LEVEL 1 REPLACEMENT RESERVE REPORT FY 2024
HIGHLAND MANOR COMMUNITY ASSOCIATION INC.

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Community Management by:

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REPLACEMENT RESERVE REPORT

HIGHLAND MANOR COMMUNITY ASSOCIATION INC.

HAGERSTOWN, MARYLAND
February 7, 2023
Revised March 21, 2023

Description. Highland Manor Community Association Inc. is a Community Association located in Hagerstown, Maryland. The community consists of 206 Single-Family Homes. The survey examined the common elements of the property, including:

- Entry Monument
- Fencing and Mailbox Clusters
- Detention Basins
- Multi-Purpose Court, Picnic Areas, and Community Park
- Management Office Building

EXECUTIVE SUMMARY
This Reserve Study has been prepared for the Highland Manor Community Association Inc. for the Fiscal Year 2024 covering the period from January 1, 2024 to December 31, 2024. The Replacement Reserves Starting Balance as of January 1, 2024 is proposed to be $2,500. The reported Current Annual Funding for Reserves is $1,000. The Recommended Annual Reserve Funding level for 2024 is $14,155.

The increase in the Recommended Annual Funding level shown above is due to the addition of the playground areas to the common inventory and the stormwater dry retention ponds on the property.

The Next Step. The next step in the Reserve Study process is for the Board to carefully review the Component inventory to make sure that all included components are the responsibility of the Association, and that the priorities and the timing of the replacement is in keeping with the goals and objectives of the Board.

If, after that review, the Reserve Study still recommends a substantial increase in the Annual Reserve Funding, MillerDodson can work with the Board to develop a Strategic Funding Plan to ramp up the Funding levels incrementally.

MillerDodson welcomes the opportunity to answer questions or to discuss this Reserve Study in more detail should the Board so desire.

Current Funding. The Starting Balance and Current Annual Reserve Funding figures have been supplied by the managing agent and/or Board of Directors. 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.

Level of Service. This study has been performed as a Level 1 Full-Service Reserve Study with Site Visit/On-Site Review as defined by the Community Associations Institute's, National Reserve Study Standards. As such, a complete inventory of components, including their condition and cost for major repair or replacement, was established by the Analyst for the common and limited common elements of this facility based on information provided by the Community Manager and/or Board of Directors, or by those developed from visual assessments, field measurements, takeoffs from to-scale drawings, or review of provided historical data. The analysis, including fund status and funding plan, is developed from the 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 Highland Manor Community Association Inc. (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 February 07, 2023 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 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.

Acknowledgment. Miller+Dodson Associates would like to acknowledge the assistance and input of Leroy Neville, Jr. / President who provided very helpful insight into the current operations of the property.

Analyst's Credentials. Mr. Christopher J. Lepadatu holds a Bachelor's Degree in Civil Engineering from Penn State University and a Master's Degree in Environmental Engineering from Tsinghua University, Beijing. He has more than 15 years of experience in construction and consulting with 3 years of experience assessing property conditions and performance in New York City. With his experience in new multi-family construction and pre-war buildings, his focus is on strategic investment to adapt existing building systems for resilience in a dynamic regulatory environment.

Respectfully Submitted,

millerdodson
CAPITAL RESERVE CONSULTANTS

Chris Lepadatu
Christopher Lepadatu

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SECTION A - FINANCIAL ANALYSIS

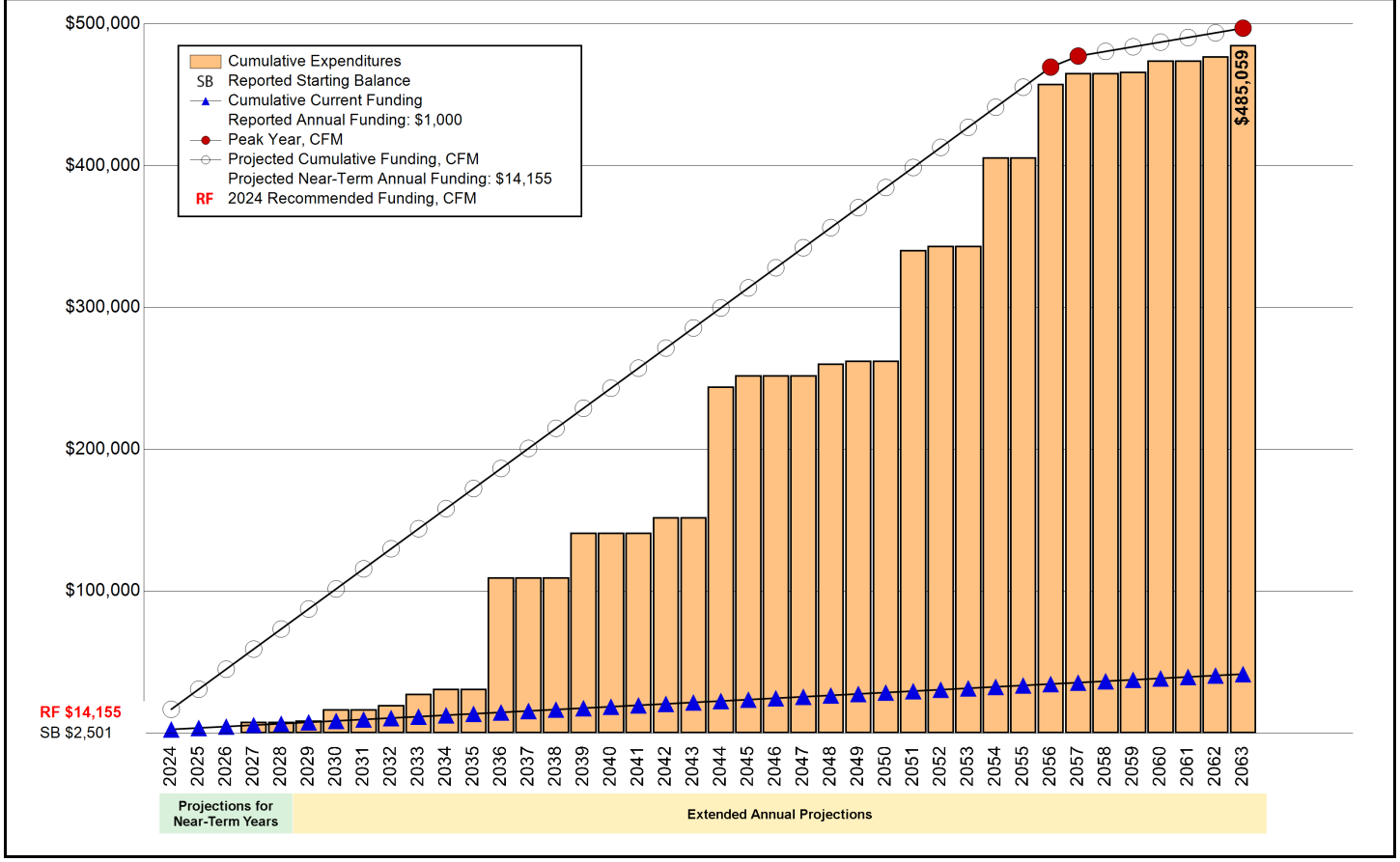
The Highland Manor Community Association Inc. Replacement Reserve Analysis uses the Cash Flow Method (CFM) to calculate Replacement Reserve funding for the periodic replacement of the 25 Projected Replacements identified in the Replacement Reserve Inventory.

$14,155 **RECOMMENDED REPLACEMENT RESERVE FUNDING FOR THE STUDY YEAR, 2024**
$5.73 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.

Highland Manor Community Association Inc. reports a Starting Balance of $2,500 and Annual Funding totaling $1,000, which 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



The increase in the Recommended Annual Funding level shown above is due to the addition of the playground areas to the common inventory and the stormwater dry retention ponds on the property.

The Next Step. The next step in the Reserve Study process is for the Board to carefully review the Component inventory to make sure that all included components are the responsibility of the Association, and that the priorities and the timing of the replacement is in keeping with the goals and objectives of the Board.

If, after that review, the Reserve Study still recommends a substantial increase in the Annual Reserve Funding, MillerDodson can work with the Board to develop a Strategic Funding Plan to ramp up the Funding levels incrementally.

REPLACEMENT RESERVE ANALYSIS - GENERAL INFORMATION

The Highland Manor Community Association Inc. 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.

2024 **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, 2024.

40 Years **STUDY PERIOD**

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

$2,500 **STARTING BALANCE**

The Association reports Replacement Reserves on Deposit totaling $2,500 at the start of the Study Year.

Level One **LEVEL OF SERVICE**

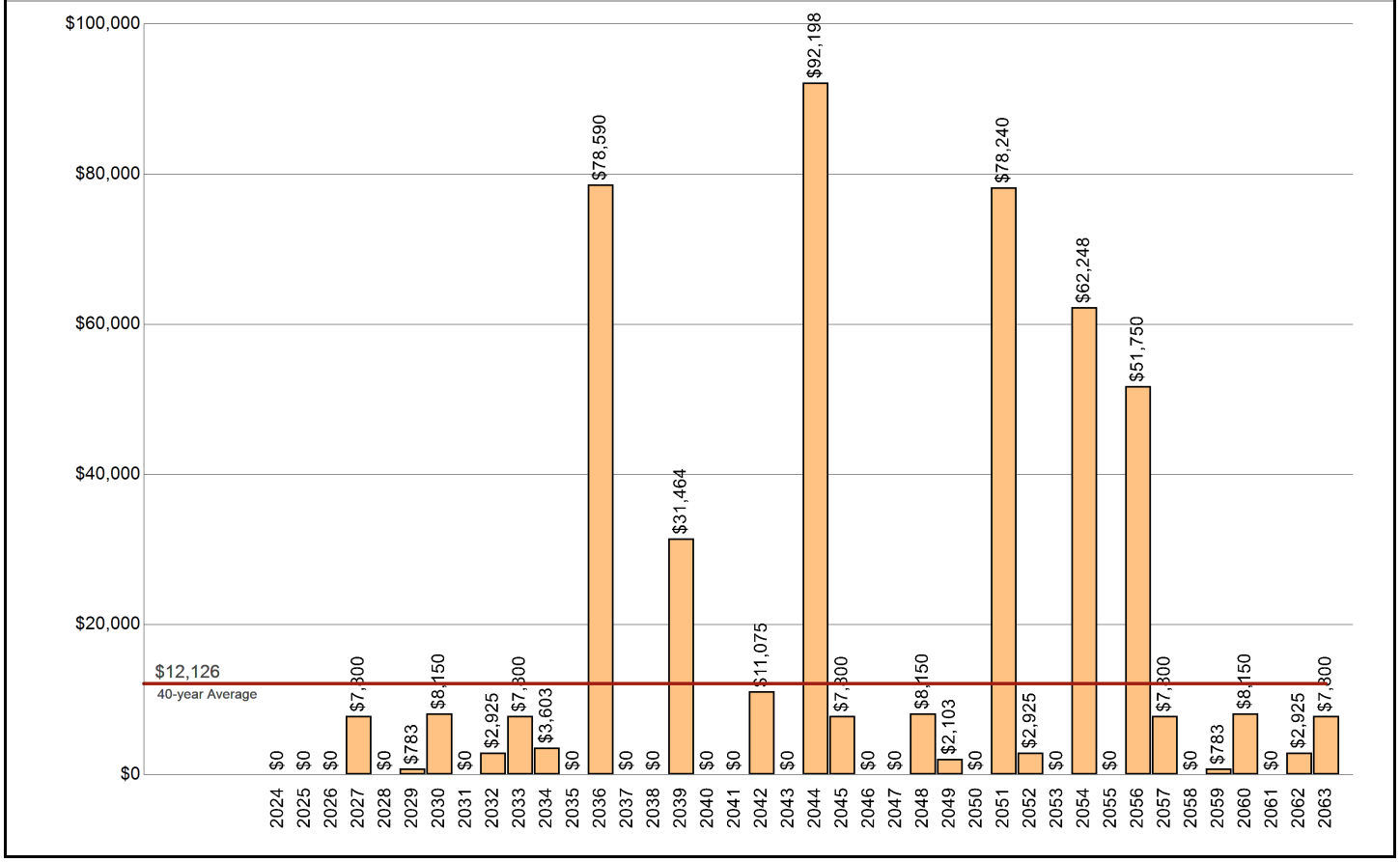
The Replacement Reserve Inventory has been developed in compliance with the National Reserve Study Standards for a Level One Study, as defined by the Community Associations Institute (CAI).

$485,059 **REPLACEMENT RESERVE INVENTORY - PROJECTED REPLACEMENTS**

The Highland Manor Community Association Inc. Replacement Reserve Inventory identifies 25 items that will require periodic replacement, that are to be funded from Replacement Reserves. We estimate the cost of these replacements will be $485,059 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 $12,126. Section C provides a year by year Calendar of these expenditures.



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 $485,059 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	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Starting Balance	$2,501									
Projected Replacements				($7,800)		($783)	($8,150)		($2,925)	($7,800)
Annual Deposit	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000
End of Year Balance	$3,501	$4,501	$5,501	($1,300)	($300)	($82)	($7,232)	($6,232)	($8,157)	($14,957)
Cumulative Expenditures				($7,800)	($7,800)	($8,583)	($16,733)	($16,733)	($19,658)	($27,458)
Cumulative Receipts	$3,501	$4,501	$5,501	$6,501	$7,501	$8,501	$9,501	$10,501	$11,501	$12,501
Year	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**
Projected Replacements	($3,603)		($78,590)			($31,464)			($11,075)	
Annual Deposit	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000
End of Year Balance	($17,560)	($16,560)	($94,150)	($93,150)	($92,150)	($122,613)	($121,613)	($120,613)	($130,688)	($129,688)
Cumulative Expenditures	($31,060)	($31,060)	($109,650)	($109,650)	($109,650)	($141,114)	($141,114)	($141,114)	($152,189)	($152,189)
Cumulative Receipts	$13,501	$14,501	$15,501	$16,501	$17,501	$18,501	$19,501	$20,501	$21,501	$22,501
Year	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	**2051**	**2052**	**2053**
Projected Replacements	($92,198)	($7,800)			($8,150)	($2,103)		($78,240)	($2,925)	
Annual Deposit	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000
End of Year Balance	($220,886)	($227,686)	($226,686)	($225,686)	($232,836)	($233,938)	($232,938)	($310,178)	($312,103)	($311,103)
Cumulative Expenditures	($244,386)	($252,186)	($252,186)	($252,186)	($260,336)	($262,439)	($262,439)	($340,679)	($343,604)	($343,604)
Cumulative Receipts	$23,501	$24,501	$25,501	$26,501	$27,501	$28,501	$29,501	$30,501	$31,501	$32,501
Year	**2054**	**2055**	**2056**	**2057**	**2058**	**2059**	**2060**	**2061**	**2062**	**2063**
Projected Replacements	($62,248)		($51,750)	($7,800)		($783)	($8,150)		($2,925)	($7,800)
Annual Deposit	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000
End of Year Balance	($372,351)	($371,351)	($422,101)	($428,901)	($427,901)	($427,683)	($434,833)	($433,833)	($435,758)	($442,558)
Cumulative Expenditures	($405,851)	($405,851)	($457,601)	($465,401)	($465,401)	($466,184)	($474,334)	($474,334)	($477,259)	($485,059)
Cumulative Receipts	$33,501	$34,501	$35,501	$36,501	$37,501	$38,501	$39,501	$40,501	$41,501	$42,501

EVALUATION OF CURRENT FUNDING

The evaluation of Current Funding (Starting Balance of $2,500 & annual funding of $1,000), 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 25 Projected Replacements identified in the Replacement Reserve Inventory and that the Association will continue Annual Funding of $1,000 throughout the 40-year Study Period.

Annual Funding of $1,000 is approximately 7 percent of the $14,155 recommended Annual Funding calculated by the Cash Flow Method for 2024, the Study Year.

See the Executive Summary for the Current Funding Statement.

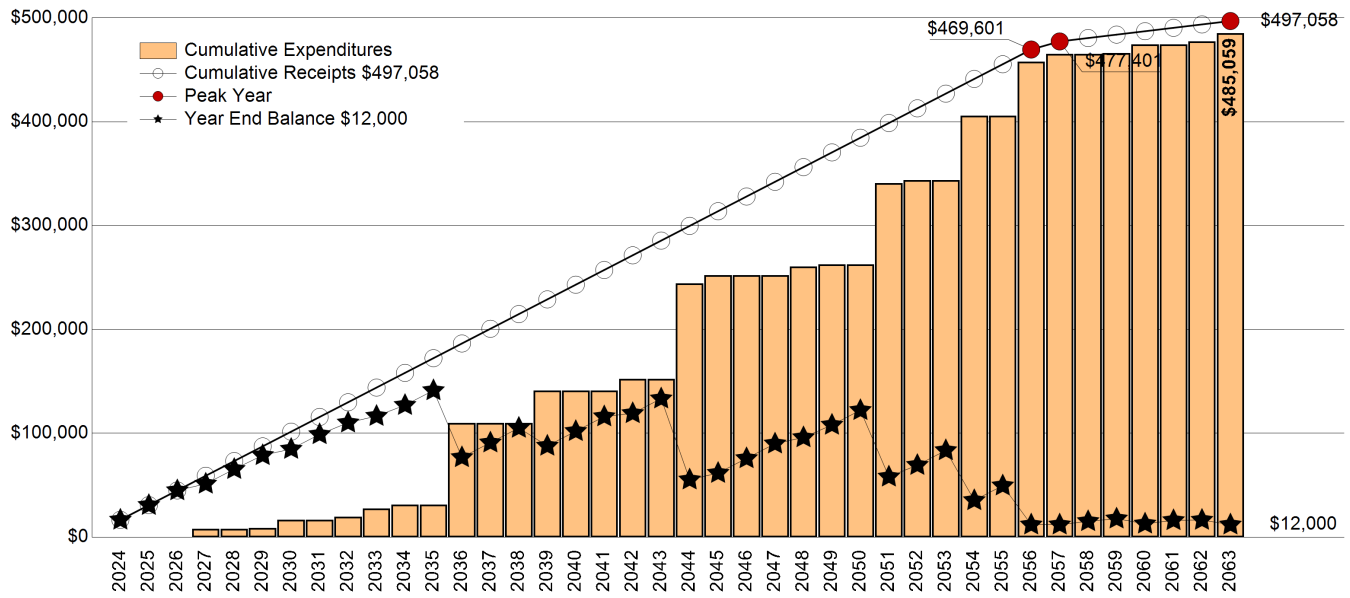
CASH FLOW METHOD FUNDING

$14,155 **RECOMMENDED REPLACEMENT RESERVE FUNDING FOR 2024**
$5.73 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 2056 with Replacement Reserves on Deposit dropping to the Minimum Balance after the completion of $457,601 of replacements from 2024 to 2056. Recommended funding is anticipated to decline in 2057. Peak Years are identified in Chart 4 and Table 5.
- **Threshold (Minimum Balance).** The calculations assume a Minimum Balance of $12,000 will always be held in reserve, which is calculated by rounding the 12-month 40-year average annual expenditure of $12,126 as shown on Graph #2.
- **Cash Flow Method Study Period.** Cash Flow Method calculates funding for $485,059 of expenditures over the 40-year Study Period. It does not include funding for any projects beyond 2063 and in 2063, 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	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Starting Balance	$2,501									
Projected Replacements				($7,800)		($783)	($8,150)		($2,925)	($7,800)
Annual Deposit	$14,155	$14,155	$14,155	$14,155	$14,155	$14,155	$14,155	$14,155	$14,155	$14,155
End of Year Balance	$16,655	$30,810	$44,964	$51,319	$65,473	$78,845	$84,850	$99,004	$110,234	$116,589
Cumulative Expenditures				($7,800)	($7,800)	($8,583)	($16,733)	($16,733)	($19,658)	($27,458)
Cumulative Receipts	$16,655	$30,810	$44,964	$59,119	$73,273	$87,428	$101,582	$115,737	$129,892	$144,046

Year	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043
Projected Replacements	($3,603)		($78,590)			($31,464)			($11,075)	
Annual Deposit	$14,155	$14,155	$14,155	$14,155	$14,155	$14,155	$14,155	$14,155	$14,155	$14,155
End of Year Balance	$127,141	$141,295	$76,860	$91,014	$105,169	$87,860	$102,015	$116,169	$119,249	$133,403
Cumulative Expenditures	($31,060)	($31,060)	($109,650)	($109,650)	($109,650)	($141,114)	($141,114)	($141,114)	($152,189)	($152,189)
Cumulative Receipts	$158,201	$172,355	$186,510	$200,664	$214,819	$228,973	$243,128	$257,283	$271,437	$285,592

Year	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053
Projected Replacements	($92,198)	($7,800)			($8,150)	($2,103)		($78,240)	($2,925)	
Annual Deposit	$14,155	$14,155	$14,155	$14,155	$14,155	$14,155	$14,155	$14,155	$14,155	$14,155
End of Year Balance	$55,360	$61,715	$75,869	$90,024	$96,029	$108,081	$122,235	$58,150	$69,379	$83,534
Cumulative Expenditures	($244,386)	($252,186)	($252,186)	($252,186)	($260,336)	($262,439)	($262,439)	($340,679)	($343,604)	($343,604)
Cumulative Receipts	$299,746	$313,901	$328,055	$342,210	$356,365	$370,519	$384,674	$398,828	$412,983	$427,137

Year	2054	2055	1st Peak - 2056	2nd Peak - 2057	2058	2059	2060	2061	2062	3rd Peak - 2063
Projected Replacements	($62,248)		($51,750)	($7,800)		($783)	($8,150)		($2,925)	($7,800)
Annual Deposit	$14,155	$14,155	$14,155	$7,800	$3,276	$3,276	$3,276	$3,276	$3,276	$3,276
End of Year Balance	$35,441	$49,595	$12,000	$12,000	$15,276	$17,770	$12,896	$16,172	$16,524	$12,000
Cumulative Expenditures	($405,851)	($405,851)	($457,601)	($465,401)	($465,401)	($466,184)	($474,334)	($474,334)	($477,259)	($485,059)
Cumulative Receipts	$441,292	$455,446	$469,601	$477,401	$480,677	$483,953	$487,230	$490,506	$493,782	$497,058

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.

$14,155 **2024 - CASH FLOW METHOD RECOMMENDED FUNDING**

The 2024 Study Year calculations have been made using current replacement costs (see Page B.2), modified by the Analyst for any project specific conditions.

$15,004 **2025 - INFLATION ADJUSTED FUNDING**

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

- Replacement Reserves on Deposit totaling $16,655 on January 1, 2025.
- No Expenditures from Replacement Reserves in 2024.
- Construction Cost Inflation of 6.00 percent in 2024.

The $15,004 inflation adjusted funding in 2025 is a 5.99 percent increase over the non-inflation adjusted funding of $14,155.

$15,904 **2026 - INFLATION ADJUSTED FUNDING**

A new analysis calculates the 2026 funding based on three assumptions:

- Replacement Reserves on Deposit totaling $17,444 on January 1, 2026.
- No Expenditures from Replacement Reserves in 2025.
- Construction Cost Inflation of 6.00 percent in 2025.

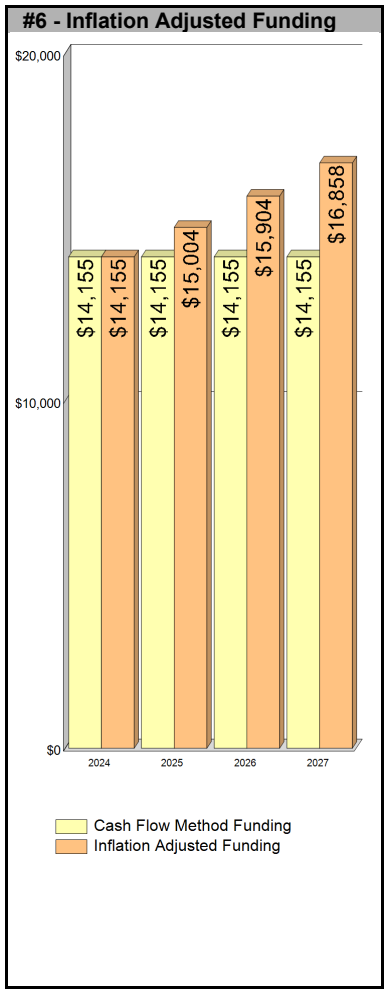
The $15,904 inflation adjusted funding in 2026 is a 12.36 percent increase over the non-inflation adjusted funding of $14,155.

$16,858 **2027 - INFLATION ADJUSTED FUNDING**

A new analysis calculates the 2027 funding based on three assumptions:

- Replacement Reserves on Deposit totaling $18,732 on January 1, 2027.
- No Expenditures from Replacement Reserves in 2026.
- Construction Cost Inflation of 6.00 percent in 2026.

The $16,858 inflation adjusted funding in 2027 is a 19.10 percent increase over the non-inflation adjusted funding of $14,155.



Year Four 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 2025, 2026 and 2027 inflation-adjusted funding calculations above, the 6.00 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 2024, based on a 1.00 percent interest rate, we estimate the Association may earn $96 on an average balance of $9,578, $170 on an average balance of $17,050 in 2025, and $181 on $18,088 in 2026. The Association may elect to attribute 100 percent of the earned interest to Reserves, resulting in a reduction in the 2024 funding from $14,155 to $14,059 (a 0.67 percent reduction), $15,004 to $14,833 in 2025 (a 1.13 percent reduction), and $15,904 to $15,723 in 2026 (a 1.13 percent reduction).

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SECTION B - REPLACEMENT RESERVE INVENTORY

- **PROJECTED REPLACEMENTS.** Highland Manor Community Association Inc. - Replacement Reserve Inventory identifies 25 items which 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 $278,598. Cumulative Replacements totaling $485,059 are scheduled in the Replacement Reserve Inventory over the 40-year Study Period. Cumulative Replacements include those components that are replaced more than once during the period of the study.

  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.** Some of the items contained 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 25 items included in the Highland Manor Community Association Inc. 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 One Study - Full Service, as defined by the National Reserve Study Standards, established in 1998 by Community Associations Institute, which states:

  A Level I - Full-Service Reserve Study includes the computation of complete component inventory information regarding commonly owned components provided by the Association, quantities derived from field measurements, and/or quantity takeoffs from to-scale engineering drawings that may be made available. The condition of all components is ascertained from a visual inspection of each component by the analyst. The remaining economic life and the value of the components are provided based on these observations and the funding status and funding plan are then derived from the analysis of this data.

REPLACEMENT RESERVE INVENTORY - GENERAL INFORMATION (CONT'D)

- **INVENTORY DATA.** Each of the 25 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.

- **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.
- **ACCURACY OF THE ANALYSIS.** The accuracy of the Replacement Reserve Analysis is dependent upon expenditures from Replacement Reserves being made ONLY for the 25 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.

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	Entrance monument, carved wood sign	sf	6	$220.00	15	10	$1,320
2	Mailbox, cluster (CBU)	units	23	$2,250.00	35	32	$51,750
3	Asphalt paths, overlay	sf	626	$6.00	15	15	$3,756
4	Asphalt paths, seal coat	sf	626	$1.25	5	5	$783
5	Property office shed, wood frame and siding	sf	370	$32.00	30	30	$11,840
6	Maintenance shed, wood frame and siding (painted)	sf	110	$32.00	30	30	$3,520
7	Concrete flatwork (6% allowance)	sf	25	$14.00	6	6	$350

Replacement Costs - Page Subtotal $73,319

COMMENTS

- We have assumed that the Association will replace the asphalt pavement by the installation of a 2-inch-thick overlay. The pavement will need to be milled prior to the installation of the overlay. Milling and the cost of minor repairs (5 to 10 percent of the total area) to the base materials and bearing soils beneath the pavement are included in the cost shown above.
- Seal coating or rejuvenation has been shown to extend service life of asphalt if performed at an early stage, once asphalt has fully cured and then cyclically thereafter. This is the best practice to extend life of the asphalt pavement. The Unit Cost includes crack sealing, and line/curb painting. The Asphalt paving industries recommendation/best practice is to sealcoat approximately one (1) year after the mill and overlay is performed. One (1) year allows the excess oils in the paving mixture to “weather off”. Sealing the following year locks in the remaining essential oils that keep the pavement pliable. Cyclical reapplication of the sealcoat, approximately every five (5) years, will keep those oils in expanding its useful life.
- Concrete has a normal economic life expectancy of 60 years. We are modeling 6% of the total requiring replacement every six years. Items showing zero remaining life expectancy are to take care of immediate needs due to tripping hazards.

SITE ITEMS
PROJECTED REPLACEMENTS

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

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST ($)	NEL	REL	REPLACEMENT COST ($)
8	Retaining wall, segmental block (reset)	sf	195	$15.00	10	8	$2,925
9	Retaining wall, segmental block (replace, 12%	sf	20	$75.00	10	10	$1,500
10	Fence, 4' galvanized chain link	ft	72	$24.00	30	30	$1,728
11	Fence, 6' galvanized chain link	ft	215	$28.00	30	30	$6,020
12	Fence, 10' galvanized chain link	ft	75	$40.00	30	30	$3,000
13	Deck, composite decking	sf	92	$18.00	30	30	$1,656
14	Deck/Balcony, vinyl railing	ft	30	$39.00	30	30	$1,170
15	Security video recorder and cameras	ea	2	$2,750.00	15	15	$5,500
16	Detention basin	ls	2	$35,000.00	20	20	$70,000

Replacement Costs - Page Subtotal $93,499

COMMENTS

- Comprehensive drawings detailing the components of the systems listed above were not available for our review. We have included the estimated cost of the systems based upon our experience with other similar communities. We have assumed that 10 percent of the system(s) will require replacement. In the future, this assumption and the estimated costs should be adjusted based upon the community's actual experience as is feasible.
- Item #9: Retaining wall, segmental block (replace, 12% allowance)) - Allowance to replace 12% of the block retaining wall every 10 years.
- Item #10: Fence, 4' galvanized chain link - 3.21.2023 Per request, changed 3' to 4' and adjusted URC.

RECREATION ITEMS
PROJECTED REPLACEMENTS

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

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST ($)	NEL	REL	REPLACEMENT COST ($)
17	Tot lot, ADA MP structure, 3 platforms and 3 slides	ea	2	$32,000.00	15	12	$64,000
18	Tot lot, border, railroad ties	ft	375	$13.00	15	15	$4,875
19	Tot lot surfacing, wood mulch (3")	sf	3,900	$2.00	3	3	$7,800
20	Tot lot, A-frame swing, 4 seat	ea	2	$3,220.00	15	12	$6,440
21	Tot lot, arch-frame swing, 2 seat	ea	1	$2,200.00	15	15	$2,200
22	Picnic table (PTL wood table & bench)	ea	8	$500.00	15	15	$4,000
23	Bench, Coated metal	ea	3	$850.00	15	15	$2,550
24	Basketball court, asphalt overlay	sf	2,675	$5.80	20	20	$15,515
25	Basketball pole and backboard	ea	2	$2,200.00	20	20	$4,400

Replacement Costs - Page Subtotal $111,780

COMMENTS

- Tot lots and tot lot equipment should be evaluated annually by a playground safety specialist for compliance with the Consumer Product Safety Commission, Handbook for Public Playground Safety. Defects should be corrected immediately to protect the users of the facilities from potential injury and the Association from potential liability for those injuries.
- Item #22: Picnic table (PTL wood table & bench) - 3.21.2023 Per request, changed #ofU and URC. Per board request, URC is between $400-$600 per bench.

VALUATION EXCLUSIONS
Excluded Items

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST ($)	NEL	REL	REPLACEMENT COST ($)
	Miscellaneous signage						EXCLUDED
	Office AC Window unit						EXCLUDED
	Office Electric baseboard heater						EXCLUDED

VALUATION EXCLUSIONS
Comments

- Valuation Exclusions. For ease of administration of the Replacement Reserves and to reflect accurately how Replacement Reserves are administered, items with a dollar value less than $1000 have not been scheduled for funding from Replacement Reserve. Examples of items excluded 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.

LONG-LIFE EXCLUSIONS
Excluded Items

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST ($)	NEL	REL	REPLACEMENT COST ($)
	Wall, floor, and roof structure						EXCLUDED
	Common element electrical services						EXCLUDED
	Electrical wiring						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 ($)	NEL	REL	REPLACEMENT COST ($)
	Any feature serving one unit						EXCLUDED
	Sanitary sewers & Domestic water pipes 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
	Sidewalk on an individual lot						EXCLUDED
	Stairs on an individual lot						EXCLUDED
	Retaining wall on an individual lot						EXCLUDED
	Fence on an individual lot						EXCLUDED
	Unit exterior						EXCLUDED
	Unit windows						EXCLUDED
	Unit doors						EXCLUDED
	Unit skylights						EXCLUDED
	Unit deck, patio, and/or balcony						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
	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 ($)	NEL	REL	REPLACEMENT COST ($)
	Cleaning of asphalt pavement						EXCLUDED
	Crack sealing of asphalt pavement						EXCLUDED
	Landscaping and site grading						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, lighting						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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SECTION C - CALENDAR OF PROJECTED ANNUAL REPLACEMENTS

GENERAL STATEMENT. The 25 Projected Replacements in the Highland Manor Community Association Inc. 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

- **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.
- **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. We acknowledge that there are instances in which multiple revisions are necessary. However, unnecessary multiple revisions drain on our time and manpower resources. Therefore, Miller Dodson will exercise its sole discretion as to whether additional charges are incurred.
- **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.

PROJECTED REPLACEMENTS

Item	2024 - Study Year	$
	No Scheduled Replacements	

Item	2025 - YEAR 1	$
	No Scheduled Replacements	

Item	2026 - YEAR 2	$
	No Scheduled Replacements	

Item	2027 - YEAR 3	$
19	Tot lot surfacing, wood mulch (3")	$7,800
	Total Scheduled Replacements	$7,800

Item	2028 - YEAR 4	$
	No Scheduled Replacements	

Item	2029 - YEAR 5	$
4	Asphalt paths, seal coat	$783
	Total Scheduled Replacements	$783

PROJECTED REPLACEMENTS

Item	2030 - YEAR 6	$
7	Concrete flatwork (6% allowance)	$350
19	Tot lot surfacing, wood mulch (3")	$7,800
	Total Scheduled Replacements	$8,150

Item	2031 - YEAR 7	$
	No Scheduled Replacements	

Item	2032 - YEAR 8	$
8	Retaining wall, segmental block (reset)	$2,925
	Total Scheduled Replacements	$2,925

Item	2033 - YEAR 9	$
19	Tot lot surfacing, wood mulch (3")	$7,800
	Total Scheduled Replacements	$7,800

Item	2034 - YEAR 10	$
1	Entrance monument, carved wood sign	$1,320
4	Asphalt paths, seal coat	$783
9	Retaining wall, segmental block (replace, 12%	$1,500
	Total Scheduled Replacements	$3,603

Item	2035 - YEAR 11	$
	No Scheduled Replacements	

PROJECTED REPLACEMENTS

Item	2036 - YEAR 12	$
7	Concrete flatwork (6% allowance)	$350
17	Tot lot, ADA MP structure, 3 platforms and 3 slides	$64,000
19	Tot lot surfacing, wood mulch (3")	$7,800
20	Tot lot, A-frame swing, 4 seat	$6,440
	Total Scheduled Replacements	$78,590

Item	2037 - YEAR 13	$
	No Scheduled Replacements	

Item	2038 - YEAR 14	$
	No Scheduled Replacements	

Item	2039 - YEAR 15	$
3	Asphalt paths, overlay	$3,756
4	Asphalt paths, seal coat	$783
15	Security video recorder and cameras	$5,500
18	Tot lot, border, railroad ties	$4,875
19	Tot lot surfacing, wood mulch (3")	$7,800
21	Tot lot, arch-frame swing, 2 seat	$2,200
22	Picnic table (PTL wood table & bench)	$4,000
23	Bench, Coated metal	$2,550
	Total Scheduled Replacements	$31,464

Item	2040 - YEAR 16	$
	No Scheduled Replacements	

Item	2041 - YEAR 17	$
	No Scheduled Replacements	

PROJECTED REPLACEMENTS

Item	2042 - YEAR 18	$
7	Concrete flatwork (6% allowance)	$350
8	Retaining wall, segmental block (reset)	$2,925
19	Tot lot surfacing, wood mulch (3")	$7,800
	Total Scheduled Replacements	$11,075

Item	2043 - YEAR 19	$
	No Scheduled Replacements	

Item	2044 - YEAR 20	$
4	Asphalt paths, seal coat	$783
9	Retaining wall, segmental block (replace, 12%	$1,500
16	Detention basin	$70,000
24	Basketball court, asphalt overlay	$15,515
25	Basketball pole and backboard	$4,400
	Total Scheduled Replacements	$92,198

Item	2045 - YEAR 21	$
19	Tot lot surfacing, wood mulch (3")	$7,800
	Total Scheduled Replacements	$7,800

Item	2046 - YEAR 22	$
	No Scheduled Replacements	

Item	2047 - YEAR 23	$
	No Scheduled Replacements	

PROJECTED REPLACEMENTS

Item	2048 - YEAR 24	$
7	Concrete flatwork (6% allowance)	$350
19	Tot lot surfacing, wood mulch (3")	$7,800
	Total Scheduled Replacements	$8,150

Item	2049 - YEAR 25	$
1	Entrance monument, carved wood sign	$1,320
4	Asphalt paths, seal coat	$783
	Total Scheduled Replacements	$2,103

Item	2050 - YEAR 26	$
	No Scheduled Replacements	

Item	2051 - YEAR 27	$
17	Tot lot, ADA MP structure, 3 platforms and 3 slides	$64,000
19	Tot lot surfacing, wood mulch (3")	$7,800
20	Tot lot, A-frame swing, 4 seat	$6,440
	Total Scheduled Replacements	$78,240

Item	2052 - YEAR 28	$
8	Retaining wall, segmental block (reset)	$2,925
	Total Scheduled Replacements	$2,925

Item	2053 - YEAR 29	$
	No Scheduled Replacements	

PROJECTED REPLACEMENTS

Item	2054 - YEAR 30	$
3	Asphalt paths, overlay	$3,756
4	Asphalt paths, seal coat	$783
5	Property office shed, wood frame and siding (painted)	$11,840
6	Maintenance shed, wood frame and siding (painted)	$3,520
7	Concrete flatwork (6% allowance)	$350
9	Retaining wall, segmental block (replace, 12%	$1,500
10	Fence, 4' galvanized chain link	$1,728
11	Fence, 6' galvanized chain link	$6,020
12	Fence, 10' galvanized chain link	$3,000
13	Deck, composite decking	$1,656
14	Deck/Balcony, vinyl railing	$1,170
15	Security video recorder and cameras	$5,500
18	Tot lot, border, railroad ties	$4,875
19	Tot lot surfacing, wood mulch (3")	$7,800
21	Tot lot, arch-frame swing, 2 seat	$2,200
22	Picnic table (PTL wood table & bench)	$4,000
23	Bench, Coated metal	$2,550
	Total Scheduled Replacements	$62,248

Item	2055 - YEAR 31	$
	No Scheduled Replacements	

Item	2056 - YEAR 32	$
2	Mailbox, cluster (CBU)	$51,750
	Total Scheduled Replacements	$51,750

Item	2057 - YEAR 33	$
19	Tot lot surfacing, wood mulch (3")	$7,800
	Total Scheduled Replacements	$7,800

Item	2058 - YEAR 34	$
	No Scheduled Replacements	

Item	2059 - YEAR 35	$
4	Asphalt paths, seal coat	$783
	Total Scheduled Replacements	$783

PROJECTED REPLACEMENTS

Item	2060 - YEAR 36	$
7	Concrete flatwork (6% allowance)	$350
19	Tot lot surfacing, wood mulch (3")	$7,800
	Total Scheduled Replacements	$8,150

Item	2061 - YEAR 37	$
	No Scheduled Replacements	

Item	2062 - YEAR 38	$
8	Retaining wall, segmental block (reset)	$2,925
	Total Scheduled Replacements	$2,925

Item	2063 - YEAR 39	$
19	Tot lot surfacing, wood mulch (3")	$7,800
	Total Scheduled Replacements	$7,800

Item	2064 (beyond study period)	$
1	Entrance monument, carved wood sign	$1,320
4	Asphalt paths, seal coat	$783
9	Retaining wall, segmental block (replace, 12%	$1,500
16	Detention basin	$70,000
24	Basketball court, asphalt overlay	$15,515
25	Basketball pole and backboard	$4,400
	Total Scheduled Replacements	$93,518

Item	2065 (beyond study period)	$
	No Scheduled Replacements	

SECTION D - CONDITION ASSESSMENT

General Comments. Miller+Dodson Associates conducted a Reserve Study at Highland Manor Community Association Inc. in February 2023. Highland Manor Community Association Inc. is in generally good condition for a community association established in 1988. 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. Miller Dodson strongly recommends that the Association retain the services of a Structural Engineer to conduct thorough and periodic evaluations of the buildings, balconies, and any other structural components of the buildings and amenities of the Association.

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.

(Continued on next page)

SITE ITEMS

Entry Monument and Signage. The Association maintains an entry monument at the main entrance to the property. The monument is made of painted wood with painted wood supports. The monument was observed to be in good condition overall.

To keep the monument fresh and appealing, we recommend regularly cleaning, repairing, and refinishing the monument as needed and replacement every 10 to 15 years.

Other small miscellaneous signs are not considered in this study and should be replaced using other funds.

Mailboxes. Cluster mailboxes are located throughout the community. The mailboxes were observed to be in good condition overall.

Mailboxes should be maintained to the extent that rust does not develop on the structure or pedestal, and all mail slot doors remain intact with operable hinges and locks. Our replacement estimate assumes that these units will be replaced with fiberglass or composite units in the future.

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Asphalt Paths. The Association is responsible for asphalt paths at the office, tot lot, and mailbox clusters throughout the community. The asphalt paths were observed to be in good condition overall.

Asphalt paths are typically constructed on native soil. As a result, defects can begin to develop in a few years, leading to costly repairs, early replacement, and tripping hazards. Additionally, paths typically do not have proper edge confinement and support resulting in longitudinal cracking along the edges of the path. Compacted soil or gravel along the edges of the path can mitigate this problem. Lastly, tree root damage is a common issue with asphalt paths, and some communities have had success with a process called root trimming.

As a rule of thumb, asphalt should be overlaid when approximately 5% of the surface area is cracked or otherwise deteriorated.

To maintain the condition of the pavement throughout the community and to ensure the longest life of the asphalt, we recommend a systematic and comprehensive maintenance program that includes:

- **Cleaning.** Long-term exposure to oil or gas breaks down asphalt. Because this asphalt pavement is generally not used for long-term parking, it is unlikely that frequent cleaning will be necessary. When necessary, spill areas should be cleaned or patched if deterioration has penetrated the asphalt. This is a maintenance activity, and we have assumed that it will not be funded by Reserves.
- **Crack Repair.** All cracks should be repaired with an appropriate compound to prevent water infiltration through the asphalt into the base. This repair should be done annually. Crack repair is normally considered a maintenance activity and is not funded by Reserves. Areas of extensive cracking or deterioration that cannot be made watertight should be cut out and patched.
- **Seal Coating.** The asphalt should be seal coated every five to seven years. For this maintenance, activity to be effective in extending the life of the asphalt, cleaning, and crack repair should be performed first.

Sheds. The Association owns two (2) sheds on the property. One is used as the property management office and another is used for storage purposes located near the upper tot lot. The sheds were observed to be in good condition overall.

We have assumed that the components of the shed's exterior will be replaced as needed, and when a complete replacement is required, it will be replaced with one of a similar type and size.

Concrete Work. The concrete work includes the community mailbox cluster pads and pads at the exterior of the management office. The concrete work was observed to be in good condition overall.

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 over 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 one (1) segmental block retaining wall at the property. The retaining wall was observed to be in good condition overall.

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

The movement and displacement of retaining walls 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.

Segmental block retaining walls can have an extended useful life, and if stable, are likely to only require localized resetting of displaced blocks, typically near the top of the wall. This study assumes that resetting will be performed incrementally as needed.

When and if it becomes necessary to replace these walls, we recommend the Association considers one of the segmental block retaining wall systems. These systems are very low maintenance. If over time the wall experiences movement,

sections of the walls can be re-stacked at a very small portion of the cost of a new wall. Segmental block retaining walls can have a service life of 80 years or more.

Retaining wall replacement can be costly, and early planning on the part of the Association can help to reduce the impact of this work on the community's budget in the future. We, therefore, recommend having a Professional Engineer inspect the walls and develop preliminary replacement alternatives and recommendations based on the site conditions, replacement costs, and recommended replacement wall types. This information can then be incorporated into future updates to the Reserve Study.

Fencing. The Association maintains 4', 6', and 10' high chain-link fencing at the upper playground area. The fencing is new and was observed to be in good condition. Fencing systems have a large number of configurations and finishes that can usually be repaired as a maintenance activity by replacing individual components as they become damaged or weathered.

Protection from string machine damage during lawn maintenance can extend the useful life of some fence types. Protection from this type of damage is typically provided by applying herbicides around post bases or installing protective sheathing.

Chain link fencing can have a useful life of 40 years or more. Periodic weed control may be required to protect and maintain the fence.

The Association maintains steel fence posts and fasteners that are embedded in concrete or masonry.

As part of normal maintenance, we recommend the following:

- Lift or remove ornamental base covers, if applicable.
- Remove the existing caulk completely.
- Clean, prime, and paint all posts.
- Apply an appropriate caulk around each post base.
- Tool and shape caulking to shed water from the post.
- Reinstall base covers, and seal and paint all joints.

Fence posts can have an extended useful life if these simple maintenance activities are performed. If left unattended, the pressure from expansive post rust can crack and damage the supporting material.

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 online, 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 (2) dry detention ponds on the property. The detention ponds were observed to be well-maintained and in good condition overall.

1Typical 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 fore-bay • 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.

RECREATION ITEMS

Tot Lots. The community maintains two (2) tot lots on the property. These tot lots include play structures, swingsets, wood borders, and a wood chip surface. The facilities are in generally good condition with minor wear. The wood chip surface was observed to be in good condition overall and providing adequate coverage.

The safety of each individual piece of playground equipment, as well as the layout of the entire play area, should be considered when evaluating a playground for safety. The installation and maintenance of the protective surfacing under and around all equipment is crucial. Please note that the evaluation of the equipment and these facilities for safety is beyond the scope of this work.

Information for playground design and safety can be found in the "Public Playground Safety Handbook", U.S. Consumer Product Safety Commission (Pub Number 325). For a link to this handbook, please see our website at www.mdareserves.com/resources/links/recreation.

Our estimates for playground equipment are based on comparing photos of the existing equipment with equipment of a similar size in manufacturers' catalogs. We use the pricing that is quoted by manufacturers for comparable equipment and added an additional 30% for the disposal of the old equipment and installation of new equipment.

Basketball Court. The community maintains a full asphalt basketball court. The court was observed to be in good condition overall.

Replacement of nets, hoops, and backstops is considered a maintenance activity and is therefore not included in the study. Repaving, color coating, and entire goal replacement are included.

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

1. COMMON INTEREST DEVELOPMENTS - AN OVERVIEW

Over the past 40 years, the responsibility for many services, facilities and infrastructure around 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 approximately 500 Community Associations in the United States. According to the 1990 U.S. Census, there were roughly 130,000 Community Associations. The Community Associations Institute (CAI), a national trade association, estimates in 2020 that there were more than 350,000 communities with over 75 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 issues. Although Community Associations have succeeded in solving many short-term issues, many Associations still fail to properly plan for the significant 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 invariably exposed to the burden of special assessments, major increases in Association fees, and often 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 major repair or replacement, a general view of the physical condition of these components, and an effective financial plan to fund projected periodic replacements or major repairs. The Replacement Reserve Study consists of the following:

Replacement Reserve Study Introduction. The introduction provides a description of the property, an Executive Summary of the Funding Recommendations, Level of Reserve Study service, and a statement of the Purpose of the Replacement Reserve Study. It also lists documents and site evaluations upon which the Replacement Reserve Study is based, and provides the Credentials of the Reserve Analyst.

Section A Replacement Reserve Analysis. Many components that are owned by the Association have a limited life and require periodic replacement. Therefore, it is essential that the Association have a financial plan that provides funding for the timely replacement of these components in order to protect the safety, appearance, and ultimately, the property value of the home sin the community. In conformance with National Reserve Study Standards, a Replacement Reserve Analysis evaluates the current funding of Replacement Reserves as reported by the Association and recommends annual funding of Replacement Reserves using the Threshold Cash Flow Method. See definition below.

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. Replacement Reserve Inventory includes estimates of the Normal Economic Life (NEL) and the Remaining Economic Life (REL) for those components whose replacement is scheduled for funding from Replacement Reserves.

The Replacement Reserve Inventory also provides information about those components which are excluded from the Replacement Reserve Inventory and whose replacement is not 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. The observed condition of the major 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 at the time of 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.).

3. METHODS OF ANALYSIS

The Replacement Reserve industry generally recognizes two different methods of accounting for Replacement Reserve Analysis, the Cash Flow Method and the Component Method. Due to the difference in accounting methodologies, these methods lead to different calculated values for the Recommended Annual Funding to the Reserves. A brief description is included below:

Cash Flow Threshold Method. This Reserve Study uses the Threshold Cash Flow Method, sometimes referred to as the "Pooling Method." It calculates the minimum constant annual funding to reserves (Minimum Annual Deposit) required to meet projected expenditures without allowing total reserves on hand to fall below the predetermined Minimum Balance, or Threshold, in any year.

Component Method. The Component Method of calculating Reserve Funding needs is based upon an older mathematical model. Instead of calculating total funding based on yearly funding requirements, the Component method treats each component as its own “line item” budget that can only be used for that component. As a result, the Component Method is typically more conservative requiring greater Annual Reserve Funding levels.

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 parties responsible for maintaining the community after acceptance of our proposal. Upon submission of the initial Study, the Study should be reviewed by the Board of Directors and the individuals responsible for maintaining the community. We depend upon the Association for correct information, documentation, and drawings. We also look to the Association representative to help us fashion the Reserve Study so that it reflects what the community hopes to accomplish in the coming years.

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 regular 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 Threshold Method, above.

Component Analysis. See Component Method, above.

Contingency. An allowance for unexpected requirements. The “Threshold” used in the Cash Flow Method is a predetermined minimum balance that serves the same purpose as a “contingency”. However, IRS Guidelines do not allow for a “contingency” line item in the inventory. Therefore, it is built into the mathematical model as a “Threshold”.

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.

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 Balance. Otherwise referred to as the Threshold, this amount is used in the Cash Flow Threshold Method only. Normally derived using the average annual expenditure over the study period, this is the minimum amount held in reserves in the Peak Year.

National Reserve Study Standards. A set of Standards developed by the Community Associations Institute in 1995 (and updated in 2017) which establishes the accepted methods of Reserve Calculation and stipulates what data must be included in the Reserve Study for each component listed in the inventory. These Standards can be found at CAIonline.org.

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.)

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. The Reserve Study must cover a minimum of 20 years to comply with the National Reserve Study Standards. However, your study covers a 40-year period.

Peak Year. In the Cash Flow Threshold Method, a year in which the reserves on hand are projected to fall to the established threshold level. See Minimum Balance, above.

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.

Replacement Reserve Study. An analysis of all of the components of the common property of a Community Association for which 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, Normal Economic Life, and Remaining Economic Life. The objective of the study is to calculate a Recommended Annual Funding 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				

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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

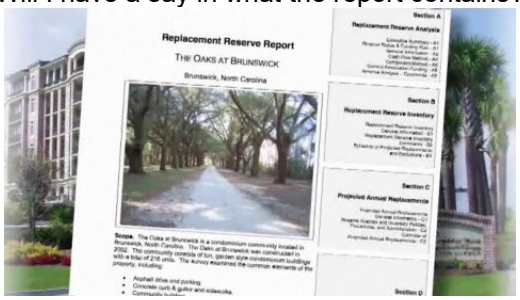
What is my role as a community Board Member?
Will a Reserve Study meet my needs?

https://youtu.be/aARD1B1Oa3o

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

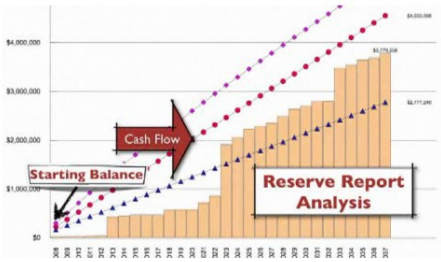
https://youtu.be/diZfM1IyJYU

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?

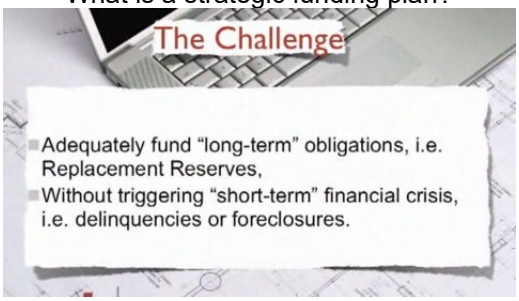


https://youtu.be/SePdwVDvHWI

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