LEVEL 2 REPLACEMENT RESERVE REPORT FY 2022
PENN FOREST HOA

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REPLACEMENT RESERVE REPORT

PENN FOREST HOA

ROANOKE, VIRGINIA
July 9, 2021
Revised August 4, 2021
Revised August 26, 2021
Revised September 21, 2021

Description. Penn Forest HOA is a Homeowner's Association located in Roanoke, Virginia. Constructed between 1995 and 1996, the community consists of 31 Single-family Homes.
The survey examined the common elements of the property, including:

- Entry Monument and Signage
- Retaining Walls
- Stormwater Management and Detention Basins
- Building Exteriors

Level of Service. This study has been performed as a Level 2 Update with Site Visit/On-Site Review as defined by the Community Associations Institute's, National Reserve Study Standards. As such, the component inventory is based on the study that was performed by Miller-Dodson Assoc. in 2017. This inventory was adjusted to reflect changes provided by the Community Manager and/or the Board of Directors, or adjustments made based on the site visit and visual assessment performed by the Analyst. The analysis, including fund status and funding plan, is developed from the adjusted inventory.

To aid in the understanding of this report and its concepts and practices, on our web site, we have developed videos addressing frequently asked topics. In addition, there are posted links covering a variety of subjects under the resources page of our web site at mdareserves.com.

Purpose. The purpose of this Replacement Reserve Study is to provide Penn Forest HOA (hereinafter called the Association) with an inventory of the common community facilities and infrastructure components that require periodic replacement. The Study includes a general view of the condition of these items and an effective financial plan to fund projected periodic replacements.

- **Inventory of Items Owned by the Association.** Section B lists the Projected Replacements of the commonly owned items that require periodic replacement using funding from Replacement Reserves. The Replacement Reserve Inventory also provides information about excluded items, which are items whose replacements are not scheduled for funding from Replacement Reserves.

- **Condition of Items Owned by the Association.** Section B includes our estimates of the normal economic life and the remaining economic life for the projected replacements. Section C provides a year-by-year listing of the projected replacements. Section D provides additional detail for items that are unique or deserving of attention because of their condition or the manner in which they have been treated in this study.

- **Financial Plan.** The Association has a fiduciary responsibility to protect the appearance, value, and safety of the property and it is therefore essential the Association have a financial plan that provides funding for the projected replacements. In conformance with American Institute of Certified Public Accountant guidelines, Section A, Replacement Reserve Analysis evaluates the current funding of Replacement Reserves as reported by the Association and recommends annual funding of Replacement Reserves by the Cash Flow Method. Section A, Replacement Reserve Analysis includes graphic and tabular presentations of the reported current funding and the recommended funding based on the Cash Flow Method. An Executive Summary of these calculations is provided on Page A1. The alternative Component Method of funding is provided in the Appendix.

Basis. The data contained in this Replacement Reserve Study is based upon the following:

- The Request for Proposal submitted and executed by the Association.

- Miller+Dodson performed a visual evaluation on July 09, 2021 to determine a remaining useful life and replacement cost for the commonly owned elements of this facility.

- This study contains additional recommendations to address inflation for the Cash Flow Method only. For this recommendation, Miller+Dodson uses the Producers Price Index (PPI), which gauges inflation in manufacturing and construction. Please see page A5 for further details.

To-Scale Drawings. Site and building plans were not used in the development of this study. We recommend the Association assemble and maintain a library of site and building plans of the entire facility. Record drawings should be scanned into an electronic format for safe storage and ease of distribution. Upon request for a nominal fee, Miller+Dodson can provide scanning services.

Current Funding. This reserve study has been prepared for Fiscal Year 2022 covering the period from January 1, 2022 to December 31, 2022. The Replacement Reserves on deposit as of January 1, 2022 and the current annual funding for reserves are reported to be:

	Opening Balance	Annual Contribution
Penn Forest HOA	$182,845	$48,854
Non-Capital Operating	$9,670	$5,790

The balance and contribution figures have been supplied by the managing agent and confirmation or audit of these figures is beyond the scope of the study. For the purposes of this study, it is assumed that the annual contribution will be deposited at the end of each month.

Acknowledgment. Miller+Dodson Associates would like to acknowledge the assistance and input of Charles Spencer, Treasurer and Nikki Pritt, Assoc. Manager who provided very helpful insight into the current operations of the property.

Analyst's Credentials. Bill Conner holds a Bachelor of Science Degree in Economics from James Madison University. He has over forty years of experience in inspection services, residential construction, commercial construction, and architectural woodwork. Bill has personally inspected and evaluated over 3,000 properties and managed the inspection of many more throughout the eastern United States. Currently, Bill resides near Richmond, Virginia and is a reserve analyst for Miller+Dodson Associates.

Respectfully Submitted,

millerdodson
CAPITAL RESERVE CONSULTANTS

Bill Conner
William (Bill) J. Conner, Jr., RS

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EXECUTIVE SUMMARY

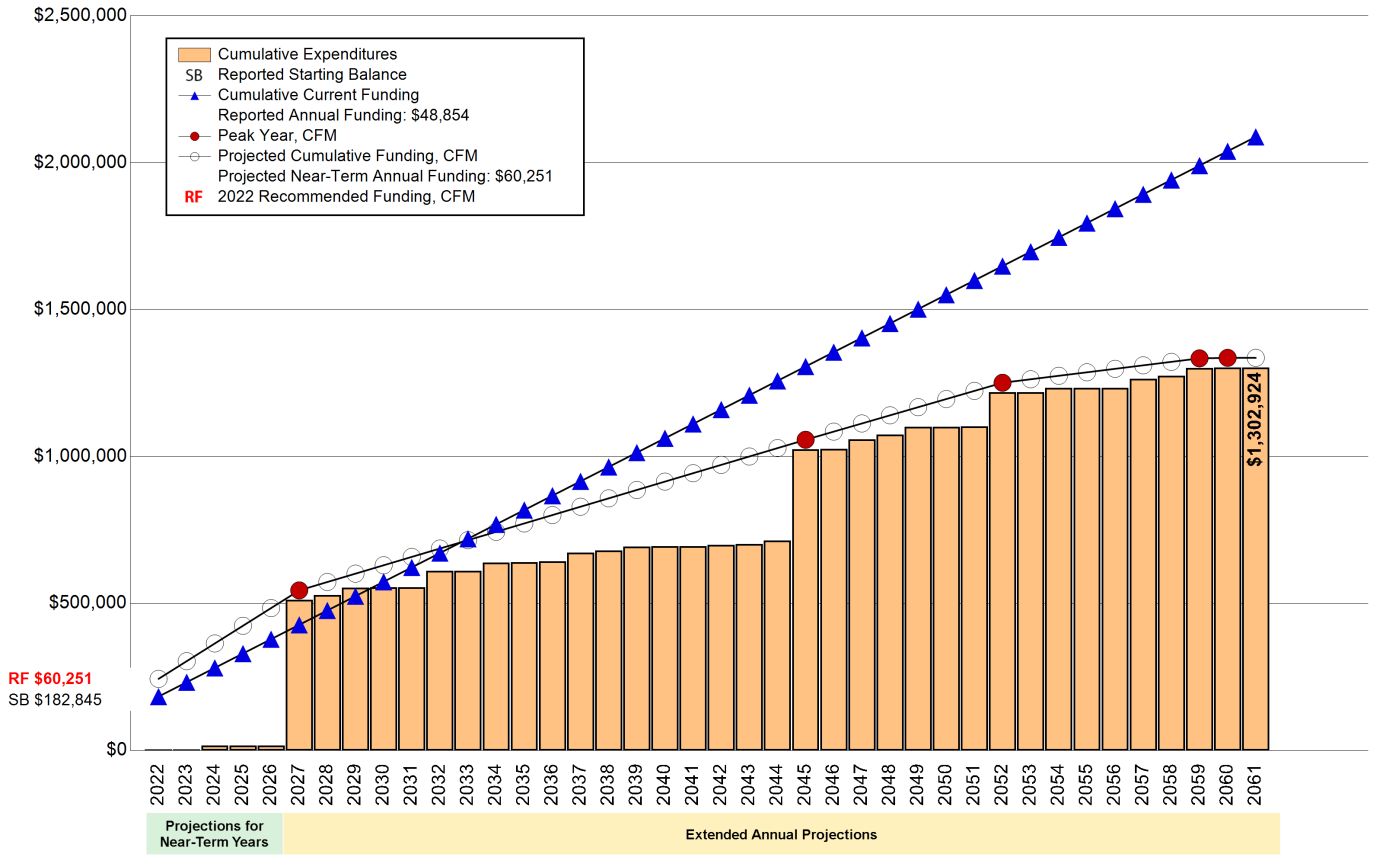
The Penn Forest HOA Replacement Reserve Analysis uses the Cash Flow Method (CFM) to calculate Replacement Reserve funding for the periodic replacement of the 23 Projected Replacements identified in the Replacement Reserve Inventory.

$60,251 **RECOMMENDED REPLACEMENT RESERVE FUNDING FOR THE STUDY YEAR, 2022**
$161.97 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 A.5.

Penn Forest HOA reports a Starting Balance of $182,845 and Annual Funding totaling $48,854. The reported Current Annual Funding of $48,854 is inadequate to fund projected replacements starting in 2027. See Page A.3 for a more detailed evaluation.

#1 - Cumulative Replacement Reserve Funding and Expenditures Graph



REPLACEMENT RESERVE ANALYSIS - GENERAL INFORMATION

The Penn Forest HOA Replacement Reserve Analysis calculations of recommended funding of Replacement Reserves by the Cash Flow Method (CFM) and the evaluation of the Current Funding are based upon the same Study Year, Study Period, Beginning Balance, Replacement Reserve Inventory and Level of Service.

2022 **STUDY YEAR**

The Association reports that their accounting year begins on January 1, and the Study Year, the first year evaluated by the Replacement Reserve Analysis, begins on January 1, 2022.

40 Years **STUDY PERIOD**

The Replacement Reserve Analysis evaluates the funding of Replacement Reserves over a 40-year Study Period

$182,845 **STARTING BALANCE**

The Association reports Replacement Reserves on Deposit totaling $182,845 at the start of the Study Year.

Level Two **LEVEL OF SERVICE**

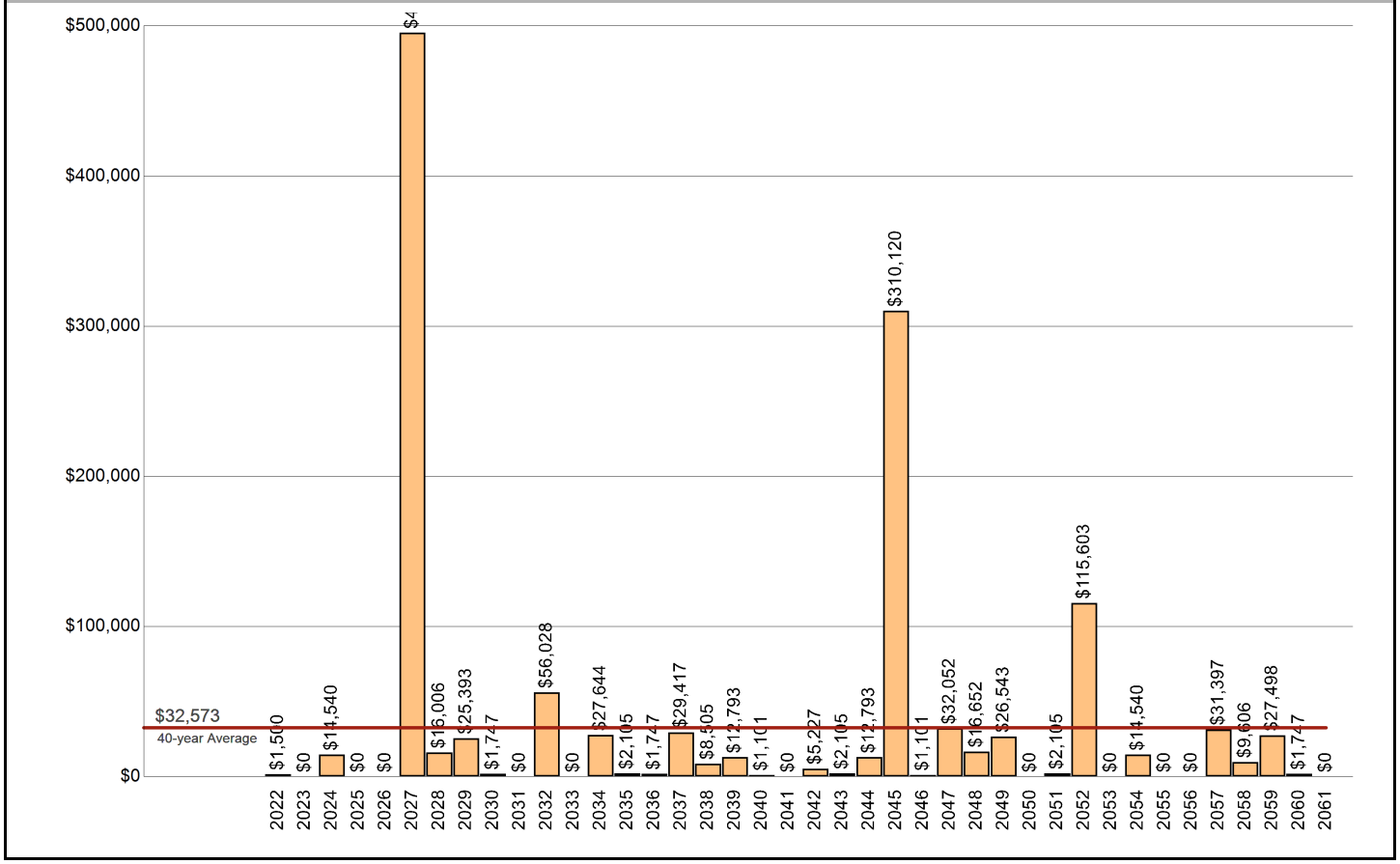
The Replacement Reserve Inventory has been developed in compliance with the National Reserve Study Standards for a Level Two Study, as defined by the Community Associations Institute (CAI).

$1,302,924 **REPLACEMENT RESERVE INVENTORY - PROJECTED REPLACEMENTS**

The Penn Forest HOA Replacement Reserve Inventory identifies 23 items that will require periodic replacement, that are to be funded from Replacement Reserves. We estimate the cost of these replacements will be $1,302,924 over the 40-year Study Period. The Projected Replacements are divided into 2 major categories starting on Page B.3. Pages B.1-B.2 provide detailed information on the Replacement Reserve Inventory.

#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 $32,573. Section C provides a year by year Calendar of these expenditures.



UPDATING

UPDATING OF THE FUNDING PLAN

The Association has a responsibility to review the Funding Plan annually. The review should include a comparison and evaluation of actual reserve funding with recommended levels shown on Page A.4 and A.5. The Projected Replacements listed on Page C.2 should be compared with any replacements accomplished and funded from Replacement Reserves. Discrepancies should be evaluated and if necessary, the Reserve Study should be updated or a new study commissioned. We recommend annual increases in replacement reserve funding to account for the impact of inflation. Inflation Adjusted Funding is discussed on Page A.5.

UPDATING OF THE REPLACEMENT RESERVE STUDY

At a minimum, the Replacement Reserve Study should be professionally updated every three to five years or after completion of a major replacement project. Updating should also be considered if during the annual review of the Funding Plan, discrepancies are noted between projected and actual reserve funding or replacement costs. Updating may also be necessary if there is a meaningful discrepancy between the actual inflation rate and the inflation rate used for the Inflation Adjusted Funding of Replacement Reserves on Page A.5.

ANNUAL EXPENDITURES AND CURRENT FUNDING

The annual expenditures that comprise the $1,302,924 of Projected Expenditures over the 40-year Study Period and the impact of the Association continuing to fund Replacement Reserves at the current level are detailed in Table 3.

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

Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Starting Balance	$182,845									
Projected Replacements	($1,500)		($14,540)			($495,313)	($16,006)	($25,393)	($1,747)	
Annual Deposit	$48,854	$48,854	$48,854	$48,854	$48,854	$48,854	$48,854	$48,854	$48,854	$48,854
End of Year Balance	$230,199	$279,053	$313,367	$362,221	$411,075	($35,384)	($2,535)	$20,926	$68,033	$116,887
Cumulative Expenditures	($1,500)	($1,500)	($16,040)	($16,040)	($16,040)	($511,353)	($527,358)	($552,751)	($554,498)	($554,498)
Cumulative Receipts	$231,699	$280,553	$329,407	$378,261	$427,115	$475,969	$524,823	$573,677	$622,531	$671,385
Year	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**
Projected Replacements	($56,028)		($27,644)	($2,105)	($1,747)	($29,417)	($8,505)	($12,793)	($1,101)	
Annual Deposit	$48,854	$48,854	$48,854	$48,854	$48,854	$48,854	$48,854	$48,854	$48,854	$48,854
End of Year Balance	$109,713	$158,567	$179,777	$226,526	$273,633	$293,071	$333,420	$369,480	$417,234	$466,088
Cumulative Expenditures	($610,526)	($610,526)	($638,170)	($640,275)	($642,022)	($671,438)	($679,943)	($692,737)	($693,837)	($693,837)
Cumulative Receipts	$720,239	$769,093	$817,947	$866,801	$915,655	$964,509	$1,013,363	$1,062,217	$1,111,071	$1,159,925
Year	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	**2051**
Projected Replacements	($5,227)	($2,105)	($12,793)	($310,120)	($1,101)	($32,052)	($16,652)	($26,543)		($2,105)
Annual Deposit	$48,854	$48,854	$48,854	$48,854	$48,854	$48,854	$48,854	$48,854	$48,854	$48,854
End of Year Balance	$509,715	$556,464	$592,525	$331,259	$379,013	$395,815	$428,017	$450,328	$499,182	$545,931
Cumulative Expenditures	($699,064)	($701,169)	($713,962)	($1,024,082)	($1,025,183)	($1,057,234)	($1,073,886)	($1,100,429)	($1,100,429)	($1,102,534)
Cumulative Receipts	$1,208,779	$1,257,633	$1,306,487	$1,355,341	$1,404,195	$1,453,049	$1,501,903	$1,550,757	$1,599,611	$1,648,465
Year	**2052**	**2053**	**2054**	**2055**	**2056**	**2057**	**2058**	**2059**	**2060**	**2061**
Projected Replacements	($115,603)		($14,540)			($31,397)	($9,606)	($27,498)	($1,747)	
Annual Deposit	$48,854	$48,854	$48,854	$48,854	$48,854	$48,854	$48,854	$48,854	$48,854	$48,854
End of Year Balance	$479,182	$528,036	$562,350	$611,204	$660,058	$677,516	$716,764	$738,120	$785,227	$834,081
Cumulative Expenditures	($1,218,137)	($1,218,137)	($1,232,677)	($1,232,677)	($1,232,677)	($1,264,073)	($1,273,679)	($1,301,177)	($1,302,924)	($1,302,924)
Cumulative Receipts	$1,697,319	$1,746,173	$1,795,027	$1,843,881	$1,892,735	$1,941,589	$1,990,443	$2,039,297	$2,088,151	$2,137,005

EVALUATION OF CURRENT FUNDING

The evaluation of Current Funding (Starting Balance of $182,845 & annual funding of $48,854) is done in today's dollars with no adjustments for inflation or interest earned on Replacement Reserves. The evaluation assumes Replacement Reserves will only be used for the 23 Projected Replacements identified in the Replacement Reserve Inventory and that the Association will continue Annual Funding of $48,854 throughout the 40-year Study Period.

Annual Funding of $48,854 is approximately 81 percent of the $60,251 recommended Annual Funding calculated by the Cash Flow Method for 2022, the Study Year.

The progression and effect of continued Current Annual Funding coupled with this studies Projected Replacements over the Study Period are evaluated in Table 3 above. Maintaining Current Annual Funding may result in inadequate End of Year Balances, noted in red.

See the Executive Summary for the Current Funding Statement.

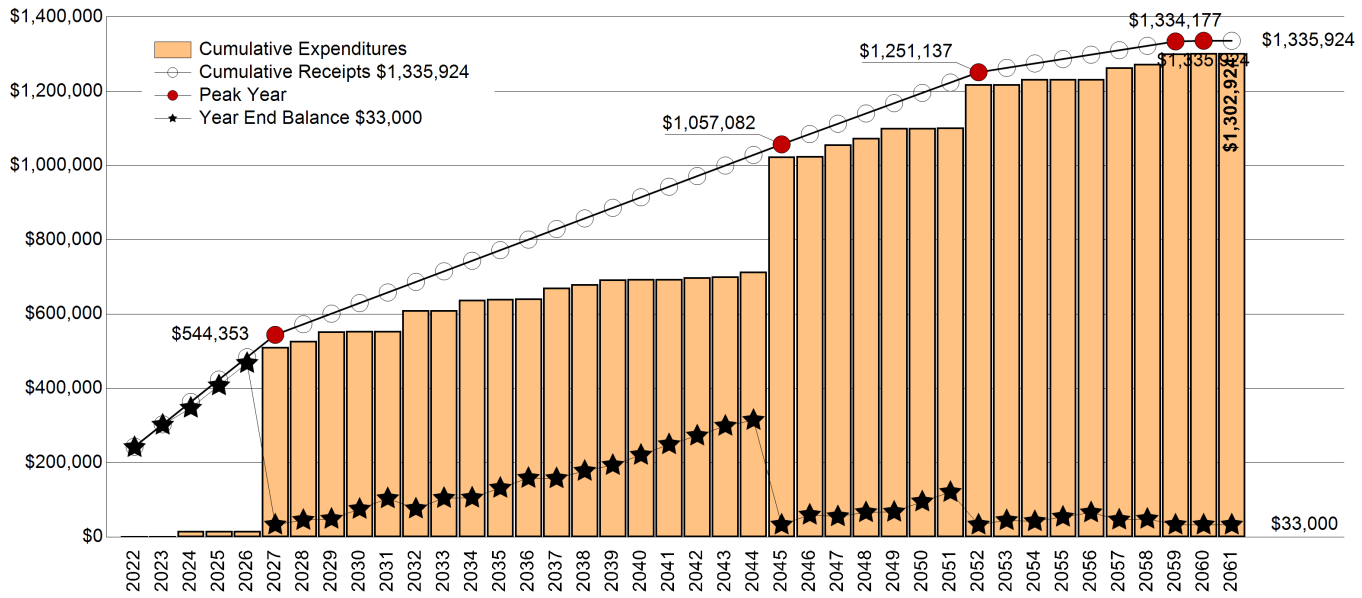
CASH FLOW METHOD FUNDING

$60,251 **RECOMMENDED REPLACEMENT RESERVE FUNDING FOR 2022**
$161.97 Per unit (average), minimum monthly funding of Replacement Reserves

Recommended Replacement Reserve Funding has been calculated using the Cash Flow Method (also called the Straight Line or Threshold Method). This method calculates a constant annual funding between peaks in cumulative expenditures, while maintaining a Minimum Balance (threshold) in the Peak Years.

- Peak Years. The First Peak Year occurs in 2027 with Replacement Reserves on Deposit dropping to the Minimum Balance after the completion of $511,353 of replacements from 2022 to 2027. Recommended funding is projected to decline from $60,251 in 2027 to $28,485 in 2028. Peak Years are identified in Chart 4 and Table 5.
- Minimum Balance. The calculations assume a Minimum Balance of $33,000 will always be held in reserve, which is calculated by rounding the 12-month 40-year average annual expenditure of $32,573 as shown on Graph #2.
- Cash Flow Method Study Period. Cash Flow Method calculates funding for $1,302,924 of expenditures over the 40-year Study Period. It does not include funding for any projects beyond 2061 and in 2061, the end of year balance will always be the Minimum Balance.

#4 - Cash Flow Method - Graph of Cumulative Receipts and Expenditures - Years 1 through 40



#5 - Cash Flow Method - Table of Receipts & Expenditures - Years 1 through 40

Year	2022	2023	2024	2025	2026	1st Peak - 2027	2028	2029	2030	2031
Starting Balance	$182,845									
Projected Replacements	($1,500)		($14,540)			($495,313)	($16,006)	($25,393)	($1,747)	
Annual Deposit	$60,251	$60,251	$60,251	$60,251	$60,251	$60,251	$28,485	$28,485	$28,485	$28,485
End of Year Balance	$241,596	$301,848	$347,559	$407,810	$468,061	$33,000	$45,479	$48,571	$75,309	$103,794
Cumulative Expenditures	($1,500)	($1,500)	($16,040)	($16,040)	($16,040)	($511,353)	($527,358)	($552,751)	($554,498)	($554,498)
Cumulative Receipts	$243,096	$303,348	$363,599	$423,850	$484,101	$544,353	$572,838	$601,323	$629,808	$658,293

Year	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
Projected Replacements	($56,028)		($27,644)	($2,105)	($1,747)	($29,417)	($8,505)	($12,793)	($1,101)	
Annual Deposit	$28,485	$28,485	$28,485	$28,485	$28,485	$28,485	$28,485	$28,485	$28,485	$28,485
End of Year Balance	$76,251	$104,736	$105,577	$131,958	$158,696	$157,764	$177,744	$193,436	$220,820	$249,305
Cumulative Expenditures	($610,526)	($610,526)	($638,170)	($640,275)	($642,022)	($671,438)	($679,943)	($692,737)	($693,837)	($693,837)
Cumulative Receipts	$686,778	$715,262	$743,747	$772,232	$800,717	$829,202	$857,687	$886,172	$914,657	$943,142

Year	2042	2043	2044	2nd Peak - 2045	2046	2047	2048	2049	2050	2051
Projected Replacements	($5,227)	($2,105)	($12,793)	($310,120)	($1,101)	($32,052)	($16,652)	($26,543)		($2,105)
Annual Deposit	$28,485	$28,485	$28,485	$28,485	$27,722	$27,722	$27,722	$27,722	$27,722	$27,722
End of Year Balance	$272,563	$298,943	$314,635	$33,000	$59,622	$55,292	$66,362	$67,541	$95,263	$120,880
Cumulative Expenditures	($699,064)	($701,169)	($713,962)	($1,024,082)	($1,025,183)	($1,057,234)	($1,073,886)	($1,100,429)	($1,100,429)	($1,102,534)
Cumulative Receipts	$971,627	$1,000,112	$1,028,597	$1,057,082	$1,084,804	$1,112,526	$1,140,248	$1,167,970	$1,195,692	$1,223,414

Year	3rd Peak - 2052	2053	2054	2055	2056	2057	2058	4th Peak - 2059	5th Peak - 2060	2061
Projected Replacements	($115,603)		($14,540)			($31,397)	($9,606)	($27,498)	($1,747)	
Annual Deposit	$27,722	$11,863	$11,863	$11,863	$11,863	$11,863	$11,863	$11,863	$1,747	
End of Year Balance	$33,000	$44,863	$42,186	$54,049	$65,912	$46,378	$48,635	$33,000	$33,000	$33,000
Cumulative Expenditures	($1,218,137)	($1,218,137)	($1,232,677)	($1,232,677)	($1,232,677)	($1,264,073)	($1,273,679)	($1,301,177)	($1,302,924)	($1,302,924)
Cumulative Receipts	$1,251,137	$1,262,999	$1,274,862	$1,286,725	$1,298,588	$1,310,451	$1,322,314	$1,334,177	$1,335,924	$1,335,924

INFLATION ADJUSTED FUNDING

The Cash Flow Method calculations on Page A4 have been done in today's dollars with no adjustment for inflation. At Miller+Dodson, we believe that long-term inflation forecasting is effective at demonstrating the power of compounding, not at calculating appropriate funding levels for Replacement Reserves. We have developed this proprietary model to estimate the short-term impact of inflation on Replacement Reserve funding.

$60,251 **2022 - CASH FLOW METHOD RECOMMENDED FUNDING**

The 2022 Study Year calculations have been made using current replacement costs (see Page B.2), modified by the Analyst for any project specific conditions.

$61,637 **2023 - INFLATION ADJUSTED FUNDING**

A new analysis calculates the 2023 funding based on three assumptions:

- Replacement Reserves on Deposit totaling $241,596 on January 1, 2023.
- All 2022 Projected Replacements listed on Page C.2 accomplished at a cost to Replacement Reserves less than $1,500.
- Construction Cost Inflation of 2.30 percent in 2022.

The $61,637 inflation adjusted funding in 2023 is a 2.29 percent increase over the non-inflation adjusted funding of $60,251.

$63,055 **2024 - INFLATION ADJUSTED FUNDING**

A new analysis calculates the 2024 funding based on three assumptions:

- Replacement Reserves on Deposit totaling $254,926 on January 1, 2024.
- No Expenditures from Replacement Reserves in 2023.
- Construction Cost Inflation of 2.30 percent in 2023.

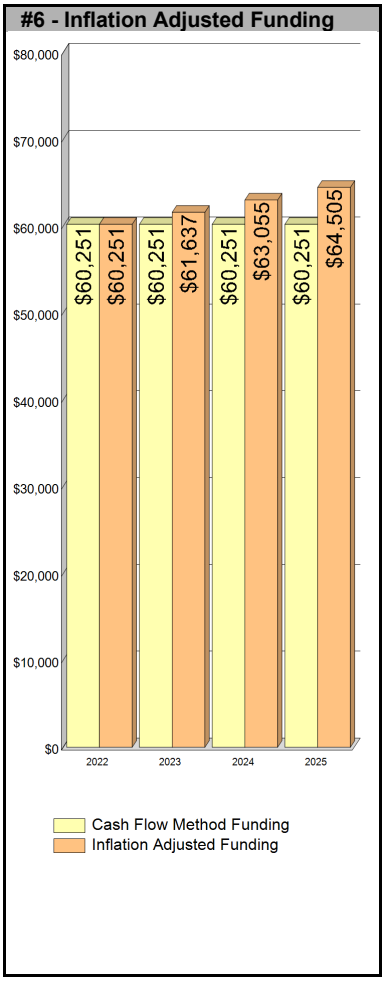
The $63,055 inflation adjusted funding in 2024 is a 4.65 percent increase over the non-inflation adjusted funding of $60,251.

$64,505 **2025 - INFLATION ADJUSTED FUNDING**

A new analysis calculates the 2025 funding based on three assumptions:

- Replacement Reserves on Deposit totaling $261,004 on January 1, 2025.
- All 2024 Projected Replacements listed on Page C.2 accomplished at a cost to Replacement Reserves less than $14,876.
- Construction Cost Inflation of 2.30 percent in 2024.

The $64,505 inflation adjusted funding in 2025 is a 7.05 percent increase over the non-inflation adjusted funding of $60,251.



Year Five and Beyond

The inflation-adjusted funding calculations outlined above are not intended to be a substitute for periodic evaluation of common elements by an experienced Reserve Analyst. Industry Standards, lender requirements, and many state and local statutes require a Replacement Reserve Study to be professionally updated every 3 to 5 years.

Inflation Adjustment

Prior to approving a budget based upon the 2023, 2024 and 2025 inflation-adjusted funding calculations above, the 2.30 percent base rate of inflation used in our calculations should be compared to rates published by the Bureau of Labor Statistics. If there is a significant discrepancy (over 1 percentage point), contact Miller+Dodson Associates prior to using the Inflation Adjusted Funding.

Interest on Reserves

The recommended funding calculations do not account for interest earned on Replacement Reserves. In 2022, based on a 1.00 percent interest rate, we estimate the Association may earn $2,122 on an average balance of $212,221, $2,483 on an average balance of $248,261 in 2023, and $2,580 on $257,965 in 2024. The Association may elect to attribute 100 percent of the earned interest to Reserves, resulting in a reduction in the 2022 funding from $60,251 to $58,129 (a 3.52 percent reduction), $61,637 to $59,154 in 2023 (a 4.02 percent reduction), and $63,055 to $60,475 in 2024 (a 4.09 percent reduction).

REPLACEMENT RESERVE STUDY - SUPPLEMENTAL COMMENTS

- The Cash Flow Method calculates the minimum annual funding necessary to prevent Replacement Reserves from dropping below the Minimum Balance, as defined on Page A4. Failure to fund at least the recommended levels may result in funding not being available for the Projected Replacements listed in the Replacement Reserve Inventory.
- The accuracy of the Replacement Reserve Analysis is dependent upon expenditures from Replacement Reserves being made ONLY for the 23 Projected Replacements specifically listed in the Replacement Reserve Inventory. The inclusion/exclusion of items from the Replacement Reserve Inventory is discussed on Page B.1.

REPLACEMENT RESERVE INVENTORY
GENERAL INFORMATION

Penn Forest HOA - Replacement Reserve Inventory identifies 23 Projected Replacements.

- PROJECTED REPLACEMENTS. 23 of the items are Projected Replacements and the periodic replacements of these items are scheduled for funding from Replacement Reserves. The Projected Replacements have an estimated one-time replacement cost of $953,775. Cumulative Replacements totaling $1,302,924 are scheduled in the Replacement Reserve Inventory over the 40-year Study Period.

  Projected Replacements are the replacement of commonly-owned physical assets that require periodic replacement and whose replacement is to be funded from Replacement Reserves.

- EXCLUDED ITEMS. None of the items included in the Replacement Reserve Inventory are 'Excluded Items'. Multiple categories of items are typically excluded from funding by Replacement Reserves, including but not limited to:

  Tax Code. The United States Tax Code grants very favorable tax status to Replacement Reserves, conditioned on expenditures being made within certain guidelines. These guidelines typically exclude maintenance activities, minor repairs, and capital improvements.

  Value. Items with a replacement cost of less than $1000 and/or a normal economic life of less than 3 years are typically excluded from funding from Replacement Reserves. This exclusion should reflect the Association policy on the administration of Replacement Reserves. If the Association has selected an alternative level, it will be noted in the Replacement Reserve Inventory - General Comments on Page B.2.

  Long-lived Items. Items are excluded from the Replacement Reserve Inventory when items are properly maintained and are assumed to have a life equal to the property.

  Unit improvements. Items owned by a single unit and where the items serve a single unit are generally assumed to be the responsibility of that unit, not the Association.

  Other non-common improvements. Items owned by the local government, public and private utility companies, the United States Postal Service, Master Associations, state and local highway authorities, etc., may be installed on property that is owned by the Association. These types of items are generally not the responsibility of the Association and are excluded from the Replacement Reserve Inventory.

- CATEGORIES. The 23 items included in the Penn Forest HOA Replacement Reserve Inventory are divided into 2 major categories. Each category is printed on a separate page, beginning on page B.3
- LEVEL OF SERVICE. This Replacement Reserve Inventory has been developed in compliance with the standards established for a Level 2 Update, as defined by the National Reserve Study Standards, established in 1998 by Community Associations Institute, which states:

  This study has been performed as a Level 2 Update with Site Visit/On-Site Review as defined by the Community Associations Institute's, National Reserve Study Standards. As such, the component inventory is based on the study that was performed by Miller-Dodson Assoc. in 2017. This inventory was adjusted to reflect changes provided by the Community Manager and/or the Board of Directors, or adjustments made based on the site visit and visual assessment performed by the Analyst. The analysis, including fund status and funding plan, is developed from the adjusted inventory.

REPLACEMENT RESERVE INVENTORY - GENERAL INFORMATION (CONT'D)

- INVENTORY DATA. Each of the 23 Projected Replacements listed in the Replacement Reserve Inventory includes the following data:

  Item Number. The Item Number is assigned sequentially and is intended for identification purposes only.

  Item Description. We have identified each item included in the Inventory. Additional information may be included in the Comments section at the bottom of each page of the Inventory.

  Units. We have used standard abbreviations to identify the number of units including SF-square feet, LF-lineal feet, SY-square yard, LS-lump sum, EA-each, and PR-pair. Non-standard abbreviations are noted in the Comments section at the bottom of the page.

  Number of Units. The methods used to develop the quantities are discussed in "Level of Service" above.

  Unit Replacement Cost. We use four sources to develop the unit cost data shown in the Inventory; actual replacement cost data provided by the client, information provided by local contractors and suppliers, industry standard estimating manuals, and a cost database we have developed based upon our detailed interviews with contractors and service providers who are specialists in their respective lines of work.

  Normal Economic Life (Years). The number of years that a new and properly installed item should be expected to remain in service.

  Remaining Economic Life (Years). The estimated number of years before an item will need to be replaced. In "normal" conditions, this could be calculated by subtracting the age of the item from the Normal Economic Life of the item, but only rarely do physical assets age "normally". Some items may have longer or shorter lives depending on many factors such as environment, initial quality of the item, maintenance, etc.

  Total Replacement Cost. This is calculated by multiplying the Unit Replacement Cost by the Number of Units.

- REVIEW OF EXPENDITURES. This Replacement Reserve Study should be reviewed by an accounting professional representing the Association prior to implementation.

- PARTIAL FUNDING. Items may have been included in the Replacement Reserve Inventory at less than 100 percent of their full quantity and/or replacement cost. This is done on items that will never be replaced in their entirety, but which may require periodic replacements over an extended period of time. The assumptions that provide the basis for any partial funding are noted in the Comments section.

- REMAINING ECONOMIC LIFE GREATER THAN 40 YEARS. The calculations do not include funding for initial replacements beyond 40 years. These replacements are included in this Study for tracking and evaluation. They should be included for funding in future Studies when they enter the 40-year window.

SITE ITEMS
PROJECTED REPLACEMENTS

NEL- Normal Economic Life (yrs)
REL- Remaining Economic Life (yrs)

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST ($)	NEL	REL	REPLACEMENT COST ($)
1	Curb and gutter, center island (3%)	ft	31	$35.50	6	6	$1,101
2	Unit leadwalks	sf	1,240	$18.55	30	30	$23,002
3	Unit patio, concrete under decks (8%)	sf	194	$10.85	8	5	$2,105
4	Unit patio, concrete uncovered (8%)	sf	161	$10.85	6	2	$1,747
5	Retaining wall, stone, repoint/repair (10%)	sf	700	$12.15	10	6	$8,505
6	Entrance monument, carved wood sign	sf	18	$110.00	15	5	$1,980
7	Entrance monument, repoint/repair masonry	ls	1	$1,500.00	10	none	$1,500
8	Stormwater management including BMP's	ls	1	$17,000.00	10	5	$17,000

Replacement Costs - Page Subtotal $56,939

COMMENTS

- Item #2: Unit leadwalks - 8/04/2021 Revision. Most walks were replaced in 2021. Replacement cost here based on actual provided by BOD.
- Item #5: Retaining wall, stone, repoint/repair (10%) - 08/04/2021 Cost increase based on actual recent expenditures and comments provided by BOD.

EXTERIOR ITEMS
PROJECTED REPLACEMENTS

NEL- Normal Economic Life (yrs)
REL- Remaining Economic Life (yrs)

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST ($)	NEL	REL	REPLACEMENT COST ($)
9	Roofing, asphalt shingles	sf	75,535	$4.00	30	23	$302,140
10	Standing seam metal roofing	ft	570	$14.00	50	23	$7,980
11	Gutter and downspouts, 5" aluminum	ft	8,201	$7.20	35	5	$59,047
12	Siding and trim, vinyl	sf	41,352	$7.80	35	5	$322,546
13	Foundation Flashing	sf	12,000	$7.50	25	5	$90,000
14	Masonry (10% repointing allowance)	sf	1,267	$9.80	10	15	$12,417
15	Wood deck, structure < 4' high	sf	336	$23.00	30	10	$7,728
16	Wood deck, structure > 4' high	sf	1,872	$25.00	30	10	$46,800
17	Wood deck, decking (33%)	sf	728	$12.65	5	2	$9,209
18	Wood deck, railing (33%)	ft	112	$32.00	5	2	$3,584
19	Screened deck, structure repair/columns	sf	504	$25.00	30	7	$12,600
20	Screened deck, screen replacement	sf	640	$6.00	20	6	$3,840
21	Screened deck, rail replacement	ft	80	$32.00	20	6	$2,560
22	Exterior stoop ceiling lighting	ea	31	$85.00	20	5	$2,635
23	Exterior lighting, wall sconce	ea	110	$125.00	15	12	$13,750

Replacement Costs - Page Subtotal $896,836

COMMENTS

- Item #11: Gutter and downspouts, 5" aluminum - 8/24/2021 Change to replace in 2027 per BOD.
- Item #12: Siding and trim, vinyl - 2022. Per BOD instruction replacement changed from periodic partial to full replacement at one event. 08/24/2021 Change replacement year to 2027 per BOD.
- Item #13: Foundation Flashing - Added in 2022 study. 08/04/2021 Revised to 100% replacement per BOD instruction. 08/24/2021 Changed replacement year to 2027 to coincide with vinyl siding and gutter replacement per BOD.
- Item #17: Wood deck, decking (33%) - Decks were pressure washed and sealed in 2020.
- Item #23: Exterior lighting, wall sconce - Front exterior lighting wall sconces were replaced in 2019.

LONG-LIFE EXCLUSIONS
Excluded Items

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST ($)	NEL	REL	REPLACEMENT COST ($)
	Miscellaneous culverts						EXCLUDED
	Exterior brick veneer						EXCLUDED
	Building foundation(s)						EXCLUDED

LONG-LIFE EXCLUSIONS
Comments

- Long Life Exclusions. Components that when properly maintained, can be assumed to have a life equal to the property as a whole, are normally excluded from the Replacement Reserve Inventory. Examples of items excluded from funding by Replacement Reserves by this standard are listed above.
- Exterior masonry is generally assumed to have an unlimited economic life, but periodic repointing is required, and we have included this for funding in the Replacement Reserve Inventory.
- The list above exemplifies exclusions by the cited standard(s) and is not intended to be comprehensive.

UNIT IMPROVEMENTS EXCLUSIONS

Excluded Items

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST ($)	NEL	REL	REPLACEMENT COST ($)
	Domestic water pipes serving one unit						EXCLUDED
	Sanitary sewers serving one unit						EXCLUDED
	Electrical wiring serving one unit						EXCLUDED
	Cable TV service serving one unit						EXCLUDED
	Telephone service serving one unit						EXCLUDED
	Gas service serving one unit						EXCLUDED
	Driveway on an individual lot						EXCLUDED
	Apron on an individual lot						EXCLUDED
	Unit windows						EXCLUDED
	Unit doors						EXCLUDED
	Unit mailbox						EXCLUDED
	Unit interior						EXCLUDED
	Unit HVAC system						EXCLUDED

UNIT IMPROVEMENTS EXCLUSIONS

Comments

- Unit improvement Exclusions. We understand that the elements of the project that relate to a single unit are the responsibility of that unit owner. Examples of items excluded from funding by Replacement Reserves by this standard are listed above.
- The list above exemplifies exclusions by the cited standard(s) and is not intended to be comprehensive.

UTILITY EXCLUSIONS
Excluded Items

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST ($)	NEL	REL	REPLACEMENT COST ($)
	Primary electric feeds						EXCLUDED
	Electric transformers						EXCLUDED
	Cable TV systems and structures						EXCLUDED
	Telephone cables and structures						EXCLUDED
	Site lighting						EXCLUDED
	Gas mains and meters						EXCLUDED
	Water mains and meters						EXCLUDED
	Sanitary sewers						EXCLUDED

UTILITY EXCLUSIONS
Comments

- Utility Exclusions. Many improvements owned by utility companies are on property owned by the Association. We have assumed that repair, maintenance, and replacements of these components will be done at the expense of the appropriate utility company. Examples of items excluded from funding Replacement Reserves by this standard are listed above.

- The list above exemplifies exclusions by the cited standard(s) and is not intended to be comprehensive.

MAINTENANCE AND REPAIR EXCLUSIONS

Excluded Items

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST ($)	NEL	REL	REPLACEMENT COST ($)
	Landscaping and site grading						EXCLUDED
	Exterior painting						EXCLUDED
	Interior painting						EXCLUDED
	Capital improvements						EXCLUDED

MAINTENANCE AND REPAIR EXCLUSIONS

Comments

- Maintenance activities, one-time-only repairs, and capital improvements. These activities are NOT appropriately funded from Replacement Reserves. The inclusion of such component in the Replacement Reserve Inventory could jeopardize the special tax status of ALL Replacement Reserves, exposing the Association to significant tax liabilities. We recommend that the Board of Directors discuss these exclusions and Revenue Ruling 75-370 with a Certified Public Accountant.

- Examples of items excluded from funding by Replacement Reserves are listed above. The list above exemplifies exclusions by the cited standard(s) and is not intended to be comprehensive.

GOVERNMENT EXCLUSIONS

Excluded Items

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST ($)	NEL	REL	REPLACEMENT COST ($)
	Government, roadways and parking						EXCLUDED

GOVERNMENT EXCLUSIONS

Comments

- Government Exclusions. We have assumed that some of the improvements installed on property owned by the Association will be maintained by the state, county, or local government, or other association or other responsible entity. Examples of items excluded from funding by Replacement Reserves by this standard are listed above.
- Excluded rights-of-way, including adjacent properties and adjacent roadways.
- The list above exemplifies exclusions by the cited standard(s) and is not intended to be comprehensive.

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PROJECTED ANNUAL REPLACEMENTS
GENERAL INFORMATION

CALENDAR OF ANNUAL REPLACEMENTS. The 23 Projected Replacements in the Penn Forest HOA Replacement Reserve Inventory whose replacement is scheduled to be funded from Replacement Reserves are broken down on a year-by-year basis, beginning on Page C.2.

REPLACEMENT RESERVE ANALYSIS AND INVENTORY POLICIES, PROCEDURES, AND ADMINISTRATION

- REVISIONS. Revisions will be made to the Replacement Reserve Analysis and Replacement Reserve Inventory in accordance with the written instructions of the Board of Directors. No additional charge is incurred for the first revision, if requested in writing within three months of the date of the Replacement Reserve Study. It is our policy to provide revisions in electronic (Adobe PDF) format only.
- TAX CODE. The United States Tax Code grants favorable tax status to a common interest development (CID) meeting certain guidelines for their Replacement Reserve. If a CID files their taxes as a 'Corporation' on Form 1120 (IRC Section 277), these guidelines typically require maintenance activities, partial replacements, minor replacements, capital improvements, and one-time only replacements to be excluded from Reserves. A CID cannot co-mingle planning for maintenance activities with capital replacement activities in the Reserves (Revenue Ruling 75-370). Funds for maintenance activities and capital replacements activities must be held in separate accounts. If a CID files taxes as an "Exempt Homeowners Association" using Form 1120H (IRC Section 528), the CID does not have to segregate these activities. However, because the CID may elect to change their method of filing from year to year within the Study Period, we advise using the more restrictive approach. We further recommend that the CID consult with their Accountant and consider creating separate and independent accounts and reserves for large maintenance items, such as painting.
- CONFLICT OF INTEREST. Neither Miller - Dodson Associates nor the Reserve Analyst has any prior or existing relationship with this Association which would represent a real or perceived conflict of interest.
- RELIANCE ON DATA PROVIDED BY THE CLIENT. Information provided by an official representative of the Association regarding financial, physical conditions, quality, or historical issues is deemed reliable.
- INTENT. This Replacement Reserve Study is a reflection of the information provided by the Association and the visual evaluations of the Analyst. It has been prepared for the sole use of the Association and is not for the purpose of performing an audit, quality/forensic analyses, or background checks of historical records.
- PREVIOUS REPLACEMENTS. Information provided to Miller - Dodson Associates regarding prior replacements is considered to be accurate and reliable. Our visual evaluation is not a project audit or quality inspection.
- EXPERIENCE WITH FUTURE REPLACEMENTS. The Calendar of Annual Projected Replacements, lists replacements we have projected to occur over the Study Period, begins on Page C2. Actual experience in replacing the items may differ significantly from the cost estimates and time frames shown because of conditions beyond our control. These differences may be caused by maintenance practices, inflation, variations in pricing and market conditions, future technological developments, regulatory actions, acts of God, and luck. Some items may function normally during our visual evaluation and then fail without notice.
- REVIEW OF THE REPLACEMENT RESERVE STUDY. For this study to be effective, it should be reviewed by the Board of Directors, those responsible for the management of the items included in the Replacement Reserve Inventory, and the accounting professionals employed by the Association.

PROJECTED REPLACEMENTS

Item	2022 - Study Year	$
7	Entrance monument, repoint/repair masonry	$1,500
	Total Scheduled Replacements	$1,500

Item	2023 - YEAR 1	$
	No Scheduled Replacements	

Item	2024 - YEAR 2	$
4	Unit patio, concrete uncovered (8%)	$1,747
17	Wood deck, decking (33%)	$9,209
18	Wood deck, railing (33%)	$3,584
	Total Scheduled Replacements	$14,540

Item	2025 - YEAR 3	$
	No Scheduled Replacements	

Item	2026 - YEAR 4	$
	No Scheduled Replacements	

Item	2027 - YEAR 5	$
3	Unit patio, concrete under decks (8%)	$2,105
6	Entrance monument, carved wood sign	$1,980
8	Stormwater management including BMP's	$17,000
11	Gutter and downspouts, 5" aluminum	$59,047
12	Siding and trim, vinyl	$322,546
13	Foundation Flashing	$90,000
22	Exterior stoop ceiling lighting	$2,635
	Total Scheduled Replacements	$495,313

Item	2028 - YEAR 6	$
1	Curb and gutter, center island (3%)	$1,101
5	Retaining wall, stone, repoint/repair (10%)	$8,505
20	Screened deck, screen replacement	$3,840
21	Screened deck, rail replacement	$2,560
	Total Scheduled Replacements	$16,006

Item	2029 - YEAR 7	$
17	Wood deck, decking (33%)	$9,209
18	Wood deck, railing (33%)	$3,584
19	Screened deck, structure repair/columns	$12,600
	Total Scheduled Replacements	$25,393

Item	2030 - YEAR 8	$
4	Unit patio, concrete uncovered (8%)	$1,747
	Total Scheduled Replacements	$1,747

Item	2031 - YEAR 9	$
	No Scheduled Replacements	

PROJECTED REPLACEMENTS

Item	2032 - YEAR 10	$
7	Entrance monument, repoint/repair masonry	$1,500
15	Wood deck, structure < 4' high	$7,728
16	Wood deck, structure > 4' high	$46,800
	Total Scheduled Replacements	$56,028

Item	2033 - YEAR 11	$
	No Scheduled Replacements	

Item	2034 - YEAR 12	$
1	Curb and gutter, center island (3%)	$1,101
17	Wood deck, decking (33%)	$9,209
18	Wood deck, railing (33%)	$3,584
23	Exterior lighting, wall sconce	$13,750
	Total Scheduled Replacements	$27,644

Item	2035 - YEAR 13	$
3	Unit patio, concrete under decks (8%)	$2,105
	Total Scheduled Replacements	$2,105

Item	2036 - YEAR 14	$
4	Unit patio, concrete uncovered (8%)	$1,747
	Total Scheduled Replacements	$1,747

Item	2037 - YEAR 15	$
8	Stormwater management including BMP's	$17,000
14	Masonry (10% repointing allowance)	$12,417
	Total Scheduled Replacements	$29,417

Item	2038 - YEAR 16	$
5	Retaining wall, stone, repoint/repair (10%)	$8,505
	Total Scheduled Replacements	$8,505

Item	2039 - YEAR 17	$
17	Wood deck, decking (33%)	$9,209
18	Wood deck, railing (33%)	$3,584
	Total Scheduled Replacements	$12,793

Item	2040 - YEAR 18	$
1	Curb and gutter, center island (3%)	$1,101
	Total Scheduled Replacements	$1,101

Item	2041 - YEAR 19	$
	No Scheduled Replacements	

PROJECTED REPLACEMENTS

Item	2042 - YEAR 20	$
4	Unit patio, concrete uncovered (8%)	$1,747
6	Entrance monument, carved wood sign	$1,980
7	Entrance monument, repoint/repair masonry	$1,500
	Total Scheduled Replacements	$5,227

Item	2043 - YEAR 21	$
3	Unit patio, concrete under decks (8%)	$2,105
	Total Scheduled Replacements	$2,105

Item	2044 - YEAR 22	$
17	Wood deck, decking (33%)	$9,209
18	Wood deck, railing (33%)	$3,584
	Total Scheduled Replacements	$12,793

Item	2045 - YEAR 23	$
9	Roofing, asphalt shingles	$302,140
10	Standing seam metal roofing	$7,980
	Total Scheduled Replacements	$310,120

Item	2046 - YEAR 24	$
1	Curb and gutter, center island (3%)	$1,101
	Total Scheduled Replacements	$1,101

Item	2047 - YEAR 25	$
8	Stormwater management including BMP's	$17,000
14	Masonry (10% repointing allowance)	$12,417
22	Exterior stoop ceiling lighting	$2,635
	Total Scheduled Replacements	$32,052

Item	2048 - YEAR 26	$
4	Unit patio, concrete uncovered (8%)	$1,747
5	Retaining wall, stone, repoint/repair (10%)	$8,505
20	Screened deck, screen replacement	$3,840
21	Screened deck, rail replacement	$2,560
	Total Scheduled Replacements	$16,652

Item	2049 - YEAR 27	$
17	Wood deck, decking (33%)	$9,209
18	Wood deck, railing (33%)	$3,584
23	Exterior lighting, wall sconce	$13,750
	Total Scheduled Replacements	$26,543

Item	2050 - YEAR 28	$
	No Scheduled Replacements	

Item	2051 - YEAR 29	$
3	Unit patio, concrete under decks (8%)	$2,105
	Total Scheduled Replacements	$2,105

PROJECTED REPLACEMENTS

Item	2052 - YEAR 30	$
1	Curb and gutter, center island (3%)	$1,101
2	Unit leadwalks	$23,002
7	Entrance monument, repoint/repair masonry	$1,500
13	Foundation Flashing	$90,000
	Total Scheduled Replacements	$115,603

Item	2053 - YEAR 31	$
	No Scheduled Replacements	

Item	2054 - YEAR 32	$
4	Unit patio, concrete uncovered (8%)	$1,747
17	Wood deck, decking (33%)	$9,209
18	Wood deck, railing (33%)	$3,584
	Total Scheduled Replacements	$14,540

Item	2055 - YEAR 33	$
	No Scheduled Replacements	

Item	2056 - YEAR 34	$
	No Scheduled Replacements	

Item	2057 - YEAR 35	$
6	Entrance monument, carved wood sign	$1,980
8	Stormwater management including BMP's	$17,000
14	Masonry (10% repointing allowance)	$12,417
	Total Scheduled Replacements	$31,397

Item	2058 - YEAR 36	$
1	Curb and gutter, center island (3%)	$1,101
5	Retaining wall, stone, repoint/repair (10%)	$8,505
	Total Scheduled Replacements	$9,606

Item	2059 - YEAR 37	$
3	Unit patio, concrete under decks (8%)	$2,105
17	Wood deck, decking (33%)	$9,209
18	Wood deck, railing (33%)	$3,584
19	Screened deck, structure repair/columns	$12,600
	Total Scheduled Replacements	$27,498

Item	2060 - YEAR 38	$
4	Unit patio, concrete uncovered (8%)	$1,747
	Total Scheduled Replacements	$1,747

Item	2061 - YEAR 39	$
	No Scheduled Replacements	

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CONDITION ASSESSMENT

General Comments. Miller+Dodson Associates conducted a Reserve Study at Penn Forest HOA in July 2021. Penn Forest HOA is in generally good condition for a homeowner's association constructed between 1995 and 1996. A review of the Replacement Reserve Inventory will show that we are anticipating most of the components achieving their normal economic lives.
The following comments pertain to the larger, more significant components in the Replacement Reserve Inventory and to those items that are unique or deserving of attention because of their condition or the manner in which they have been treated in the Replacement Reserve Analysis or Inventory.

IMPORTANT NOTE: This Condition Assessment is based upon visual and apparent conditions of the common elements of the community which were observed by the Reserve Analyst at the time of the site visit. This Condition Assessment does not constitute, nor is it a substitute for, a professional Structural Evaluation of the buildings, amenities, or systems.

General Condition Statements.

Excellent. 100% to 90% of Normal Economic Life expected, with no appreciable wear or defects.

Good. 90% to 60% of Normal Economic Life expected, minor wear or cosmetic defects found. Normal maintenance should be expected. If performed properly, normal maintenance may increase the useful life of a component. Otherwise, the component is wearing normally.

Fair. 60% to 30% of Normal Economic Life expected, moderate wear with defects found. Repair actions should be taken to extend the life of the component or to correct repairable defects and distress. Otherwise, the component is wearing normally.

Marginal. 30% to 10% of Normal Economic Life expected, with moderate to significant wear or distress found. Repair actions are expected to be cost-effective for localized issues, but normal wear and use are evident. The component is reaching the end of the Normal Economic Life.

Poor. 10% to 0% of Normal Economic Life expected, with significant distress and wear. Left unattended, additional damage to underlying structures is likely to occur. Further maintenance is unlikely to be cost-effective.

SITE ITEMS

Concrete Work. The concrete work includes the community leadwalks, patios, and curbs at the center island. The overall condition of the concrete work is good. Most leadwalks have been recently replaced and are in very good condition. The concrete patios show some minor cracking but exhibit no trip hazards. We have allowed for partial replacement of the patios on an ongoing basis. The center island curb is damaged in various locations and is in need of repair.

The standards we use for recommending replacement are as follows:

- Trip hazard, ½ inch height difference.
- Severe cracking.
- Severe spalling and scale.
- Uneven riser heights on steps.
- Steps with risers in excess of 8¼ inches.

Because it is highly unlikely that all of the concrete components will fail and require replacement in the period of the study, we have programmed funds for the replacement of these inventories and spread the funds over an extended timeframe to reflect the incremental nature of this work.

Retaining Walls. The Association maintains numerous stone/masonry retaining walls. (Approximately 7000 sq. ft.) The retaining walls remain in good condition.

Retaining walls, in general, are designed to provide slope stabilization and soil retention by means of a structural system. Typically, walls that are three feet high or more require some level of design.

The movement and displacement of any retaining wall is a sign of general settlement or failure. This typically is in the form of leaning and bowing and can involve the entire wall or localized sections of the wall. Typically, these types of movements are gradual and may require the replacement of the wall. The movement of retaining walls located near other buildings or structures may negatively affect the stability of the adjacent structure. These conditions can become extremely costly if not properly identified, monitored, and addressed.

Brick, stone, and concrete block. Brick, stone, concrete block masonry walls can have an extended useful life of 40 years or more, and if stable, may only require periodic repointing and localized repair. Repoint is the process of raking out defective masonry joints and tooling new mortar into the joints. Properly mortared and tooled joints will repel the weather and keep water from penetrating the wall. Siloxane or other breathable sealants should be considered to provide additional protection to the wall from water penetration. This study assumes that repointing will be performed incrementally as needed to maintain the life of the wall.

Entry Monument and Signage. The Association maintains a brick masonry entry monument with a carved wood sign. The carved wood sign is in good condition. We noted numerous open/deteriorated brick mortar joints in the masonry wall.

We recommend repointing and replacement of defective areas of the masonry as needed. The Association may want to consider applying a coating of Siloxane or other appropriate breathable sealants to mitigate water penetration and further degradation of the masonry work.

Surface Water Control and Dry Detention Pond. Dry ponds also called “detention ponds or detention basins,” are designed to temporarily intercept and impound a designed volume of stormwater runoff water for gradual release to the receiving stream or subsequent stormwater system. Dry ponds are typically on-line, end-of-pipe components of a designed stormwater management system. Dry ponds are designed to empty between runoff events and mainly provide

runoff rate control as opposed to water quality control. Dry ponds can provide limited settling of particulate matter, but a large portion of these materials can be re-suspended during subsequent runoff events. Therefore, dry ponds are primarily installed to reduce the peak discharge of stormwater into receiving streams thereby limiting downstream flooding and may provide some degree of channel protection. The Association maintains two dry ponds or "BMP" areas. We found these to be in good condition. Other aspects of the community surface water control were also in good condition.

Typical Maintenance Activities for Dry Ponds

Activity	Schedule
• Note erosion of pond banks or bottom	Semi-Annual Inspection
• Inspect for damage to the embankment • Monitor for sediment accumulation in the facility and forebay • Examine to ensure that inlet and outlet devices are free of debris and operational	Annual Inspection
• Repair undercut or eroded areas • Mow side slopes • Pesticide/ Nutrient management • Litter/ Debris Removal	Standard Maintenance
• Seed or sod to restore dead or damaged ground cover, as needed	Annual Maintenance
• Monitor sediment accumulations, and remove sediment when the pond volume has been reduced by 25%	25 to 50-year Maintenance

Regular maintenance of a stormwater pond involves the upkeep of the pond and its immediate surroundings, including periodic removal of trash and debris. Perhaps most important, aquatic and other plant growth should be monitored annually in the spring to late summer. Inspections should include an assessment of aquatic and other weeds, the effectiveness of weed management, and the integrity of the structure of the pond. In addition to these annual inspections, ponds should be inspected after major storms for side slope erosion and outfall structure damage, with repairs made as soon as possible. The table above outlines the recommended maintenance practices.

We have provided funds for the minor dredging of the dry detention ponds and clearing of the swales, creek areas, and drainage lines. Because of the significance of the cost of this work in establishing the correct reserve contribution, it is recommended that the Association undertake studies to refine the information and assumptions made in this study and replace those with more specific information relevant to the conditions at this property.

Please note that the periodic removal of overgrown vegetation from the pond is considered to be a maintenance activity and is therefore not included in the Reserve Analysis.

EXTERIOR ITEMS

Asphalt Shingle Roofing. The asphalt shingle roofs were replaced in 2015 and are in good condition. We have estimated the remaining useful life of the roofs based on the conditions seen at the site as well as the age of the roofs. The small sections of metal roofing are also in good condition.

Gutters and Downspouts. The homes have aluminum gutters and downspouts. The gutters and downspouts are in good condition with the exception of some damaged downspouts from mowing machine contact.

A gutter and downspout system will remove rainwater from the area of the building's roof, siding, and foundation, protect the exterior surfaces from water damage. Gutters should run the full length of all drip edges of the building's roof. Even with full gutters, it is important to inspect the function of the gutters during heavy rain to identify any deficiencies. It may be necessary to periodically adjust the slope of sections, repair connections, replace hangers, and install shrouds to the

gutter system. Downspouts should be securely attached to the side of the structure. Any broken straps should be replaced. The area of the outlet should be inspected to promote run-off in the desired direction. Long straight runs should have an elbow at the bottom. Splash blocks should be installed to fray the water out-letting from the downspout.

It is recommended that all gutters be cleaned at least twice each year. If there are a large number of trees located close to a building, consider installing a gutter debris shield that will let water into the gutters but will filter out leaves, twigs, and other debris.

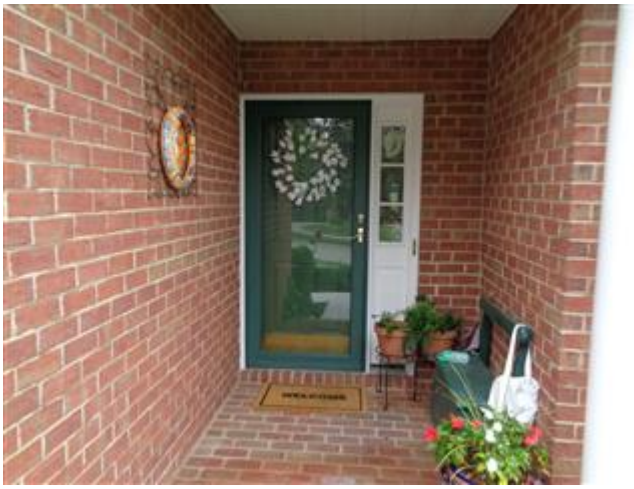
Siding and Trim. The exterior of the single-family homes are clad in vinyl and brick masonry siding. The trim materials include a vinyl soffit and aluminum wrapped fascias and rakes. The siding and trim materials are in generally good condition. The defects noted were some damaged vinyl siding. This was noted on units 5850, 5846, 5834, 5830, 5826, 5814, and 5808 and is pictured below. Per BOD's request, we have reduced the phases of vinyl siding to one in this report in order to achieve uniformity and economy of scale.

Vinyl/Aluminum Siding and Trim can have an extended useful life if not damaged by impact, heat, or other physical reasons. However, the coatings and finishes typically have a useful life and over time begin to weather, chalk, and show their age. For these reasons, we have modeled for the replacement of the siding and trim every 25 years.

Masonry. Brick masonry is used as one of the main exterior claddings on the homes and is in very good condition. As masonry weathers, the mortar joints will become damaged by water penetration. As additional water gains access to the joints, repeated freeze-thaw cycles gradually increase the damage to the mortar joints. If allowed to progress, even the masonry units such as brick can have their surfaces affected and masonry units can become loose.

In general, masonry is considered a long-life item and is therefore excluded from reserve funding. However, because weather and other conditions result in the slow deterioration of the mortar in masonry joints, we have included funding in this study for repointing. Repointing is the process of raking and cutting out damaged sections of mortar and replacing them with new mortar.

Periodic repointing and local replacement of damaged masonry units will limit the damage done by moisture penetration. For this study, we assume that 10% of the masonry will require repointing every 10 years after approximately 30 years.



Foundation Flashing. The homes have metal flashing that covers much of the masonry foundation areas. This exists between the bottom of the vinyl siding and the ground around many homes. We found much of the metal flashing has deteriorated and is in need of replacement. We have added this item to the 2022 study and included funding to replace the metal flashing in the near term. Other options would be to remove the metal flashing and parge coat or paint the foundation in these areas. *(08/04/2021 revision comment: Per BOD request we are including here the estimated cost to parge coat or paint the foundations. Parge coating should cost approximately $4.00 per sq. ft. or $48,000 and will have an average life span of 30 years. Painting the foundation should cost approximately 1.50 per sq. ft. or $18,000 and will have a life span similar to most exterior paint of 5 to 10 years.)*

Wood Decks and Porches. The wooden decks and porches of the community are maintained by the Association. The wooden structures, decking, and railings are in good condition. Because the decking and railings on individual decks will age at varying rates depending on exposure, we have included them for replacement in phases and spread them out over time. For safety, the structures have been set for a 30 year life and should all be inspected at that time. If the condition warrants, we will update the study to extend the life of those structures determined to remain in sound structural condition.

We recommend for the Association implement an annual inspection program. We also recommend power washing and the application of a wood sealer with UV protection every two to three years. Installation of carpet or other water trapping coverings should be prohibited, and potted plants should be placed on raised feet to allow for proper air circulation and drying of wooden components. When installing new decking, the installation of a self-healing flashing membrane is recommended along the top and ends of all wooden horizontal structural members. Synthetic decking and railing systems should also be considered. Please note that your State or local jurisdiction may have specific requirements for deck and balcony inspections, such as the recently enacted Maryland HB 947 (Jonathan's Law). This level of inspection is beyond the scope of work for this Reserve Study.

Exterior Lighting. The Association is responsible for maintaining the exterior lighting on the homes. We found the lighting to be in good condition. The front wall mounted light fixtures were replaced in 2019. The front stoop ceiling lights and the rear wall-mounted lights appear to be in good condition at this time. The lighting was not on at the time of our site visit.

Non-Capital Components. At the direction of the Association, we have included in the study a separate inventory of non-capital components to be used for budgeting purposes. These components include landscaping (specimen tree replacement), site grading (erosion control repairs), exterior painting, and exterior power-washing. In this 2022 update, we have added per BOD request, deck pressure washing and sealing as well as brick front stoop pressure washing and sealing.

This Condition Assessment is based upon our visual survey of the property. The sole purpose of the visual survey was an evaluation of the common and limited common elements of the property to ascertain their remaining useful life and replacement cost. Our evaluation assumed that all components met building code requirements in force at the time of construction. Our visual survey was conducted with care by experienced persons, but no warranty or guarantee is expressed or implied.

End of Condition Assessment

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EXECUTIVE SUMMARY

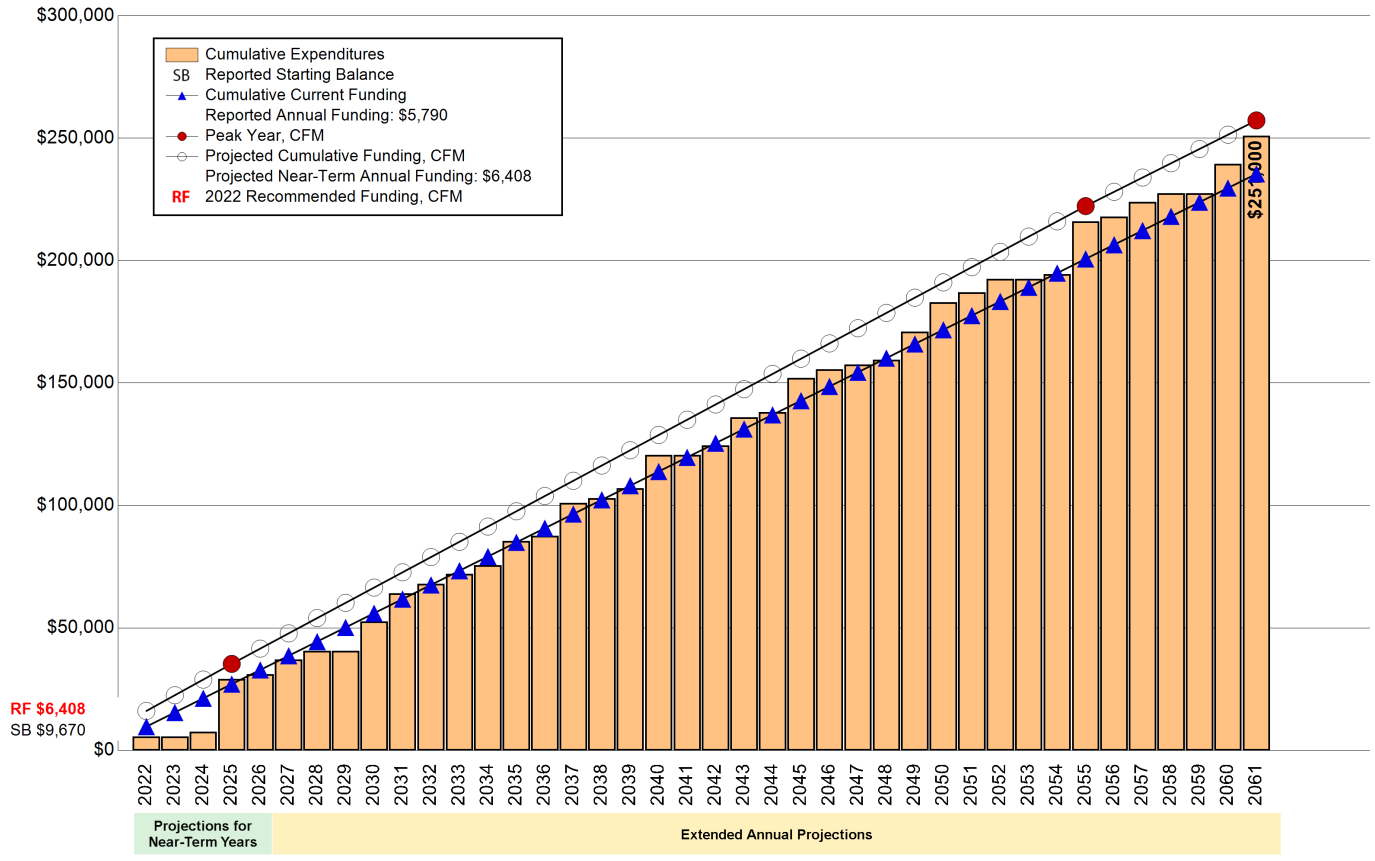
The Non-Capital Operating Reserve Replacement Reserve Analysis uses the Cash Flow Method (CFM) to calculate Replacement Reserve funding for the periodic replacement of the 6 Projected Replacements identified in the Replacement Reserve Inventory.

$6,408 **RECOMMENDED REPLACEMENT RESERVE FUNDING FOR THE STUDY YEAR, 2022**
$17.23 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 A1.5.

Non-Capital Operating Reserve reports a Starting Balance of $9,670 and Annual Funding totaling $5,790. The reported Current Annual Funding of $5,790 is inadequate to fund projected replacements starting in 2025. See Page A1.3 for a more detailed evaluation.

#1 - Cumulative Replacement Reserve Funding and Expenditures Graph



REPLACEMENT RESERVE ANALYSIS - GENERAL INFORMATION

The Non-Capital Operating Reserve Replacement Reserve Analysis calculations of recommended funding of Replacement Reserves by the Cash Flow Method (CFM) and the evaluation of the Current Funding are based upon the same Study Year, Study Period, Beginning Balance, Replacement Reserve Inventory and Level of Service.

2022 **STUDY YEAR**

The Association reports that their accounting year begins on January 1, and the Study Year, the first year evaluated by the Replacement Reserve Analysis, begins on January 1, 2022.

40 Years **STUDY PERIOD**

The Replacement Reserve Analysis evaluates the funding of Replacement Reserves over a 40-year Study Period

$9,670 **STARTING BALANCE**

The Association reports Replacement Reserves on Deposit totaling $9,670 at the start of the Study Year.

Level Two **LEVEL OF SERVICE**

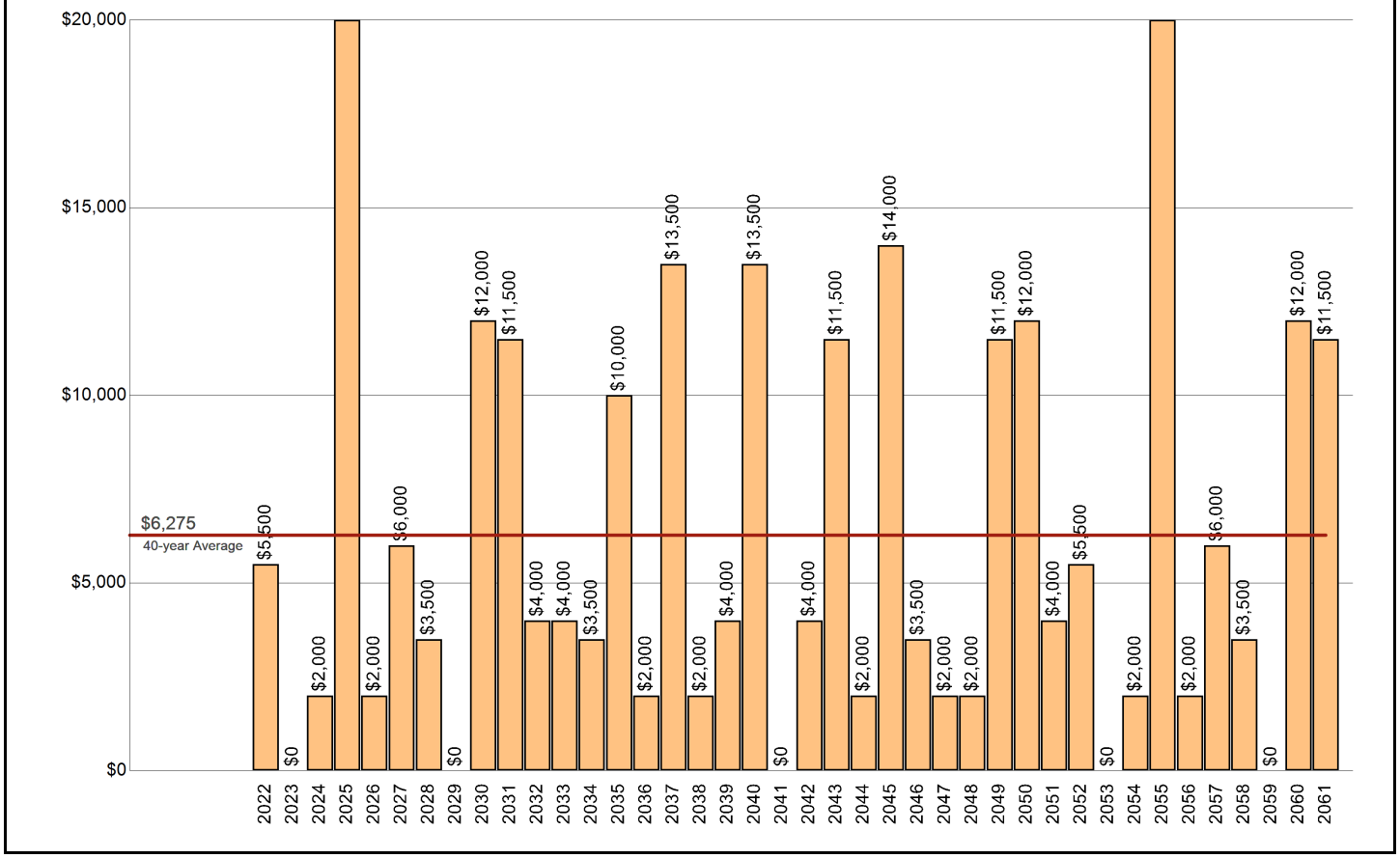
The Replacement Reserve Inventory has been developed in compliance with the National Reserve Study Standards for a Level Two Study, as defined by the Community Associations Institute (CAI).

$251,000 **REPLACEMENT RESERVE INVENTORY - PROJECTED REPLACEMENTS**

The Non-Capital Operating Reserve Replacement Reserve Inventory identifies 6 items that will require periodic replacement, that are to be funded from Replacement Reserves. We estimate the cost of these replacements will be $251,000 over the 40-year Study Period. The Projected Replacements are divided into 2 major categories starting on Page B1.3. Pages B1.1-B1.2 provide detailed information on the Replacement Reserve Inventory.

#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 $6,275. Section C1 provides a year by year Calendar of these expenditures.



UPDATING

UPDATING OF THE FUNDING PLAN

The Association has a responsibility to review the Funding Plan annually. The review should include a comparison and evaluation of actual reserve funding with recommended levels shown on Page A1.4 and A1.5. The Projected Replacements listed on Page C1.2 should be compared with any replacements accomplished and funded from Replacement Reserves. Discrepancies should be evaluated and if necessary, the Reserve Study should be updated or a new study commissioned. We recommend annual increases in replacement reserve funding to account for the impact of inflation. Inflation Adjusted Funding is discussed on Page A1.5.

UPDATING OF THE REPLACEMENT RESERVE STUDY

At a minimum, the Replacement Reserve Study should be professionally updated every three to five years or after completion of a major replacement project. Updating should also be considered if during the annual review of the Funding Plan, discrepancies are noted between projected and actual reserve funding or replacement costs. Updating may also be necessary if there is a meaningful discrepancy between the actual inflation rate and the inflation rate used for the Inflation Adjusted Funding of Replacement Reserves on Page A1.5.

ANNUAL EXPENDITURES AND CURRENT FUNDING

The annual expenditures that comprise the $251,000 of Projected Expenditures over the 40-year Study Period and the impact of the Association continuing to fund Replacement Reserves at the current level are detailed in Table 3.

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

Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Starting Balance	$9,670									
Projected Replacements	($5,500)		($2,000)	($21,500)	($2,000)	($6,000)	($3,500)		($12,000)	($11,500)
Annual Deposit	$5,790	$5,790	$5,790	$5,790	$5,790	$5,790	$5,790	$5,790	$5,790	$5,790
End of Year Balance	$9,960	$15,750	$19,540	$3,830	$7,620	$7,410	$9,700	$15,490	$9,280	$3,570
Cumulative Expenditures	($5,500)	($5,500)	($7,500)	($29,000)	($31,000)	($37,000)	($40,500)	($40,500)	($52,500)	($64,000)
Cumulative Receipts	$15,460	$21,250	$27,040	$32,830	$38,620	$44,410	$50,200	$55,990	$61,780	$67,570
Year	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**
Projected Replacements	($4,000)	($4,000)	($3,500)	($10,000)	($2,000)	($13,500)	($2,000)	($4,000)	($13,500)	
Annual Deposit	$5,790	$5,790	$5,790	$5,790	$5,790	$5,790	$5,790	$5,790	$5,790	$5,790
End of Year Balance	$5,360	$7,150	$9,440	$5,230	$9,020	$1,310	$5,100	$6,890	($820)	$4,970
Cumulative Expenditures	($68,000)	($72,000)	($75,500)	($85,500)	($87,500)	($101,000)	($103,000)	($107,000)	($120,500)	($120,500)
Cumulative Receipts	$73,360	$79,150	$84,940	$90,730	$96,520	$102,310	$108,100	$113,890	$119,680	$125,470
Year	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	**2051**
Projected Replacements	($4,000)	($11,500)	($2,000)	($14,000)	($3,500)	($2,000)	($2,000)	($11,500)	($12,000)	($4,000)
Annual Deposit	$5,790	$5,790	$5,790	$5,790	$5,790	$5,790	$5,790	$5,790	$5,790	$5,790
End of Year Balance	$6,760	$1,050	$4,840	($3,370)	($1,080)	$2,710	$6,500	$790	($5,420)	($3,630)
Cumulative Expenditures	($124,500)	($136,000)	($138,000)	($152,000)	($155,500)	($157,500)	($159,500)	($171,000)	($183,000)	($187,000)
Cumulative Receipts	$131,260	$137,050	$142,840	$148,630	$154,420	$160,210	$166,000	$171,790	$177,580	$183,370
Year	**2052**	**2053**	**2054**	**2055**	**2056**	**2057**	**2058**	**2059**	**2060**	**2061**
Projected Replacements	($5,500)		($2,000)	($21,500)	($2,000)	($6,000)	($3,500)		($12,000)	($11,500)
Annual Deposit	$5,790	$5,790	$5,790	$5,790	$5,790	$5,790	$5,790	$5,790	$5,790	$5,790
End of Year Balance	($3,340)	$2,450	$6,240	($9,470)	($5,680)	($5,890)	($3,600)	$2,190	($4,020)	($9,730)
Cumulative Expenditures	($192,500)	($192,500)	($194,500)	($216,000)	($218,000)	($224,000)	($227,500)	($227,500)	($239,500)	($251,000)
Cumulative Receipts	$189,160	$194,950	$200,740	$206,530	$212,320	$218,110	$223,900	$229,690	$235,480	$241,270

EVALUATION OF CURRENT FUNDING

The evaluation of Current Funding (Starting Balance of $9,670 & annual funding of $5,790) is done in today's dollars with no adjustments for inflation or interest earned on Replacement Reserves. The evaluation assumes Replacement Reserves will only be used for the 6 Projected Replacements identified in the Replacement Reserve Inventory and that the Association will continue Annual Funding of $5,790 throughout the 40-year Study Period.

Annual Funding of $5,790 is approximately 90 percent of the $6,408 recommended Annual Funding calculated by the Cash Flow Method for 2022, the Study Year.

The progression and effect of continued Current Annual Funding coupled with this studies Projected Replacements over the Study Period are evaluated in Table 3 above. Maintaining Current Annual Funding may result in inadequate End of Year Balances, noted in red.

See the Executive Summary for the Current Funding Statement.

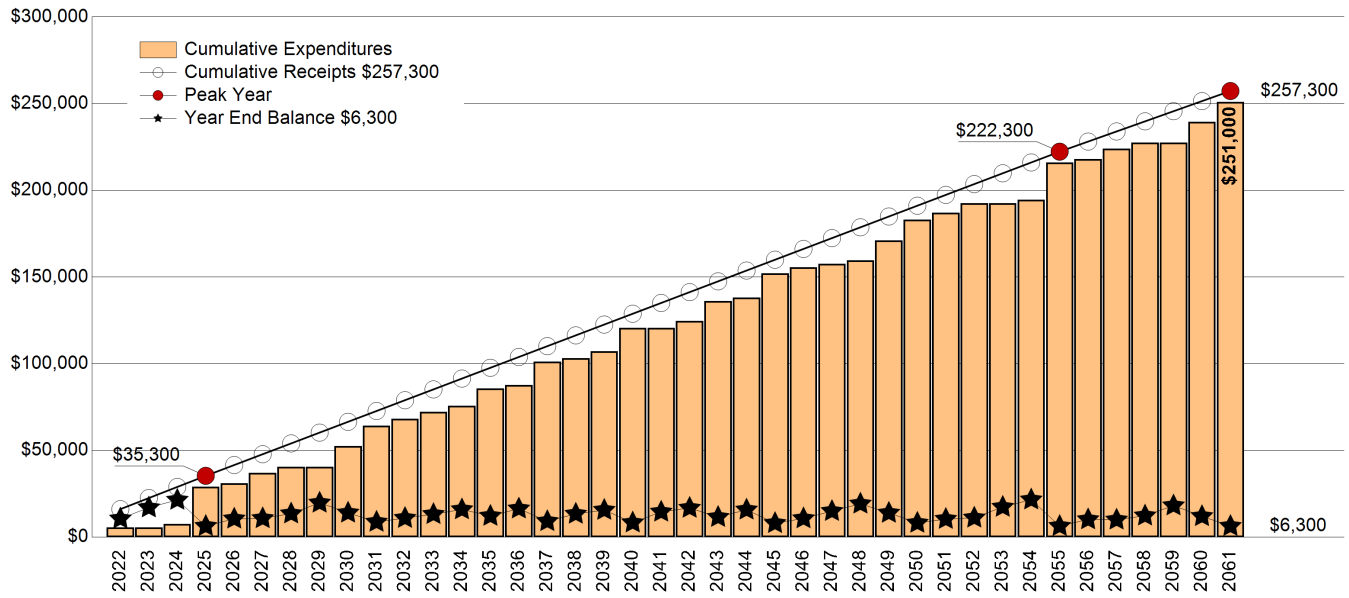
CASH FLOW METHOD FUNDING

$6,408 **RECOMMENDED REPLACEMENT RESERVE FUNDING FOR 2022**
$17.23 Per unit (average), minimum monthly funding of Replacement Reserves

Recommended Replacement Reserve Funding has been calculated using the Cash Flow Method (also called the Straight Line or Threshold Method). This method calculates a constant annual funding between peaks in cumulative expenditures, while maintaining a Minimum Balance (threshold) in the Peak Years.

- Peak Years. The First Peak Year occurs in 2025 with Replacement Reserves on Deposit dropping to the Minimum Balance after the completion of $29,000 of replacements from 2022 to 2025. Recommended funding is projected to decline from $6,408 in 2025 to $6,233 in 2026. Peak Years are identified in Chart 4 and Table 5.
- Minimum Balance. The calculations assume a Minimum Balance of $6,300 will always be held in reserve, which is calculated by rounding the 12-month 40-year average annual expenditure of $6,275 as shown on Graph #2.
- Cash Flow Method Study Period. Cash Flow Method calculates funding for $251,000 of expenditures over the 40-year Study Period. It does not include funding for any projects beyond 2061 and in 2061, the end of year balance will always be the Minimum Balance.

#4 - Cash Flow Method - Graph of Cumulative Receipts and Expenditures - Years 1 through 40



#5 - Cash Flow Method - Table of Receipts & Expenditures - Years 1 through 40

Year	2022	2023	2024	1st Peak - 2025	2026	2027	2028	2029	2030	2031
Starting Balance	$9,670									
Projected Replacements	($5,500)		($2,000)	($21,500)	($2,000)	($6,000)	($3,500)		($12,000)	($11,500)
Annual Deposit	$6,408	$6,408	$6,408	$6,408	$6,233	$6,233	$6,233	$6,233	$6,233	$6,233
End of Year Balance	$10,578	$16,985	$21,393	$6,300	$10,533	$10,767	$13,500	$19,733	$13,967	$8,700
Cumulative Expenditures	($5,500)	($5,500)	($7,500)	($29,000)	($31,000)	($37,000)	($40,500)	($40,500)	($52,500)	($64,000)
Cumulative Receipts	$16,078	$22,485	$28,893	$35,300	$41,533	$47,767	$54,000	$60,233	$66,467	$72,700

Year	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
Projected Replacements	($4,000)	($4,000)	($3,500)	($10,000)	($2,000)	($13,500)	($2,000)	($4,000)	($13,500)	
Annual Deposit	$6,233	$6,233	$6,233	$6,233	$6,233	$6,233	$6,233	$6,233	$6,233	$6,233
End of Year Balance	$10,933	$13,167	$15,900	$12,133	$16,367	$9,100	$13,333	$15,567	$8,300	$14,533
Cumulative Expenditures	($68,000)	($72,000)	($75,500)	($85,500)	($87,500)	($101,000)	($103,000)	($107,000)	($120,500)	($120,500)
Cumulative Receipts	$78,933	$85,167	$91,400	$97,633	$103,867	$110,100	$116,333	$122,567	$128,800	$135,033

Year	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051
Projected Replacements	($4,000)	($11,500)	($2,000)	($14,000)	($3,500)	($2,000)	($2,000)	($11,500)	($12,000)	($4,000)
Annual Deposit	$6,233	$6,233	$6,233	$6,233	$6,233	$6,233	$6,233	$6,233	$6,233	$6,233
End of Year Balance	$16,767	$11,500	$15,733	$7,967	$10,700	$14,933	$19,167	$13,900	$8,133	$10,367
Cumulative Expenditures	($124,500)	($136,000)	($138,000)	($152,000)	($155,500)	($157,500)	($159,500)	($171,000)	($183,000)	($187,000)
Cumulative Receipts	$141,267	$147,500	$153,733	$159,967	$166,200	$172,433	$178,667	$184,900	$191,133	$197,367

Year	2052	2053	2054	2nd Peak - 2055	2056	2057	2058	2059	2060	3rd Peak - 2061
Projected Replacements	($5,500)		($2,000)	($21,500)	($2,000)	($6,000)	($3,500)		($12,000)	($11,500)
Annual Deposit	$6,233	$6,233	$6,233	$6,233	$5,833	$5,833	$5,833	$5,833	$5,833	$5,833
End of Year Balance	$11,100	$17,333	$21,567	$6,300	$10,133	$9,967	$12,300	$18,133	$11,967	$6,300
Cumulative Expenditures	($192,500)	($192,500)	($194,500)	($216,000)	($218,000)	($224,000)	($227,500)	($227,500)	($239,500)	($251,000)
Cumulative Receipts	$203,600	$209,833	$216,067	$222,300	$228,133	$233,967	$239,800	$245,633	$251,467	$257,300

INFLATION ADJUSTED FUNDING

The Cash Flow Method calculations on Page A4 have been done in today's dollars with no adjustment for inflation. At Miller+Dodson, we believe that long-term inflation forecasting is effective at demonstrating the power of compounding, not at calculating appropriate funding levels for Replacement Reserves. We have developed this proprietary model to estimate the short-term impact of inflation on Replacement Reserve funding.

$6,408 **2022 - CASH FLOW METHOD RECOMMENDED FUNDING**

The 2022 Study Year calculations have been made using current replacement costs (see Page B1.2), modified by the Analyst for any project specific conditions.

$6,555 **2023 - INFLATION ADJUSTED FUNDING**

A new analysis calculates the 2023 funding based on three assumptions:

- Replacement Reserves on Deposit totaling $10,578 on January 1, 2023.
- All 2022 Projected Replacements listed on Page C1.2 accomplished at a cost to Replacement Reserves less than $5,500.
- Construction Cost Inflation of 2.30 percent in 2022.

The $6,555 inflation adjusted funding in 2023 is a 2.30 percent increase over the non-inflation adjusted funding of $6,408.

$6,706 **2024 - INFLATION ADJUSTED FUNDING**

A new analysis calculates the 2024 funding based on three assumptions:

- Replacement Reserves on Deposit totaling $16,049 on January 1, 2024.
- No Expenditures from Replacement Reserves in 2023.
- Construction Cost Inflation of 2.30 percent in 2023.

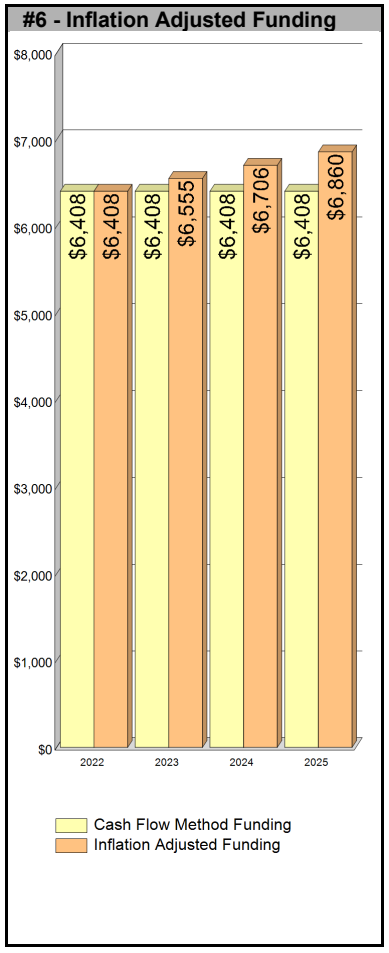
The $6,706 inflation adjusted funding in 2024 is a 4.65 percent increase over the non-inflation adjusted funding of $6,408.

$6,860 **2025 - INFLATION ADJUSTED FUNDING**

A new analysis calculates the 2025 funding based on three assumptions:

- Replacement Reserves on Deposit totaling $19,497 on January 1, 2025.
- No Expenditures from Replacement Reserves in 2024.
- Construction Cost Inflation of 2.30 percent in 2024.

The $6,860 inflation adjusted funding in 2025 is a 7.05 percent increase over the non-inflation adjusted funding of $6,408.



Year Five and Beyond

The inflation-adjusted funding calculations outlined above are not intended to be a substitute for periodic evaluation of common elements by an experienced Reserve Analyst. Industry Standards, lender requirements, and many state and local statutes require a Replacement Reserve Study to be professionally updated every 3 to 5 years.

Inflation Adjustment

Prior to approving a budget based upon the 2023, 2024 and 2025 inflation-adjusted funding calculations above, the 2.30 percent base rate of inflation used in our calculations should be compared to rates published by the Bureau of Labor Statistics. If there is a significant discrepancy (over 1 percentage point), contact Miller+Dodson Associates prior to using the Inflation Adjusted Funding.

Interest on Reserves

The recommended funding calculations do not account for interest earned on Replacement Reserves. In 2022, based on a 1.00 percent interest rate, we estimate the Association may earn $101 on an average balance of $10,124, $133 on an average balance of $13,313 in 2023, and $178 on $17,773 in 2024. The Association may elect to attribute 100 percent of the earned interest to Reserves, resulting in a reduction in the 2022 funding from $6,408 to $6,306 (a 1.57 percent reduction), $6,555 to $6,422 in 2023 (a 2.03 percent reduction), and $6,706 to $6,528 in 2024 (a 2.65 percent reduction).

REPLACEMENT RESERVE STUDY - SUPPLEMENTAL COMMENTS

- The Cash Flow Method calculates the minimum annual funding necessary to prevent Replacement Reserves from dropping below the Minimum Balance, as defined on Page A4. Failure to fund at least the recommended levels may result in funding not being available for the Projected Replacements listed in the Replacement Reserve Inventory.
- The accuracy of the Replacement Reserve Analysis is dependent upon expenditures from Replacement Reserves being made ONLY for the 6 Projected Replacements specifically listed in the Replacement Reserve Inventory. The inclusion/exclusion of items from the Replacement Reserve Inventory is discussed on Page B1.1.

REPLACEMENT RESERVE INVENTORY
GENERAL INFORMATION

Non-Capital Operating Reserve - Replacement Reserve Inventory identifies 6 Projected Replacements.

- PROJECTED REPLACEMENTS. 6 of the items are Projected Replacements and the periodic replacements of these items are scheduled for funding from Replacement Reserves. The Projected Replacements have an estimated one-time replacement cost of $29,500. Cumulative Replacements totaling $251,000 are scheduled in the Replacement Reserve Inventory over the 40-year Study Period.

  Projected Replacements are the replacement of commonly-owned physical assets that require periodic replacement and whose replacement is to be funded from Replacement Reserves.

- EXCLUDED ITEMS. None of the items included in the Replacement Reserve Inventory are 'Excluded Items'. Multiple categories of items are typically excluded from funding by Replacement Reserves, including but not limited to:

  Tax Code. The United States Tax Code grants very favorable tax status to Replacement Reserves, conditioned on expenditures being made within certain guidelines. These guidelines typically exclude maintenance activities, minor repairs, and capital improvements.

  Value. Items with a replacement cost of less than $1000 and/or a normal economic life of less than 3 years are typically excluded from funding from Replacement Reserves. This exclusion should reflect the Association policy on the administration of Replacement Reserves. If the Association has selected an alternative level, it will be noted in the Replacement Reserve Inventory - General Comments on Page B1.2.

  Long-lived Items. Items are excluded from the Replacement Reserve Inventory when items are properly maintained and are assumed to have a life equal to the property.

  Unit improvements. Items owned by a single unit and where the items serve a single unit are generally assumed to be the responsibility of that unit, not the Association.

  Other non-common improvements. Items owned by the local government, public and private utility companies, the United States Postal Service, Master Associations, state and local highway authorities, etc., may be installed on property that is owned by the Association. These types of items are generally not the responsibility of the Association and are excluded from the Replacement Reserve Inventory.

- CATEGORIES. The 6 items included in the Non-Capital Operating Reserve Replacement Reserve Inventory are divided into 2 major categories. Each category is printed on a separate page, beginning on page B1.3
- LEVEL OF SERVICE. This Replacement Reserve Inventory has been developed in compliance with the standards established for a Level 2 Update, as defined by the National Reserve Study Standards, established in 1998 by Community Associations Institute, which states:

  This study has been performed as a Level 2 Update with Site Visit/On-Site Review as defined by the Community Associations Institute's, National Reserve Study Standards. As such, the component inventory is based on the study that was performed by. This inventory was adjusted to reflect changes provided by the Community Manager and/or the Board of Directors, or adjustments made based on the site visit and visual assessment performed by the Analyst. The analysis, including fund status and funding plan, is developed from the adjusted inventory.

REPLACEMENT RESERVE INVENTORY - GENERAL INFORMATION (CONT'D)

- INVENTORY DATA. Each of the 6 Projected Replacements listed in the Replacement Reserve Inventory includes the following data:

  Item Number. The Item Number is assigned sequentially and is intended for identification purposes only.

  Item Description. We have identified each item included in the Inventory. Additional information may be included in the Comments section at the bottom of each page of the Inventory.

  Units. We have used standard abbreviations to identify the number of units including SF-square feet, LF-lineal feet, SY-square yard, LS-lump sum, EA-each, and PR-pair. Non-standard abbreviations are noted in the Comments section at the bottom of the page.

  Number of Units. The methods used to develop the quantities are discussed in "Level of Service" above.

  Unit Replacement Cost. We use four sources to develop the unit cost data shown in the Inventory; actual replacement cost data provided by the client, information provided by local contractors and suppliers, industry standard estimating manuals, and a cost database we have developed based upon our detailed interviews with contractors and service providers who are specialists in their respective lines of work.

  Normal Economic Life (Years). The number of years that a new and properly installed item should be expected to remain in service.

  Remaining Economic Life (Years). The estimated number of years before an item will need to be replaced. In "normal" conditions, this could be calculated by subtracting the age of the item from the Normal Economic Life of the item, but only rarely do physical assets age "normally". Some items may have longer or shorter lives depending on many factors such as environment, initial quality of the item, maintenance, etc.

  Total Replacement Cost. This is calculated by multiplying the Unit Replacement Cost by the Number of Units.

- REVIEW OF EXPENDITURES. This Replacement Reserve Study should be reviewed by an accounting professional representing the Association prior to implementation.

- PARTIAL FUNDING. Items may have been included in the Replacement Reserve Inventory at less than 100 percent of their full quantity and/or replacement cost. This is done on items that will never be replaced in their entirety, but which may require periodic replacements over an extended period of time. The assumptions that provide the basis for any partial funding are noted in the Comments section.

- REMAINING ECONOMIC LIFE GREATER THAN 40 YEARS. The calculations do not include funding for initial replacements beyond 40 years. These replacements are included in this Study for tracking and evaluation. They should be included for funding in future Studies when they enter the 40-year window.

SITE ITEMS
PROJECTED REPLACEMENTS

NEL- Normal Economic Life (yrs)
REL- Remaining Economic Life (yrs)

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST ($)	NEL	REL	REPLACEMENT COST ($)
1	Landscaping allowance	ls	1	$2,000.00	2	none	$2,000
2	Site grading allowance	ls	1	$1,500.00	3	none	$1,500
						Replacement Costs - Page Subtotal	$3,500

COMMENTS

EXTERIOR ITEMS
PROJECTED REPLACEMENTS

NEL- Normal Economic Life (yrs)
REL- Remaining Economic Life (yrs)

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST ($)	NEL	REL	REPLACEMENT COST ($)
3	Exterior painting	ls	1	$10,000.00	6	3	$10,000
4	Exterior pressure washing	ls	1	$4,000.00	6	5	$4,000
5	Decks, pressure wash and seal	ls	1	$10,000.00	5	3	$10,000
6	Brick front stoops, pressure wash and seal	ls	1	$2,000.00	5	none	$2,000
						Replacement Costs - Page Subtotal	$26,000

COMMENTS

- Note: Please see Paragraph entitled “TAX CODE” on page C1. Under IRS guidelines painting, pressure washing, and sealing are considered maintenance items and therefore not reservable. We have included them at the Association's request. We recommend that you contact your Association’s tax professional to discuss your inclusion of these items within your Reserve Study.
- Item #3: Exterior painting - 09/21/2021 Changed next paint cycle to 2025 per BOD request.
- Item #5: Decks, pressure wash and seal - Added to 2022 study per BOD instruction.
- Item #6: Brick front stoops, pressure wash and seal - Added to 2022 study per BOD instruction.

PROJECTED ANNUAL REPLACEMENTS
GENERAL INFORMATION

CALENDAR OF ANNUAL REPLACEMENTS. The 6 Projected Replacements in the Non-Capital Operating Reserve Replacement Reserve Inventory whose replacement is scheduled to be funded from Replacement Reserves are broken down on a year-by-year basis, beginning on Page C1.2.

REPLACEMENT RESERVE ANALYSIS AND INVENTORY POLICIES, PROCEDURES, AND ADMINISTRATION

- REVISIONS. Revisions will be made to the Replacement Reserve Analysis and Replacement Reserve Inventory in accordance with the written instructions of the Board of Directors. No additional charge is incurred for the first revision, if requested in writing within three months of the date of the Replacement Reserve Study. It is our policy to provide revisions in electronic (Adobe PDF) format only.
- TAX CODE. The United States Tax Code grants favorable tax status to a common interest development (CID) meeting certain guidelines for their Replacement Reserve. If a CID files their taxes as a 'Corporation' on Form 1120 (IRC Section 277), these guidelines typically require maintenance activities, partial replacements, minor replacements, capital improvements, and one-time only replacements to be excluded from Reserves. A CID cannot co-mingle planning for maintenance activities with capital replacement activities in the Reserves (Revenue Ruling 75-370). Funds for maintenance activities and capital replacements activities must be held in separate accounts. If a CID files taxes as an "Exempt Homeowners Association" using Form 1120H (IRC Section 528), the CID does not have to segregate these activities. However, because the CID may elect to change their method of filing from year to year within the Study Period, we advise using the more restrictive approach. We further recommend that the CID consult with their Accountant and consider creating separate and independent accounts and reserves for large maintenance items, such as painting.
- CONFLICT OF INTEREST. Neither Miller - Dodson Associates nor the Reserve Analyst has any prior or existing relationship with this Association which would represent a real or perceived conflict of interest.
- RELIANCE ON DATA PROVIDED BY THE CLIENT. Information provided by an official representative of the Association regarding financial, physical conditions, quality, or historical issues is deemed reliable.
- INTENT. This Replacement Reserve Study is a reflection of the information provided by the Association and the visual evaluations of the Analyst. It has been prepared for the sole use of the Association and is not for the purpose of performing an audit, quality/forensic analyses, or background checks of historical records.
- PREVIOUS REPLACEMENTS. Information provided to Miller - Dodson Associates regarding prior replacements is considered to be accurate and reliable. Our visual evaluation is not a project audit or quality inspection.
- EXPERIENCE WITH FUTURE REPLACEMENTS. The Calendar of Annual Projected Replacements, lists replacements we have projected to occur over the Study Period, begins on Page C2. Actual experience in replacing the items may differ significantly from the cost estimates and time frames shown because of conditions beyond our control. These differences may be caused by maintenance practices, inflation, variations in pricing and market conditions, future technological developments, regulatory actions, acts of God, and luck. Some items may function normally during our visual evaluation and then fail without notice.
- REVIEW OF THE REPLACEMENT RESERVE STUDY. For this study to be effective, it should be reviewed by the Board of Directors, those responsible for the management of the items included in the Replacement Reserve Inventory, and the accounting professionals employed by the Association.

PROJECTED REPLACEMENTS

Item	2022 - Study Year	$
1	Landscaping allowance	$2,000
2	Site grading allowance	$1,500
6	Brick front stoops, pressure wash and seal	$2,000
Total Scheduled Replacements		$5,500

Item	2023 - YEAR 1	$
No Scheduled Replacements		

Item	2024 - YEAR 2	$
1	Landscaping allowance	$2,000
Total Scheduled Replacements		$2,000

Item	2025 - YEAR 3	$
2	Site grading allowance	$1,500
3	Exterior painting	$10,000
5	Decks, pressure wash and seal	$10,000
Total Scheduled Replacements		$21,500

Item	2026 - YEAR 4	$
1	Landscaping allowance	$2,000
Total Scheduled Replacements		$2,000

Item	2027 - YEAR 5	$
4	Exterior pressure washing	$4,000
6	Brick front stoops, pressure wash and seal	$2,000
Total Scheduled Replacements		$6,000

Item	2028 - YEAR 6	$
1	Landscaping allowance	$2,000
2	Site grading allowance	$1,500
Total Scheduled Replacements		$3,500

Item	2029 - YEAR 7	$
No Scheduled Replacements		

Item	2030 - YEAR 8	$
1	Landscaping allowance	$2,000
5	Decks, pressure wash and seal	$10,000
Total Scheduled Replacements		$12,000

Item	2031 - YEAR 9	$
2	Site grading allowance	$1,500
3	Exterior painting	$10,000
Total Scheduled Replacements		$11,500

PROJECTED REPLACEMENTS

Item	2032 - YEAR 10	$
1	Landscaping allowance	$2,000
6	Brick front stoops, pressure wash and seal	$2,000
Total Scheduled Replacements		$4,000

Item	2033 - YEAR 11	$
4	Exterior pressure washing	$4,000
Total Scheduled Replacements		$4,000

Item	2034 - YEAR 12	$
1	Landscaping allowance	$2,000
2	Site grading allowance	$1,500
Total Scheduled Replacements		$3,500

Item	2035 - YEAR 13	$
5	Decks, pressure wash and seal	$10,000
Total Scheduled Replacements		$10,000

Item	2036 - YEAR 14	$
1	Landscaping allowance	$2,000
Total Scheduled Replacements		$2,000

Item	2037 - YEAR 15	$
2	Site grading allowance	$1,500
3	Exterior painting	$10,000
6	Brick front stoops, pressure wash and seal	$2,000
Total Scheduled Replacements		$13,500

Item	2038 - YEAR 16	$
1	Landscaping allowance	$2,000
Total Scheduled Replacements		$2,000

Item	2039 - YEAR 17	$
4	Exterior pressure washing	$4,000
Total Scheduled Replacements		$4,000

Item	2040 - YEAR 18	$
1	Landscaping allowance	$2,000
2	Site grading allowance	$1,500
5	Decks, pressure wash and seal	$10,000
Total Scheduled Replacements		$13,500

Item	2041 - YEAR 19	$
No Scheduled Replacements		

PROJECTED REPLACEMENTS

Item	2042 - YEAR 20	$
1	Landscaping allowance	$2,000
6	Brick front stoops, pressure wash and seal	$2,000
Total Scheduled Replacements		$4,000

Item	2043 - YEAR 21	$
2	Site grading allowance	$1,500
3	Exterior painting	$10,000
Total Scheduled Replacements		$11,500

Item	2044 - YEAR 22	$
1	Landscaping allowance	$2,000
Total Scheduled Replacements		$2,000

Item	2045 - YEAR 23	$
4	Exterior pressure washing	$4,000
5	Decks, pressure wash and seal	$10,000
Total Scheduled Replacements		$14,000

Item	2046 - YEAR 24	$
1	Landscaping allowance	$2,000
2	Site grading allowance	$1,500
Total Scheduled Replacements		$3,500

Item	2047 - YEAR 25	$
6	Brick front stoops, pressure wash and seal	$2,000
Total Scheduled Replacements		$2,000

Item	2048 - YEAR 26	$
1	Landscaping allowance	$2,000
Total Scheduled Replacements		$2,000

Item	2049 - YEAR 27	$
2	Site grading allowance	$1,500
3	Exterior painting	$10,000
Total Scheduled Replacements		$11,500

Item	2050 - YEAR 28	$
1	Landscaping allowance	$2,000
5	Decks, pressure wash and seal	$10,000
Total Scheduled Replacements		$12,000

Item	2051 - YEAR 29	$
4	Exterior pressure washing	$4,000
Total Scheduled Replacements		$4,000

PROJECTED REPLACEMENTS

Item	2052 - YEAR 30	$
1	Landscaping allowance	$2,000
2	Site grading allowance	$1,500
6	Brick front stoops, pressure wash and seal	$2,000
	Total Scheduled Replacements	$5,500

Item	2053 - YEAR 31	$
	No Scheduled Replacements	

Item	2054 - YEAR 32	$
1	Landscaping allowance	$2,000
	Total Scheduled Replacements	$2,000

Item	2055 - YEAR 33	$
2	Site grading allowance	$1,500
3	Exterior painting	$10,000
5	Decks, pressure wash and seal	$10,000
	Total Scheduled Replacements	$21,500

Item	2056 - YEAR 34	$
1	Landscaping allowance	$2,000
	Total Scheduled Replacements	$2,000

Item	2057 - YEAR 35	$
4	Exterior pressure washing	$4,000
6	Brick front stoops, pressure wash and seal	$2,000
	Total Scheduled Replacements	$6,000

Item	2058 - YEAR 36	$
1	Landscaping allowance	$2,000
2	Site grading allowance	$1,500
	Total Scheduled Replacements	$3,500

Item	2059 - YEAR 37	$
	No Scheduled Replacements	

Item	2060 - YEAR 38	$
1	Landscaping allowance	$2,000
5	Decks, pressure wash and seal	$10,000
	Total Scheduled Replacements	$12,000

Item	2061 - YEAR 39	$
2	Site grading allowance	$1,500
3	Exterior painting	$10,000
	Total Scheduled Replacements	$11,500

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1. COMMON INTEREST DEVELOPMENTS - AN OVERVIEW

Over the past 40 years, the responsibility for community facilities and infrastructure around many of our homes has shifted from the local government to Community Associations. Thirty years ago, a typical new town house abutted a public street on the front and a public alley on the rear. Open space was provided by a nearby public park and recreational facilities were purchased ala carte from privately owned country clubs, swim clubs, tennis clubs, and gymnasiums. Today, 60% of all new residential construction, i.e., townhouses, single-family homes, condominiums, and cooperatives, is in Common Interest Developments (CID). In a CID, a homeowner is bound to a Community Association that owns, maintains, and is responsible for periodic replacements of various components that may include the roads, curbs, sidewalks, playgrounds, streetlights, recreational facilities, and other community facilities and infrastructure.

The growth of Community Associations has been explosive. In 1965, there were only 500 Community Associations in the United States. According to the 1990 U.S. Census, there were 130,000 Community Associations. The Community Associations Institute (CAI), a national trade association, estimates in 2018 that there were more than 347,000 communities with over 73.5 million residents.

The shift of responsibility for billions of dollars of community facilities and infrastructure from the local government and private sector to Community Associations has generated new and unanticipated problems. Although Community Associations have succeeded in solving many short-term problems, many Associations have failed to properly plan for the tremendous expenses of replacing community facilities and infrastructure components. When inadequate replacement reserve funding results in less than timely replacements of failing components, home owners are exposed to the burden of special assessments, major increases in Association fees, and a decline in property values.

2. REPLACEMENT RESERVE STUDY

The purpose of a Replacement Reserve Study is to provide the Association with an inventory of the common community facilities and infrastructure components that require periodic replacement, a general view of the condition of these components, and an effective financial plan to fund projected periodic replacements. The Replacement Reserve Study consists of the following:

Replacement Reserve Study Introduction. The introduction provides a description of the property, reviews the intent of the Replacement Reserve Study, and lists documents and site evaluations upon which the Replacement Reserve Study is based.

Section A Replacement Reserve Analysis. Many components owned by the Association have a limited life and require periodic replacement. Therefore, it is essential the Association have a financial plan that provides funding for the timely replacement of these components in order to protect the safety, appearance, and value of the community. In conformance with American Institute of Certified Public Accountant guidelines, a Replacement Reserve Analysis evaluates the current funding of Replacement Reserves as reported by the Association and recommends annual funding of Replacement Reserves by two generally accepted accounting methods, the Cash Flow Method and the Component Method. Miller+Dodson provides a replacement reserve recommendation based on the Cash Flow Method in Section A, and the Component Method in the Appendix of the report.

Section B Replacement Reserve Inventory. The Replacement Reserve Inventory lists the commonly owned components within the community that require periodic replacement using funding from Replacement Reserves.

The Replacement Reserve Inventory also provides information about components excluded from the Replacement Reserve Inventory whose replacement is not scheduled for funding from Replacement Reserves. Replacement Reserve Inventory includes estimates of the normal economic life and the remaining economic life for those components whose replacement is scheduled for funding from Replacement Reserves.

Section C Projected Annual Replacements. The Calendar of Projected Annual Replacements provides a year-by-year listing of the Projected Replacements based on the data in the Replacement Reserve Inventory.

Section D Condition Assessment. Several of the items listed in the Replacement Reserve Inventory are discussed in more detail. The Condition Assessment includes a narrative and photographs that document conditions at the property observed during our visual evaluation.

The Appendix is provided as an attachment to the Replacement Reserve Study. Additional attachments may include supplemental photographs to document conditions at the property and additional information specific to the property cited in the Conditions Assessment (i.e., Consumer Product Safety Commission, Handbook for Public Playground Safety, information on segmental retaining walls, manufacturer recommendations for asphalt shingles or siding, etc.). The Appendix also includes the Accounting Summary for the Cash Flow Method and the Component Method.

3. METHODS OF ANALYSIS

The Replacement Reserve industry generally recognizes two different methods of accounting for Replacement Reserve Analysis. Due to the difference in accounting methodologies, these methods lead to different calculated values for the Minimum Annual Contribution to the Reserves. The results of both methods are presented in this report. The Association should obtain the advice of its accounting professional as to which method is more appropriate for the Association. The two methods are:

Cash Flow Method. The Cash Flow Method is sometimes referred to as the "Pooling Method." It calculates the minimum constant annual contribution to reserves (Minimum Annual Deposit) required to meet projected expenditures without allowing total reserves on hand to fall below the specified minimum level in any year.

First, the Minimum Recommended Reserve Level to be Held on Account is determined based on the age, condition, and replacement cost of the individual components. The mathematical model then allocates the estimated replacement costs to the future years in which they are projected to occur. Based on these expenditures, it then calculates the minimum constant yearly contribution (Minimum Annual Deposit) to the reserves necessary to keep the reserve balance at the end of each year above the Minimum Recommended Reserve Level to be Held on Account. The Cash Flow Analysis assumes that the Association will have authority to use all of the reserves on hand for replacements as the need occurs. This method usually results in a Minimum Annual Deposit that is less than that arrived at by the Component Method.

Component Method. This method is a time tested mathematical model developed by HUD in the early 1980s but has been generally relegated to a few States that require it by law. For the vast majority of Miller+Dodson's clients, this method is not used.

The Component Method treats each item in the replacement schedule as an individual line item budget. Generally, the Minimum Annual Contribution to Reserves is higher when calculated by the Component Method. The mathematical model for this method works as follows:

First, the total Current Objective is calculated, which is the reserve amount that would have accumulated had all of the items on the schedule been funded from initial construction at their current replacement costs. Next, the Reserves Currently on Deposit (as reported by the Association) are distributed to the components in the schedule in proportion to the Current Objective. The Minimum Annual Deposit for each component is equal to the Estimated Replacement Cost, minus the Reserves on Hand, divided by the years of life remaining.

4. REPLACEMENT RESERVE STUDY DATA

Identification of Reserve Components. The Reserve Analyst has only two methods of identifying Reserve Components; (1) information provided by the Association and (2) observations made at the site. It is important that the Reserve Analyst be provided with all available information detailing the components owned by the Association. It is our policy to request such information prior to bidding on a project and to meet with the individuals responsible for maintaining the community after acceptance of our proposal. After completion of the Study, the Study should be reviewed by the Board of Directors, individuals responsible for maintaining the community, and the Association's accounting professionals. We are dependent upon the Association for correct information, documentation, and drawings.

Unit Costs. Unit costs are developed using nationally published standards and estimating guides and are adjusted by state or region. In some instances, recent data received in the course of our work is used to modify these figures. Contractor proposals or actual cost experience may be available as part of the Association records. This is useful information, which should be incorporated into your report. Please bring any such available data to our attention, preferably before the report is commenced.

Replacement vs. Repair and Maintenance. A Replacement Reserve Study addresses the required funding for Capital Replacement Expenditures. This should not be confused with operational costs or cost of repairs or maintenance.

5. DEFINITIONS

Adjusted Cash Flow Analysis. Cash flow analysis adjusted to take into account annual cost increases due to inflation and interest earned on invested reserves. In this method, the annual contribution is assumed to grow annually at the inflation rate.

Annual Deposit if Reserves Were Fully Funded. Shown on the Summary Sheet A1 in the Component Method summary, this would be the amount of the Annual Deposit needed if the Reserves Currently on Deposit were equal to the Total Current Objective.

Cash Flow Analysis. See Cash Flow Method, above.

Component Analysis. See Component Method, above.

Contingency. An allowance for unexpected requirements. Roughly the same as the Minimum Recommended Reserve Level to be Held on Account used in the Cash Flow Method of analysis.

Critical Year. In the Cash Flow Method, a year in which the reserves on hand are projected to fall to the established minimum level. See Minimum Recommended Reserve Level to be Held on Account.

Current Objective. This is the reserve amount that would have accumulated had the item been funded from initial construction at its current replacement cost. It is equal to the estimated replacement cost divided by the estimated economic life, times the number of years expended (the difference between the Estimated Economic Life and the Estimated Life Left). The Total Current Objective can be thought of as the amount of reserves the Association should now have on hand based on the sum of all of the Current Objectives.

Cyclic Replacement Item. A component item that typically begins to fail after an initial period (Estimated Initial Replacement), but which will be replaced in increments over a number of years (the Estimated Replacement Cycle). The Reserve Analysis program divides the number of years in the Estimated Replacement Cycle into five equal increments. It then allocates the Estimated Replacement Cost equally over those five increments. (As distinguished from Normal Replacement Items, see below)

Estimated Normal Economic Life (NEL). Used in the Normal Replacement Schedules. This represents the industry average number of years that a new item should be expected to last until it has to be replaced. This figure is sometimes modified by climate, region, or original construction conditions.

Estimated Remaining Economic Life (REL). Used in the Normal Replacement Schedules. Number of years until the item is expected to need replacement. Normally, this number would be considered to be the difference between the Estimated Economic Life and the age of the item. However, this number must be modified to reflect maintenance practice, climate, original construction and quality, or other conditions. For the purpose of this report, this number is determined by the Reserve Analyst based on the present condition of the item relative to the actual age.

Estimated Initial Replacement. For a Cyclic Replacement Item (see above), the number of years until the replacement cycle is expected to begin. Estimated Replacement Cycle. For a Cyclic Replacement Item, the number of years over which the remainder of the component's replacement occurs.

Minimum Annual Deposit. Shown on the Summary Sheet A1. The calculated requirement for annual contribution to reserves as calculated by the Cash Flow Method (see above).

Minimum Deposit in the Study Year. Shown on the Summary Sheet A1. The calculated requirement for contribution to reserves in the study year as calculated by the Component Method (see above).

Minimum Balance. Shown on the Summary Sheet A4, this amount is used in the Cash Flow Method only. Normally derived using the average annual expenditure over the study period, this is the minimum amount held in reserves for every year in the study period.

Normal Replacement Item. A component of the property that, after an expected economic life, is replaced in its entirety. (As distinguished from Cyclic Replacement Items, see above.)

Normal Replacement Schedules. The list of Normal Replacement Items by category or location. These items appear on pages designated.

Number of Years of the Study. The numbers of years into the future for which expenditures are projected and reserve levels calculated. This number should be large enough to include the projected replacement of every item on the schedule, at least once. This study covers a 40-year period.

One Time Deposit Required to Fully Fund Reserves. Shown on the Summary Sheet A1 in the Component Method summary, this is the difference between the Total Current Objective and the Reserves Currently on Deposit.

Reserves Currently on Deposit. Shown on the Summary Sheet A1, this is the amount of accumulated reserves as reported by the Association in the current year.

Reserves on Hand. Shown in the Cyclic Replacement and Normal Replacement Schedules, this is the amount of reserves allocated to each component item in the Cyclic or Normal Replacement schedules. This figure is based on the ratio of Reserves Currently on Deposit divided by the total Current Objective.

Replacement Reserve Study. An analysis of all of the components of the common property of the Association for which a need for replacement should be anticipated within the economic life of the property as a whole. The analysis involves estimation for each component of its estimated Replacement Cost, Estimated Economic Life, and Estimated Life Left. The objective of the study is to calculate a recommended annual contribution to the Association's Replacement Reserve Fund.

Total Replacement Cost. Shown on the Summary Sheet A1, this is total of the Estimated Replacement Costs for all items on the schedule if they were to be replaced once.

Unit Replacement Cost. Estimated replacement cost for a single unit of a given item on the schedule.

Unit (of Measure). Non-standard abbreviations are defined on the page of the Replacement Reserve Inventory where the item appears. The following standard abbreviations are used in this report:

ea	each	**ls**	lump sum	**sy**	square yard
ft or lf	linear foot	**pr**	pair	**cy**	cubic yard
sf	square foot				

What is a Reserve Study?
Who are we?

https://youtu.be/m4BcOE6q3Aw

What kind of property uses a Reserve Study?
Who are our clients?

https://youtu.be/40SodajTW1g

Who conducts a Reserve Study?
Reserve Specialist (RS) what does this mean?

https://youtu.be/pYSMZO13VjQ

When should a Reserve Study be updated?
What are the different types of Reserve Studies?

https://youtu.be/Qx8WHB9Cgnc

What's in a Reserve Study and what's out?
Improvement/Component, what's the difference?

https://youtu.be/ZfBoAEhtf3E

What is my role as a Community Manager?
Will the report help me explain Reserves?

https://youtu.be/1J2h7FIU3qw

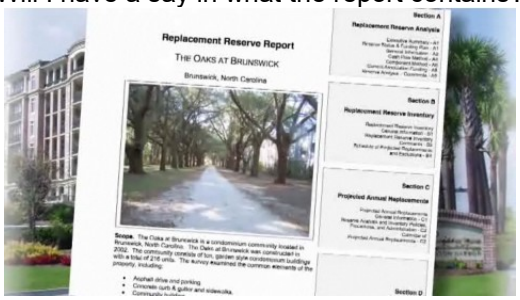
What is my role as a community Board Member?
Will a Reserve Study meet my needs?

https://youtu.be/aARD1B1Oa3o

Community dues, how can a Reserve Study help?
Will a study keep my property competitive?

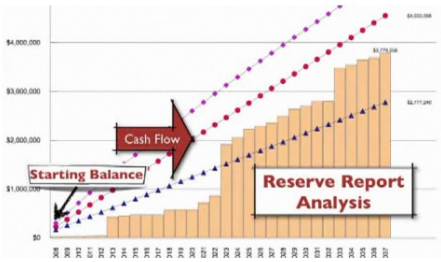
https://youtu.be/diZfM1IyJYU

How do I read the report?
Will I have a say in what the report contains?



https://youtu.be/qCeVJhFf9ag

Where do the numbers come from?
Cumulative expenditures and funding, what?

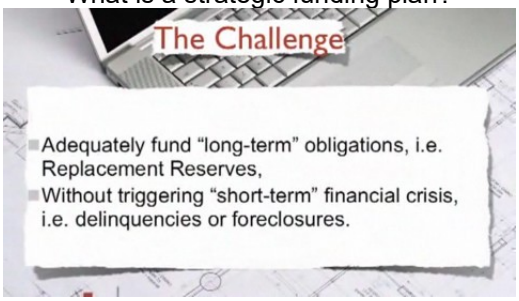


https://youtu.be/SePdwVDvHWI

How are interest and inflation addressed?
Inflation, what should we consider?

https://youtu.be/W8CDLwRIv68

A community needs more help, where do we go?
What is a strategic funding plan?



https://youtu.be/hIxV9X1tIcA