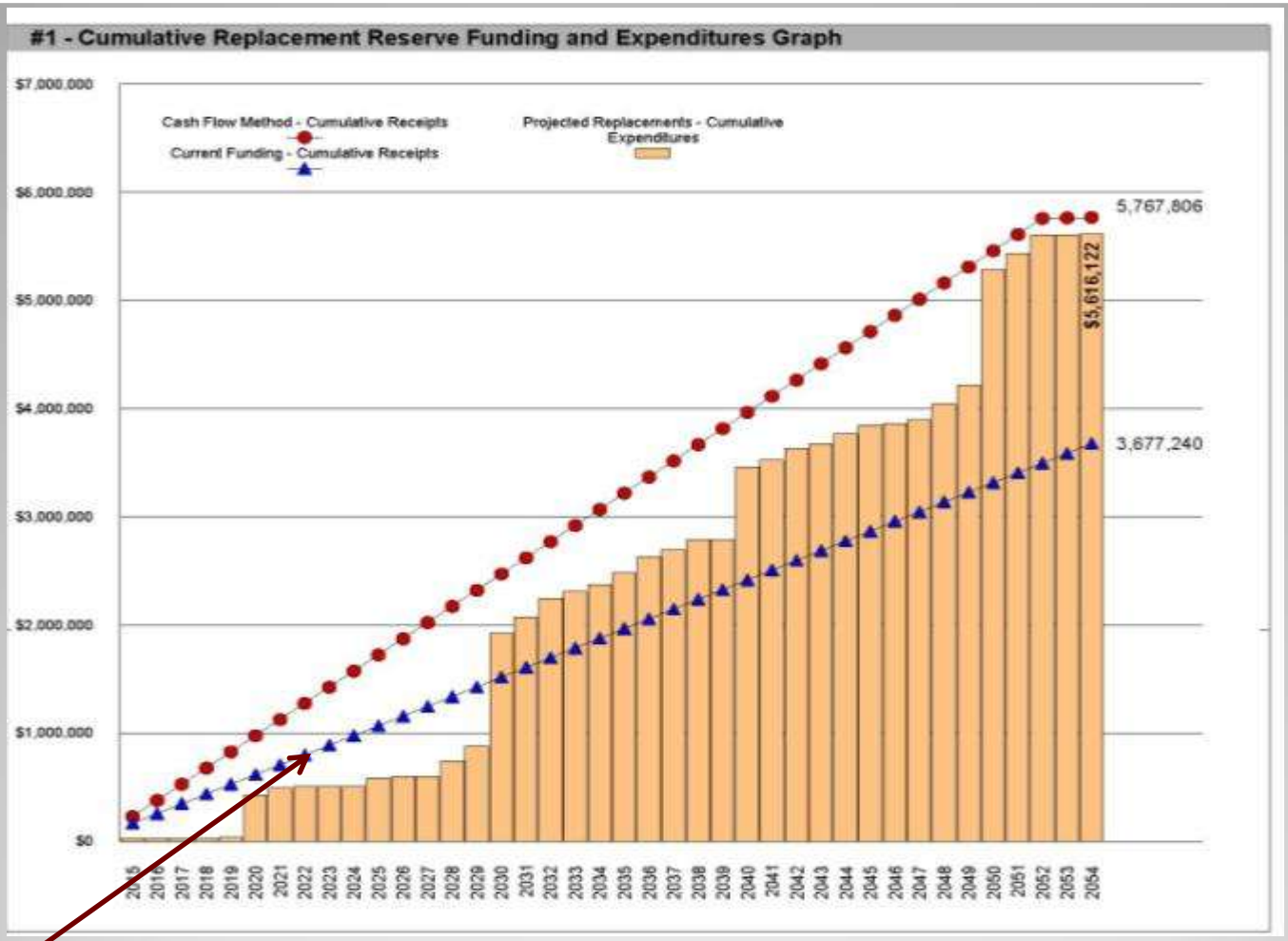
Check Cash Flow Margins



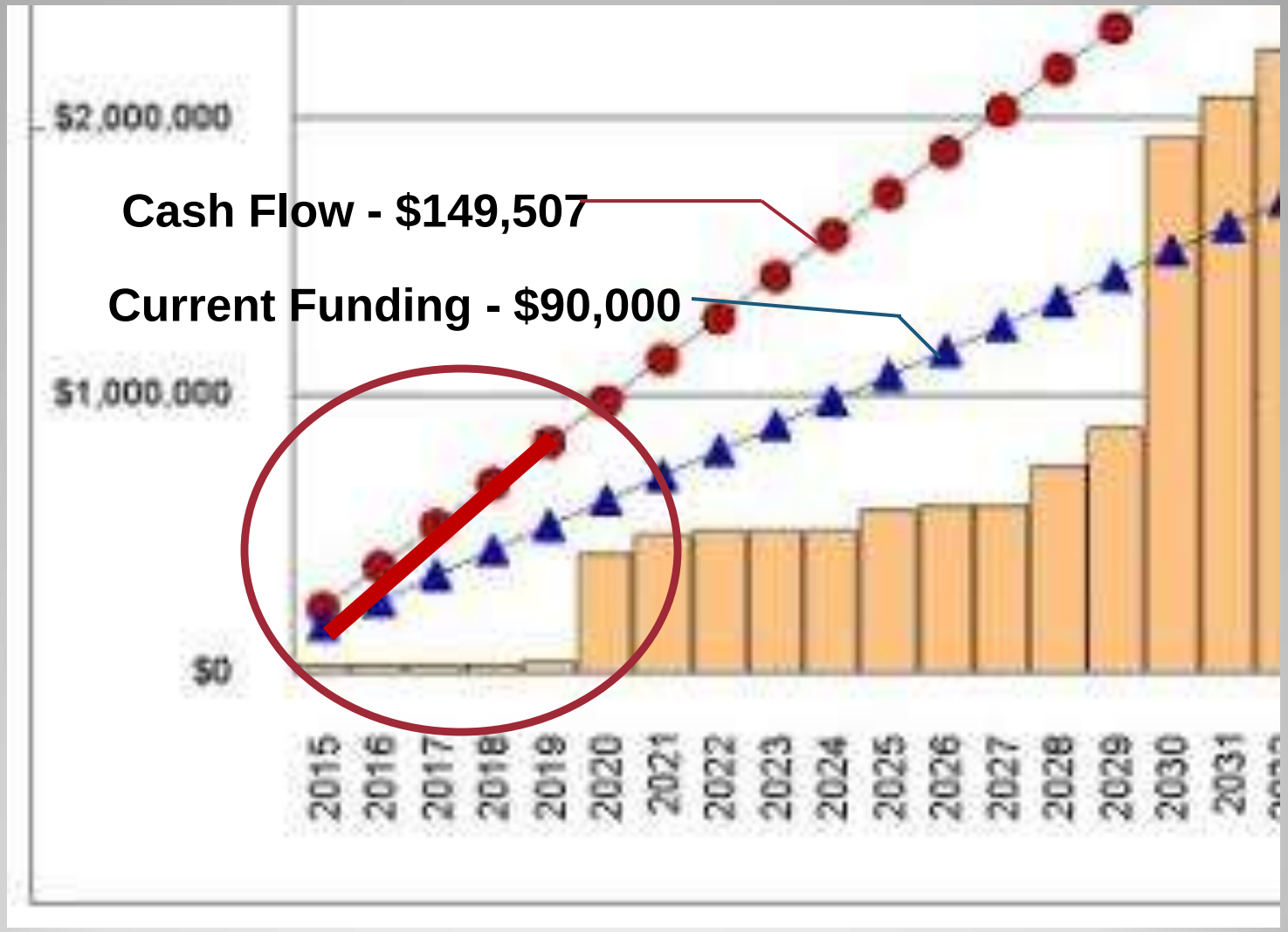
#3 - Table of Annual Expenditures and Current Funding Data - Years 1 through 40

Year	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Starting Balance	$77,240									
Projected Replacements	($25,128)	($1,950)		($1,950)	($3,965)	($396,408)	($62,593)	($14,570)		($1,950)
Annual Deposit	$90,000	$90,000	$90,000	$90,000	$90,000	$90,000	$90,000	$90,000	$90,000	$90,000
End of Year Balance	$142,112	$230,162	$320,162	$408,212	$494,247	$187,838	$215,246	$290,676	$380,676	$468,726
Cumulative Expenditures	($25,128)	($27,078)	($27,078)	($29,028)	($32,993)	($429,402)	($491,994)	($506,564)	($506,564)	($508,514)
Cumulative Receipts	$167,240	$257,240	$347,240	$437,240	$527,240	$617,240	$707,240	$797,240	$887,240	$977,240
Year	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**
Projected Replacements	($76,965)	($11,250)		($142,768)	($137,433)	($1,044,673)	($152,668)	($171,885)	($58,680)	($69,930)
Annual Deposit	$90,000	$90,000	$90,000	$90,000	$90,000	$90,000	$90,000	$90,000	$90,000	$90,000
End of Year Balance	$481,761	$560,511	$650,511	$597,743	$550,309	($404,364)	($467,032)	($548,897)	($517,577)	($497,507)
Cumulative Expenditures	($585,479)	($596,729)	($596,729)	($739,497)	($876,931)	($1,921,604)	($2,074,272)	($2,246,137)	($2,304,817)	($2,374,747)
Cumulative Receipts	$1,067,240	$1,157,240	$1,247,240	$1,337,240	$1,427,240	$1,517,240	$1,607,240	$1,697,240	$1,787,240	$1,877,240
Year	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
Projected Replacements	($105,288)	($152,380)	($59,680)	($93,700)	($3,965)	($674,805)	($59,952)	($110,220)	($40,752)	($93,700)
Annual Deposit	$90,000	$90,000	$90,000	$90,000	$90,000	$90,000	$90,000	$90,000	$90,000	$90,000
End of Year Balance	($512,796)	($575,176)	($543,856)	($547,556)	($461,521)	($1,046,326)	($1,016,278)	($1,036,497)	($987,249)	($990,949)
Cumulative Expenditures	($2,480,036)	($2,632,416)	($2,691,096)	($2,784,796)	($2,788,761)	($3,463,566)	($3,523,518)	($3,633,737)	($3,674,489)	($3,768,189)
Cumulative Receipts	$1,967,240	$2,057,240	$2,147,240	$2,237,240	$2,327,240	$2,417,240	$2,507,240	$2,597,240	$2,687,240	$2,777,240
Year	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	**2051**	**2052**	**2053**	**2054**
Projected Replacements	($80,610)	($9,300)	($40,752)	($144,718)	($178,185)	($1,062,483)	($152,668)	($169,915)		($9,300)
Annual Deposit	$90,000	$90,000	$90,000	$90,000	$90,000	$90,000	$90,000	$90,000	$90,000	$90,000
End of Year Balance	($981,560)	($900,860)	($851,612)	($906,330)	($994,515)	($1,966,999)	($2,029,667)	($2,109,582)	($2,019,582)	($1,938,882)
Cumulative Expenditures	($3,848,800)	($3,858,100)	($3,898,852)	($4,043,570)	($4,221,755)	($5,284,239)	($5,436,907)	($5,606,822)	($5,606,822)	($5,616,122)
Cumulative Receipts	$2,867,240	$2,957,240	$3,047,240	$3,137,240	$3,227,240	$3,317,240	$3,407,240	$3,497,240	$3,587,240	$3,677,240

Year end balance stays positive until year 2030.



This association has the latitude to “ramp up” rather than have one large increase.


$2,000,000
Cash Flow - $149,507
Current Funding - $90,000
$1,000,000
$0
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031

Strategic Funding Plan

Ramp Up Annual Funding over five years:

Year 1:	**$90K to $102K**
Year 2:	**$102K to $114K**
Year 3:	**$114K to $126K**
Year 4:	**$126K to $138K**
Year 5:	**$138K to $150K ***

*Year 5 would bring Reserve Study update and would adjust for inflation, underfunding, changed conditions.

Module 3

Cash Flow Method

Versus

Component Method

CASH FLOW vs COMPONENT (Pooling vs. Full Funding)

CASH FLOW ("Pooling") METHOD

Treats Reserves as an aggregate "pool" of funds.

COMPONENT ("Full Funding") METHOD

Treats each Reserve Item as a separate "line item" budget.

Illustration of the Different Mathematical Models

- **One Project per year,**
- **Projects repeat every 4 yrs**
- **Cost of $12,000 per Project**
- **Four Projects:**
  - **Year One - Parging,**
  - **Year Two - Seal Coat,**
  - **Year Three - Plumbing,**
  - **Year Four - Retaining Wall**

(Assume $Zero Starting Balance) (Assume $Zero Threshold)

Component Calculations

	Year	1st	2nd	3rd	4th	Total
COMPONENT	Cost x $1,000	Annual Contributions				
Parging Year One	$12	12	3	3	3	$21
Paving Year Two	$12	6	6	3	3	$18
Plumbing Year Three	$12	4	4	4	3	$15
Retaining Wall Year Four	$12	3	3	3	3	$12
Total Cost	$48	$25	$16	$13	$12	$66

Cash Flow Calculations

	Year	1st	2nd	3rd	4th	Total
COMPONENT	Cost x $1,000	Annual Contributions				
Parging Year One	$12	3	3	3	3	$12
Paving Year Two	$12	3	3	3	3	$12
Plumbing Year Three	$12	3	3	3	3	$12
Retaining Wall Year Four	$12	3	3	3	3	$12
Total Cost	$48	$12	$12	$12	$12	$48

Module 4

Inflation
and
Reserve Fund Planning

Understand Inflation - CPI vs PPI

- **Consumer Price Index (CPI)**
  - Food Costs
  - Fuel Costs
  - Electricity Costs
  - Housing Costs (meaning rent)
- **Producer Price Index (PPI)**
  - Manufacturing costs
  - Construction costs

Percentage Changes in Producer Price Indexes (PPIs)

for

Construction Materials & Components, (2003 - 2013)

Percentage Change in Producer Price Indexes (PPIs) for Construction Materials, Structure Types & Subcontractors, 2003-2013

BLS Series ID		12 months through December--						to February 2013 since--			
		2007	2008	2009	2010	2011	2012	1/13	11/12	2/12	12/03
Table 1: Changes in Consumer, Producer & Construction Prices											
CUUR0000SA0	Consumer price index (CPI-U)	4.1	0.1	2.7	1.5	3.0	1.7	0.8	0.8	2.0	26.0
WPUSOP3000	Producer price index (PPI) for finished goods	6.2	-0.9	4.3	3.8	4.7	1.3	0.8	0.9	1.7	35.8
PCUBCON	PPI for inputs to construction industries	4.8	2.8	0.4	5.3	5.2	1.3	1.3	1.8	2.0	52.7
PCUBHWY	Highway and street construction	10.1	-0.6	3.9				discontinued after June 2010			
PCUBHVY	Other heavy construction	6.9	1.3	-0.1				discontinued after June 2010			
PCUBBLD	Nonresidential buildings	4.8	2.2	0.3				discontinued after June 2010			
PCUBNON	PPI for inputs to nonresidential construction					5.7	0.8	1.3	1.7	1.7	
PCUBNCS	Commercial structures					4.9	1.1	0.8	1.3	1.6	
PCUBNIS	Industrial structures					5.2	0.8	0.9	1.1	1.2	
PCUBONS	Other nonresidential (highway, other heavy)					6.1	0.7	1.5	1.8	1.6	
PCUBRSM	PPI for inputs to multi-unit residential	3.8	3.0	-0.5				discontinued after June 2010			
PCUBRES	PPI for inputs to residential (formerly single-unit)	2.5	5.0	-0.6	4.3	4.8	2.0	1.1	1.9	2.5	44.8

Changes in Producer Price Indexes

Percentage Change in Producer Price Indexes (PPIs) for Construction Materials, Structure Types & Subcontractors, 2003-2013

BLS Series ID		12 months through December--						to February 2013 since--			
		2007	2008	2009	2010	2011	2012	1/13	11/12	2/12	12/03
Table 3: Changes in PPIs for Specific Construction Inputs											
WPU057303	#2 diesel fuel	33.9	-38.2	22.1	26.4	20.0	1.8	7.2	5.6	3.8	248.3
WPU139401	Asphalt paving mixtures and blocks	1.6	34.3	-9.3	4.4	8.4	4.4	-0.1	0.3	1.1	123.8
WPU136	Asphalt felts and coatings	1.4	57.8	-7.5	1.8	5.8	-0.3	-1.2	-1.8	4.7	98.5
WPU1361	Prepared asphalt & tar roofing & siding products	2.3	57.5	-5.5	1.9	2.5	-0.6	-1.5	-1.6	7.2	101.1
WPU133	Concrete products	3.8	4.1	-1.4	-0.4	0.9	2.4	0.3	1.3	2.3	41.4
WPU1331	Concrete block and brick	3.3	4.2	0.2	-1.1	1.1	1.5	-0.1	0.3	0.7	32.1
WPU1332	Concrete pipe	10.0	4.2	-6.5	0.4	1.4	4.3	0.1	1.5	5.2	33.4
WPU1333	Ready-mixed concrete	3.1	4.2	-1.1	-1.2	0.5	2.3	0.4	1.3	2.4	45.2
WPU1334	Precast concrete products	4.7	4.3	1.6	1.0	2.9	2.5	0.0	1.8	2.1	39.3
WPU1335	Prestressed concrete products	2.2	2.8	-10.6	4.7	-3.1	-0.2	1.1	1.8	1.6	25.4
WPU1342	Brick and structural clay tile	0.0	0.3	-0.9	-0.3	-2.6	-2.6	0.4	-0.5	-0.7	11.5
WPU072106	Plastic construction products	0.4	4.1	-0.7	3.3	3.6	4.7	0.0	0.4	1.4	50.8
WPU137	Gypsum products	-22.1	7.2	-10.2	3.2	-1.6	14.0	4.4	16.4	17.8	52.7
WPU1392	Insulation materials	-3.5	0.8	-0.7	4.6	5.4	5.1	2.1	4.2	5.9	32.7
WPUSI004011	Lumber and plywood	-0.7	-6.8	0.1	5.7	-0.7	10.8	2.3	8.9	15.8	7.2
WPU062101	Architectural coatings	4.2	16.6	-0.5	-0.1	4.2	10.1	-0.5	0.2	0.3	70.1
WPU1017	Steel mill products	0.9	4.8	-9.8	12.5	12.2	-7.9	-0.9	-0.1	-9.7	75.6
WPU101704	Hot-rolled bars, plates, & structural shapes	8.1	3.3	-13.4	18.4	13.2	-9.6	-2.0	0.1	-10.8	88.6
WPU101706	Steel pipe and tube	-1.3	28.6	-19.5	19.6	13.7	-6.1	-1.1	-2.1	-11.6	124.4
WPU102502	Copper and brass mill shapes	-3.0	-23.3	41.3	11.8	-9.3	1.0	0.7	2.8	-2.1	166.7
WPU102501	Aluminum mill shapes	-1.7	-4.0	-8.1	11.6	0.6	-1.6	0.6	1.3	-1.5	25.6
WPU1073	Sheet metal products	0.2	7.4	-4.2	4.0	3.7	-0.5	0.6	-1.0	-1.2	34.8
WPU107405	Fabricated structural metal	5.3	11.8	-13.5	1.9	3.8	1.1	-1.2	0.1	-0.4	44.4
WPU1074051	Fabricated structural metal bar joists & rebar	4.7	9.4	-10.2	-0.3	1.6	2.0	-1.2	-0.2	0.2	35.5
WPU107408	Architectural and ornamental metalwork	2.0	21.8	-5.8	1.6	4.5	0.5	1.0	1.2	2.4	69.1
WPU1076	Fabricated steel plate	5.7	21.8	-11.1	3.2	3.0	2.5	-1.0	-0.3	2.0	46.5
WPU1079	Prefabricated metal buildings	2.0	25.5	-14.8	8.4	9.8	-1.2	0.4	0.4	-0.6	88.7

Updated 3/15/2013 Source: Bureau of Labor Statistics (BLS): www.bls.gov/cpi for CPI, www.bls.gov/ppi for PPIs
Compiled by Ken Simonson (simonsonk@agc.org), Chief Economist, Associated General Contractors of America, www.agc.org

Percentage Changes in Producer Price Indexes (PPIs) 2003 - 2013

Percentage Change in Producer Price Indexes (PPIs) for Construction Materials, Structure Types & Subcontractors, 2003-2013

BLS Series ID		12 months through December--						to February 2013 since--			
		2007	2008	2009	2010	2011	2012	1/13	11/12	2/12	12/03
Table 4: Changes in PPIs for Basic Inputs Important to Construction											
WPU056	Crude petroleum (domestic production)	51.7	-57.7	87.0	24.8	16.2	-11.3	2.0	9.5	-5.8	234.0
WPU05810212	Asphalt (at refinery)	-0.2	48.3	5.6	-5.1	32.1	-2.5	-3.2	-10.9	-15.9	226.1
WPU066	Plastic resins and materials	9.7	-8.3	3.4	5.9	9.0	3.5	1.5	2.4	3.3	68.5
WPU1321	Construction sand/gravel/crushed stone	8.4	6.7	2.6	1.7	1.3	2.3	0.1	1.5	2.4	55.3
WPU1322	Cement	4.4	-0.9	-3.7	-6.0	-1.8	3.4	1.8	3.7	5.2	31.8
WPU1011	Iron ore	1.3	12.1	0.5	3.8	22.9	-3.8	-24.6	-27.3	-31.3	35.0
WPU1012	Iron and steel scrap	29.4	-35.2	52.9	38.9	8.7	-15.5	-3.5	-2.3	-17.9	119.2
WPU101212	Stainless and alloy steel scrap	-7.8	-39.8	97.5	29.0	-8.4	-10.2	1.4	10.9	-16.6	
WPU102102	Copper ores	-1.7	-46.6	84.4	28.8	-15.6	1.6	2.7	1.9	-5.4	293.6
WPU102301	Copper base scrap	3.1	-48.2	101.5	19.2	0.6	0.9	1.5	8.8	-1.6	312.5

Updated 3/15/2013 Source: Bureau of Labor Statistics (BLS): www.bls.gov/cpi for CPI, www.bls.gov/ppi for PPIs

Compiled by Ken Simonson (simonsonk@agc.org), Chief Economist, Associated General Contractors of America, www.agc.org

Questions

Thank You!

Speaker BIO
Peter B. Miller, RS

A Principal in the firm of Miller – Dodson Associates, Peter Miller is considered to be one of the nation's leading experts in the field of Reserve Studies and Strategic Financial Planning for community associations. He holds the professional designation of Reserve Specialist (RS). Mr. Miller is a frequent author and lecturer, and was selected to develop and teach the Community Associations Institute's (CAI) Webinar on Reserves and Reserve Studies.

Peter served as the 2004 President of the CAI Washington Metropolitan Chapter, and was a member of the Board of the CAI South Carolina Chapter. Most recently, he served as the 2014 President of the Southeast Virginia Chapter of CAI. He served as Vice-Chair of the CAI National Reserves Committee, and currently serves on the CAI National Business Partners Council, an advisory group to the National Board of Trustees. He has been widely recognized for his efforts in the industry, including the CAI National "President's Award" and "Award for Excellence in Chapter Leadership".

Peter is a graduate of the College of Architecture and Urban Studies at Virginia Tech, and is a member of the Urban Land Institute and The Congress for a New Urbanism.