

LEVEL 2 REPLACEMENT RESERVE REPORT FY 2023 PLANTATION LAKES



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PLANTATION LAKES

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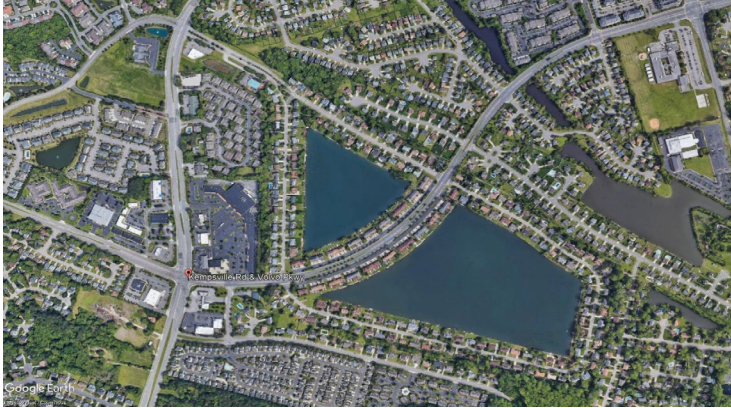
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REPLACEMENT RESERVE REPORT

PLANTATION LAKES

CHESAPEAKE, VIRGINIA

April 14, 2022



Description. Plantation Lakes is a Homeowner's Association located in Chesapeake, Virginia. Constructed in 1984, the community consists of 296 Single-family Homes containing 296 units. The survey examined the common elements of the property, including:

- Entry Monument, Signage, and Private Roadways
- Sidewalks, Curbs and Gutters
- Fencing and Mailboxes
- Stormwater Management and Bulkheads

EXECUTIVE SUMMARY

This Reserve Study has been prepared for the Plantation Lakes for the Fiscal Year 2023 covering the period from January 1, 2023 to December 31, 2023. The Replacement Reserves Starting Balance as of January 1, 2023 are proposed to be \$220,589. The reported Current Annual Funding for Reserves is \$8,200. The Recommended Annual Reserve Funding level for 2023 is \$19,344.

It is important to note that the Current Annual Funding in 2022 of \$8,200 is still significantly lower than the recommended funding of \$14,376 from the previous study in 2018. Additional inventory for the Dog Park adds more future funding obligations.

Also, as shown on Page A.1, the Current Annual Reserve Funding Level adequately funds the Reserves for the near future. However, the Board will want to begin increasing their Reserve Funding sooner rather than later. The high inflation rate in the construction industry will make it increasingly more difficult to make up the shortfall the longer the Association waits.

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

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Overview, Standard Terms, and Definitions
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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.

March 1, 2022	\$278,756
10 months contribution	\$6,833
Full mail box replacements with associated concrete pads	\$65,000
FY 2023 opening balance	\$220,589

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 MillerDodson 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 Plantation Lakes (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.

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 April 14, 2022 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 Beverly O'Quinn, CMCA, AMS who provided very helpful insight into the current operations of the property.

Analyst's Credentials. Mr. Philip Pointon holds a Bachelors Degree in Architecture from Virginia Polytechnic Institute and State University and a Masters Degree from Old Dominion University in Engineering Management and is a graduate of the Army Management Staff College. He has been a Registered Professional Architect in the States of Virginia and Hawaii since 1990 and has served in many design, management, and construction capacities as an architect since 1987. Mr. Pointon is a Reserve Specialist as accredited by the Community Association Institute for Miller+Dodson Associates.

Respectfully Submitted,



Philip Pointon
Philip Pointon, RS

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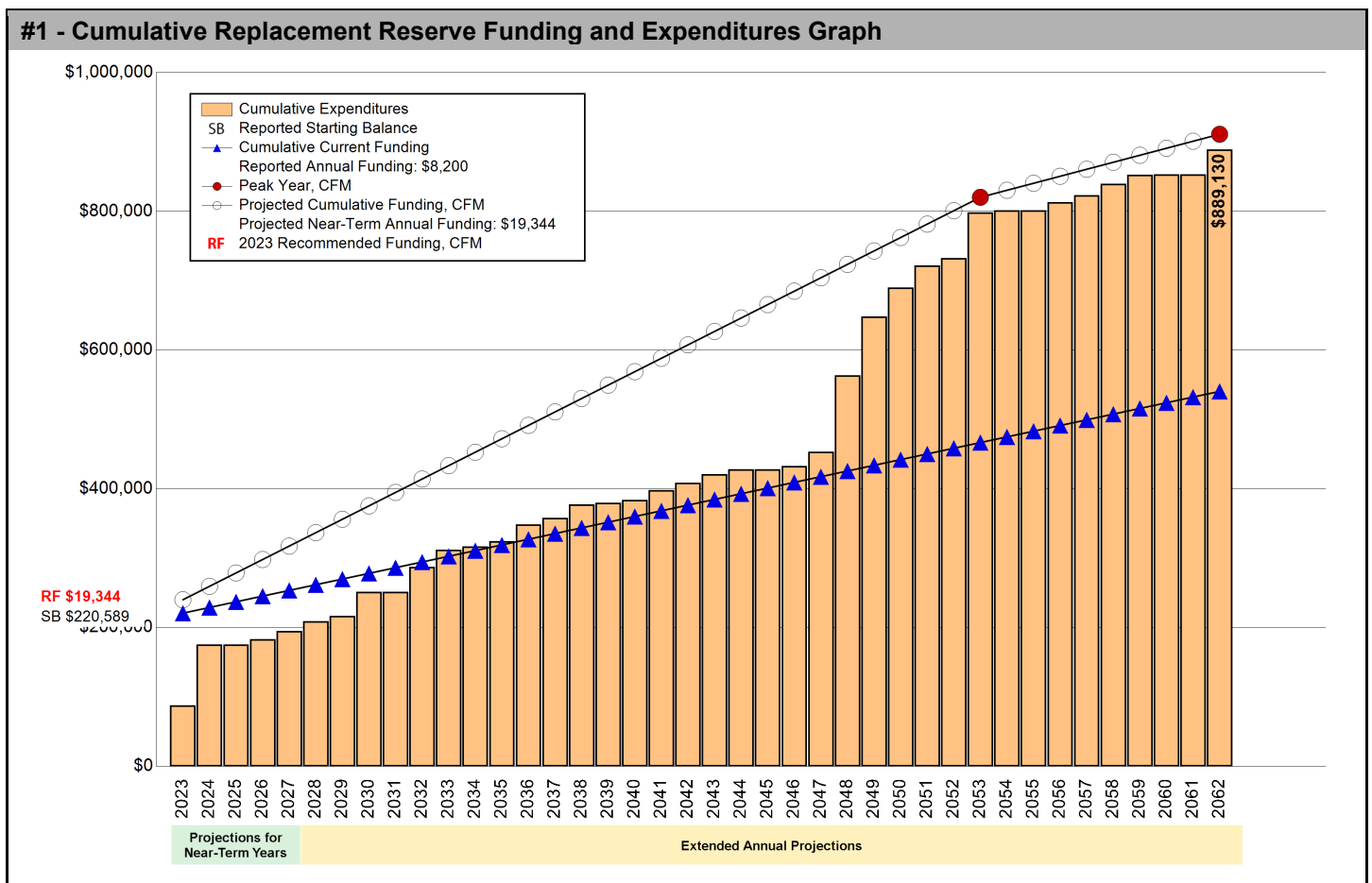
SECTION A - FINANCIAL ANALYSIS

The Plantation Lakes Replacement Reserve Analysis uses the Cash Flow Method (CFM) to calculate Replacement Reserve funding for the periodic replacement of the 28 Projected Replacements identified in the Replacement Reserve Inventory.

\$19,344 RECOMMENDED REPLACEMENT RESERVE FUNDING FOR THE STUDY YEAR, 2023
\$5.45 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.

Plantation Lakes reports a Starting Balance of \$220,589 and Annual Funding totaling \$8,200, which is inadequate to fund projected replacements starting in 2033. See Page A.3 for a more detailed evaluation.



It is important to note that the Current Annual Reserve Funding for 2022 is still significantly lower than the Recommended Annual Reserve Funding of \$14,376 from the previous study in 2018.

Also, as shown above, the Current Annual Reserve Funding Level adequately funds the Reserves for the near future. However, the Board will want to begin increasing their Reserve Funding sooner rather than later. The high inflation rate in the construction industry will make it increasingly more difficult to make up the shortfall the longer the Association waits.

REPLACEMENT RESERVE ANALYSIS - GENERAL INFORMATION

The Plantation Lakes 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.

2023 | 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, 2023.

40 Years | STUDY PERIOD

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

\$220,589 | STARTING BALANCE

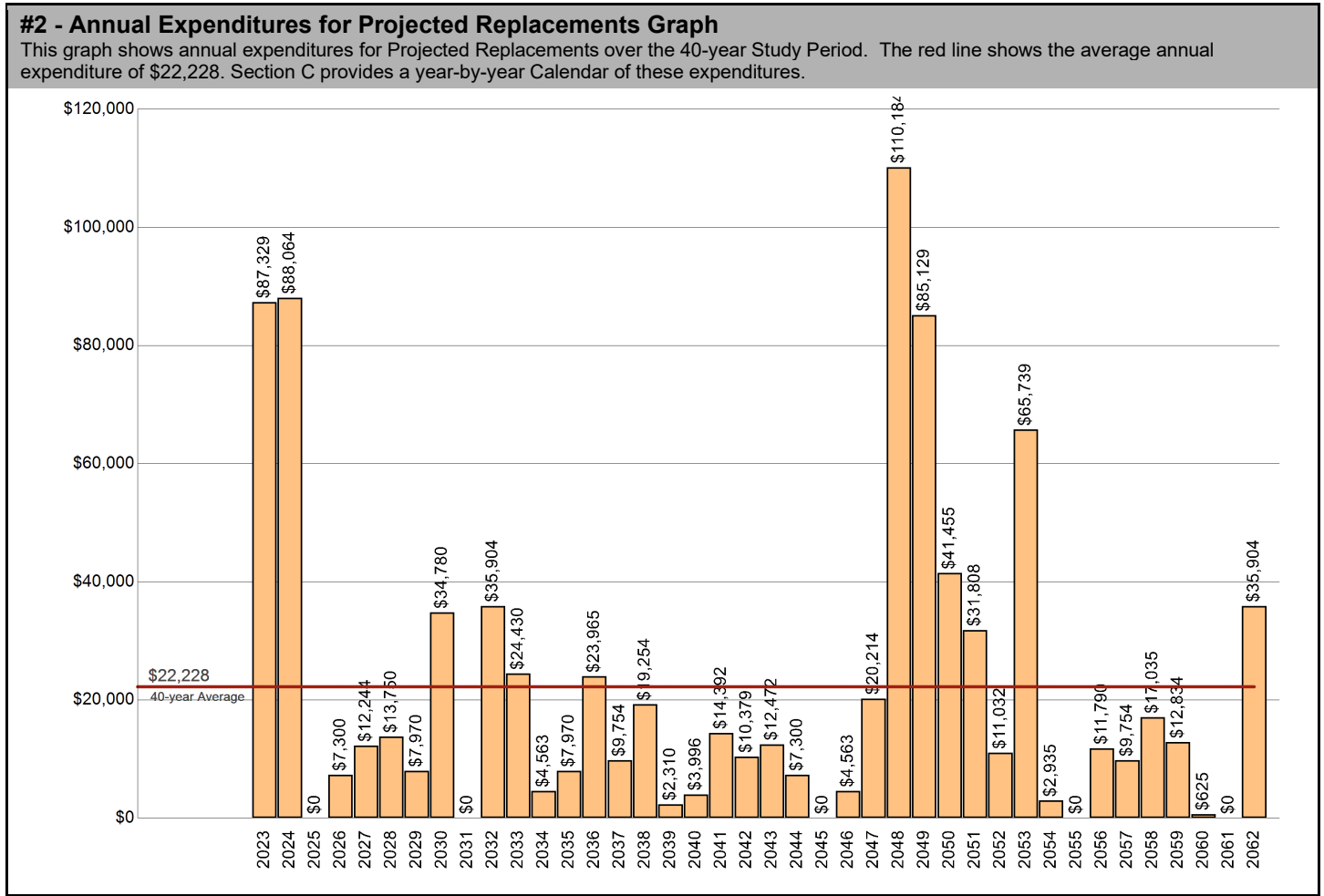
The Association reports Replacement Reserves on Deposit totaling \$220,589 at the start of the Study Year.

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).

\$889,130 | REPLACEMENT RESERVE INVENTORY - PROJECTED REPLACEMENTS

The Plantation Lakes Replacement Reserve Inventory identifies 28 items that will require periodic replacement, which are to be funded from Replacement Reserves. We estimate the cost of these replacements will be \$889,130 over the 40-year Study Period. The Projected Replacements are divided into 1 major categories starting on Page B.3. Pages B.1-B.2 provide detailed information on the Replacement Reserve Inventory.



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 \$889,130 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	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Starting Balance	\$220,589									
Projected Replacements	(\$87,329)	(\$88,064)		(\$7,300)	(\$12,244)	(\$13,750)	(\$7,970)	(\$34,780)		(\$35,904)
Annual Deposit	\$8,200	\$8,200	\$8,200	\$8,200	\$8,200	\$8,200	\$8,200	\$8,200	\$8,200	\$8,200
End of Year Balance	\$141,460	\$61,596	\$69,796	\$70,696	\$66,652	\$61,102	\$61,332	\$34,752	\$42,952	\$15,247
Cumulative Expenditures	(\$87,329)	(\$175,393)	(\$175,393)	(\$182,693)	(\$194,937)	(\$208,687)	(\$216,657)	(\$251,437)	(\$251,437)	(\$287,342)
Cumulative Receipts	\$228,789	\$236,989	\$245,189	\$253,389	\$261,589	\$269,789	\$277,989	\$286,189	\$294,389	\$302,589
Year	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
Projected Replacements	(\$24,430)	(\$4,563)	(\$7,970)	(\$23,965)	(\$9,754)	(\$19,254)	(\$2,310)	(\$3,996)	(\$14,392)	(\$10,379)
Annual Deposit	\$8,200	\$8,200	\$8,200	\$8,200	\$8,200	\$8,200	\$8,200	\$8,200	\$8,200	\$8,200
End of Year Balance	(\$983)	\$2,654	\$2,884	(\$12,881)	(\$14,435)	(\$25,489)	(\$19,599)	(\$15,395)	(\$21,587)	(\$23,767)
Cumulative Expenditures	(\$311,772)	(\$316,335)	(\$324,305)	(\$348,270)	(\$358,024)	(\$377,278)	(\$379,588)	(\$383,584)	(\$397,976)	(\$408,356)
Cumulative Receipts	\$310,789	\$318,989	\$327,189	\$335,389	\$343,589	\$351,789	\$359,989	\$368,189	\$376,389	\$384,589
Year	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052
Projected Replacements	(\$12,472)	(\$7,300)		(\$4,563)	(\$20,214)	(\$110,184)	(\$85,129)	(\$41,455)	(\$31,808)	(\$11,032)
Annual Deposit	\$8,200	\$8,200	\$8,200	\$8,200	\$8,200	\$8,200	\$8,200	\$8,200	\$8,200	\$8,200
End of Year Balance	(\$28,039)	(\$27,139)	(\$18,939)	(\$15,302)	(\$27,316)	(\$129,300)	(\$206,229)	(\$239,484)	(\$263,092)	(\$265,924)
Cumulative Expenditures	(\$420,828)	(\$428,128)	(\$428,128)	(\$432,691)	(\$452,905)	(\$563,089)	(\$648,218)	(\$689,673)	(\$721,481)	(\$732,513)
Cumulative Receipts	\$392,789	\$400,989	\$409,189	\$417,389	\$425,589	\$433,789	\$441,989	\$450,189	\$458,389	\$466,589
Year	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062
Projected Replacements	(\$65,739)	(\$2,935)		(\$11,790)	(\$9,754)	(\$17,035)	(\$12,834)	(\$625)		(\$35,904)
Annual Deposit	\$8,200	\$8,200	\$8,200	\$8,200	\$8,200	\$8,200	\$8,200	\$8,200	\$8,200	\$8,200
End of Year Balance	(\$323,463)	(\$318,198)	(\$309,998)	(\$313,588)	(\$315,143)	(\$323,978)	(\$328,612)	(\$321,037)	(\$312,837)	(\$340,541)
Cumulative Expenditures	(\$798,252)	(\$801,187)	(\$801,187)	(\$812,977)	(\$822,732)	(\$839,767)	(\$852,601)	(\$853,226)	(\$853,226)	(\$889,130)
Cumulative Receipts	\$474,789	\$482,989	\$491,189	\$499,389	\$507,589	\$515,789	\$523,989	\$532,189	\$540,389	\$548,589

EVALUATION OF CURRENT FUNDING

The evaluation of Current Funding (Starting Balance of \$220,589 & annual funding of \$8,200) 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 28 Projected Replacements identified in the Replacement Reserve Inventory and that the Association will continue Annual Funding of \$8,200 throughout the 40-year Study Period.

Annual Funding of \$8,200 is approximately 42 percent of the \$19,344 recommended Annual Funding calculated by the Cash Flow Method for 2023, the Study Year.

See the Executive Summary for the Current Funding Statement.

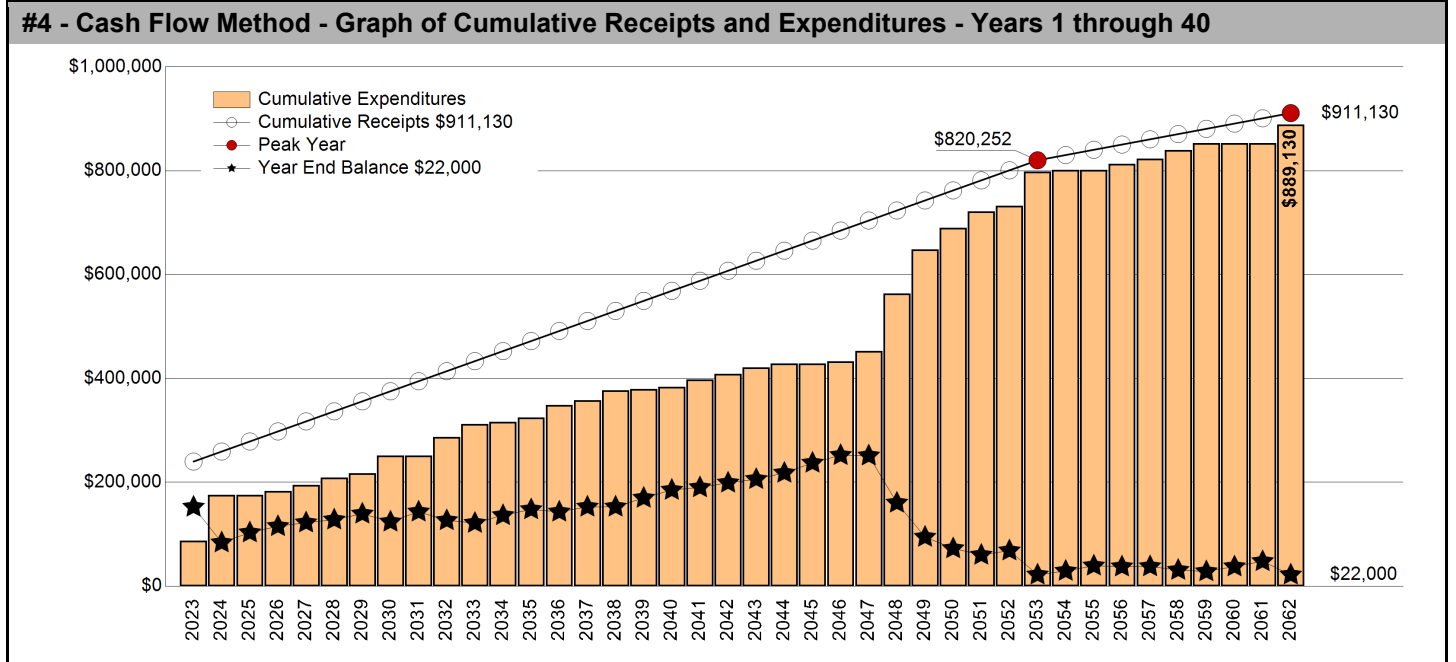
CASH FLOW METHOD FUNDING

\$19,344 RECOMMENDED REPLACEMENT RESERVE FUNDING FOR 2023

\$5.45 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 2053 with Replacement Reserves on Deposit dropping to the Minimum Balance after the completion of \$798,252 of replacements from 2023 to 2053. Recommended funding is anticipated to decline in 2054. Peak Years are identified in Chart 4 and Table 5.
- Threshold (Minimum Balance).** The calculations assume a Minimum Balance of \$22,000 will always be held in reserve, which is calculated by rounding the 12-month 40-year average annual expenditure of \$22,228 as shown on Graph #2.
- Cash Flow Method Study Period.** Cash Flow Method calculates funding for \$889,130 of expenditures over the 40-year Study Period. It does not include funding for any projects beyond 2062 and in 2062, the end of year balance will always be the Minimum Balance.



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

Year	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Starting Balance	\$220,589									
Projected Replacements	(\$87,329)	(\$88,064)		(\$7,300)	(\$12,244)	(\$13,750)	(\$7,970)	(\$34,780)		(\$35,904)
Annual Deposit	\$19,344	\$19,344	\$19,344	\$19,344	\$19,344	\$19,344	\$19,344	\$19,344	\$19,344	\$19,344
End of Year Balance	\$152,604	\$83,884	\$103,228	\$115,272	\$122,372	\$127,965	\$139,339	\$123,903	\$143,247	\$126,687
Cumulative Expenditures	(\$87,329)	(\$175,393)	(\$175,393)	(\$182,693)	(\$194,937)	(\$208,687)	(\$216,657)	(\$251,437)	(\$251,437)	(\$287,342)
Cumulative Receipts	\$239,933	\$259,277	\$278,621	\$297,965	\$317,309	\$336,653	\$355,997	\$375,341	\$394,685	\$414,029
Year	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
Projected Replacements	(\$24,430)	(\$4,563)	(\$7,970)	(\$23,965)	(\$9,754)	(\$19,254)	(\$2,310)	(\$3,996)	(\$14,392)	(\$10,379)
Annual Deposit	\$19,344	\$19,344	\$19,344	\$19,344	\$19,344	\$19,344	\$19,344	\$19,344	\$19,344	\$19,344
End of Year Balance	\$121,601	\$136,382	\$147,756	\$143,135	\$152,725	\$152,814	\$169,848	\$185,196	\$190,148	\$199,113
Cumulative Expenditures	(\$311,772)	(\$316,335)	(\$324,305)	(\$348,270)	(\$358,024)	(\$377,278)	(\$379,588)	(\$383,584)	(\$397,976)	(\$408,356)
Cumulative Receipts	\$433,373	\$452,717	\$472,061	\$491,405	\$510,749	\$530,093	\$549,437	\$568,781	\$588,125	\$607,469
Year	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052
Projected Replacements	(\$12,472)	(\$7,300)		(\$4,563)	(\$20,214)	(\$110,184)	(\$85,129)	(\$41,455)	(\$31,808)	(\$11,032)
Annual Deposit	\$19,344	\$19,344	\$19,344	\$19,344	\$19,344	\$19,344	\$19,344	\$19,344	\$19,344	\$19,344
End of Year Balance	\$205,984	\$218,028	\$237,372	\$252,153	\$251,283	\$160,443	\$94,658	\$72,547	\$60,084	\$68,395
Cumulative Expenditures	(\$420,828)	(\$428,128)	(\$428,128)	(\$432,691)	(\$452,905)	(\$563,089)	(\$648,218)	(\$689,673)	(\$721,481)	(\$732,513)
Cumulative Receipts	\$626,812	\$646,156	\$665,500	\$684,844	\$704,188	\$723,532	\$742,876	\$762,220	\$781,564	\$800,908
Year	1st Peak - 2053	2054	2055	2056	2057	2058	2059	2060	2061	2nd Peak - 2062
Projected Replacements	(\$65,739)	(\$2,935)		(\$11,790)	(\$9,754)	(\$17,035)	(\$12,834)	(\$625)		(\$35,904)
Annual Deposit	\$19,344	\$10,098	\$10,098	\$10,098	\$10,098	\$10,098	\$10,098	\$10,098	\$10,098	\$10,098
End of Year Balance	\$22,000	\$29,163	\$39,260	\$37,568	\$37,911	\$30,973	\$28,237	\$37,709	\$47,807	\$22,000
Cumulative Expenditures	(\$798,252)	(\$801,187)	(\$801,187)	(\$812,977)	(\$822,732)	(\$839,767)	(\$852,601)	(\$853,226)	(\$853,226)	(\$889,130)
Cumulative Receipts	\$820,252	\$830,350	\$840,447	\$850,545	\$860,643	\$870,740	\$880,838	\$890,935	\$901,033	\$911,130

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.

\$19,344 2023 - CASH FLOW METHOD RECOMMENDED FUNDING

The 2023 Study Year calculations have been made using current replacement costs (see Page B.2), modified by the Analyst for any project specific conditions.

\$20,872 2024 - INFLATION ADJUSTED FUNDING

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

- Replacement Reserves on Deposit totaling \$152,604 on January 1, 2024.
- All 2023 Projected Replacements listed on Page C.2 accomplished at a cost to Replacement Reserves less than \$87,329.
- Construction Cost Inflation of 7.90 percent in 2023.

The \$20,872 inflation adjusted funding in 2024 is a 7.89 percent increase over the non-inflation adjusted funding of \$19,344.

\$22,521 2025 - INFLATION ADJUSTED FUNDING

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

- Replacement Reserves on Deposit totaling \$149,703 on January 1, 2025.
- All 2024 Projected Replacements listed on Page C.2 accomplished at a cost to Replacement Reserves less than \$88,120.
- Construction Cost Inflation of 7.90 percent in 2024.

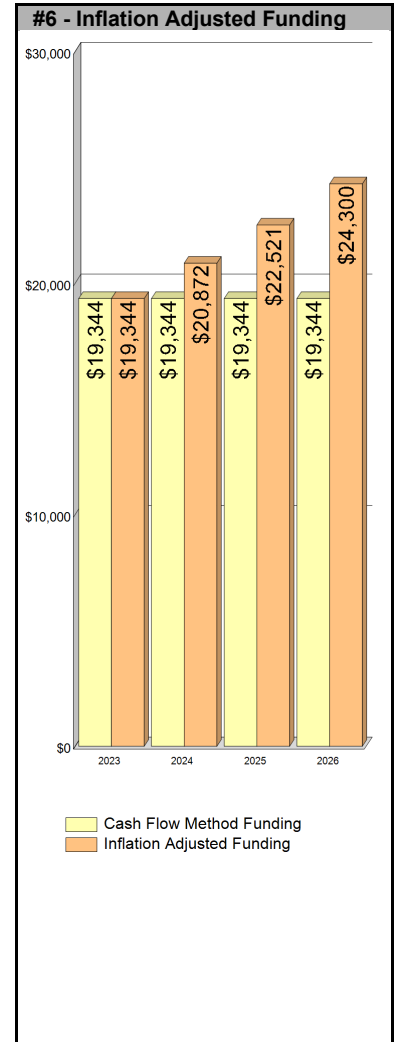
The \$22,521 inflation adjusted funding in 2025 is a 16.42 percent increase over the non-inflation adjusted funding of \$19,344.

\$24,300 2026 - INFLATION ADJUSTED FUNDING

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

- Replacement Reserves on Deposit totaling \$237,088 on January 1, 2026.
- No Expenditures from Replacement Reserves in 2025.
- Construction Cost Inflation of 7.90 percent in 2025.

The \$24,300 inflation adjusted funding in 2026 is a 25.62 percent increase over the non-inflation adjusted funding of \$19,344.



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 2024, 2025 and 2026 inflation-adjusted funding calculations above, the 7.90 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 2023, based on a 1.00 percent interest rate, we estimate the Association may earn \$1,866 on an average balance of \$186,597, \$1,512 on an average balance of \$151,153 in 2024, and \$1,934 on \$193,395 in 2025. The Association may elect to attribute 100 percent of the earned interest to Reserves, resulting in a reduction in the 2023 funding from \$19,344 to \$17,478 (a 9.64 percent reduction), \$20,872 to \$19,361 in 2024 (a 7.24 percent reduction), and \$22,521 to \$20,587 in 2025 (a 8.58 percent reduction).

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SECTION B - REPLACEMENT RESERVE INVENTORY

- **PROJECTED REPLACEMENTS.** Plantation Lakes - Replacement Reserve Inventory identifies 28 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 \$395,754. Cumulative Replacements totaling \$889,130 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 28 items included in the Plantation Lakes Replacement Reserve Inventory are divided into 1 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 MillerDodson 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 28 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 28 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		NEC - Normal Economic Life (yrs)						REL - Remaining Economic Life (yrs)	
PROJECTED REPLACEMENTS									
ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NEL	REL	REPLACEMENT COST (\$)		
1	Asphalt overlay of access roads PH 1	sf	44,338	\$1.92	25	none	\$85,129		
2	Asphalt sealcoat, PH 1	sf	44,338	\$0.22	5	4	\$9,754		
3	Asphalt overlay of Access Roads PH 2	sf	44,338	\$1.92	25	1	\$85,129		
4	Asphalt sealcoat, PH 2	sf	44,338	\$0.22	5	5	\$9,754		
5	Bulkhead at common area 1	ls	1	\$18,850.00	30	9	\$18,850		
6	Steps at common area 1	ls	1	\$2,490.00	20	4	\$2,490		
7	Bulkhead at common area 2	ls	1	\$18,850.00	30	13	\$18,850		
8	Steps and dock at common area 2	ls	1	\$4,490.00	20	13	\$4,490		
9	Concrete curb and gutter (20%)	ft	132	\$36.85	54	54	\$4,864		
10	Concrete curb and gutter (20%)	ft	132	\$36.85	54	18	\$4,864		
11	Concrete curb and gutter (20%)	ft	132	\$36.85	54	36	\$4,864		
12	Curb inlet, partial	ea	1	\$6,495.00	15	10	\$6,495		
13	Drop inlet, partial	ea	1	\$5,290.00	15	10	\$5,290		
Replacement Costs - Page Subtotal							\$260,824		

COMMENTS
<ul style="list-style-type: none"> 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. For concrete components and other roadway shoulder work, we have assumed that the Association will conduct concrete component replacement projects in conjunction with asphalt pavement, other concrete, or rights-of-way replacement projects. Item #1: Asphalt overlay of access roads PH 1 - Pavement is at the end of its normal life and should be milled and overlaid within 12 months. Item #3: Asphalt overlay of Access Roads PH 2 - Pavement is at the end of its normal life and should be milled and overlay within 12-18 months. Item #5: Bulkhead at common area 1 - Common Area #1 is the kayak launch at the corner of Plantation Lakes Circle and Volvo Parkway. Item #7: Bulkhead at common area 2 - Common Area #2 is the park with brick grille and dock at corner of Plantation Lakes Circle near Kempsville Road. Item #9: Concrete curb and gutter (20%) - A small amount of curb should be replaced with mailboxes in 2022 to create HC Access to the mailboxes and cost is deducted from the starting balance.

SITE ITEMS				NEC- Normal Economic Life (yrs)		REL- Remaining Economic Life (yrs)		
PROJECTED REPLACEMENTS								
ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NEL	REL	REPLACEMENT COST (\$)	
14	Entrance monument, main entrance - tuckpointing	sf	80	\$8.63	15	10	\$690	
15	Entrance sign, large, refurbish	ea	2	\$639.00	6	5	\$1,278	
16	Entrance sign, large, replace	ea	2	\$1,359.00	30	17	\$2,718	
17	Entrance monument, Volvo median - tuckpointing	sf	60	\$8.63	15	5	\$518	
18	Entrance sign, small, refurbish	ea	2	\$335.00	6	6	\$670	
19	Entrance sign, small, replace	ea	2	\$779.00	30	18	\$1,558	
20	Miscellaneous signage, partial allowance	ls	1	\$625.00	6	1	\$625	
21	Stormwater piping, partial	ft	30	\$77.00	15	1	\$2,310	
22	Mailboxes, replace	ea	17	\$2,695.00	30	30	\$45,815	
23	Ornamental fence	lf	900	\$37.95	20	7	\$34,155	
24	Fence, 4' vinyl coated chain link	ft	425	\$23.40	30	28	\$9,945	
25	Fence, 6' galvanized chain link	ft	825	\$26.50	30	28	\$21,863	
26	Fence, 6' galvanized chain link, partial allowance	ft	80	\$27.50	5	none	\$2,200	
27	Bench, metal (6')	ea	3	\$1,095.00	12	11	\$3,285	
28	Nature trail surfacing, wood mulch (3")	cy	100	\$73.00	3	3	\$7,300	
Replacement Costs - Page Subtotal							\$134,930	

COMMENTS
<ul style="list-style-type: none"> Item #21: Stormwater piping, partial - The curb and drop inlets and partial storm water piping replacement was added to the 2012 update based on observations on site and the condition of stormwater system components in isolated areas along the feeder roads adjacent to Volvo Parkway. Required work may exceed these amounts and requires more thorough investigation and engineering design for a more accurate correction and estimated cost. Item #22: Mailboxes, replace - The boxes are planned for full replacement in 2022 and cost is deducted from the starting balance. Item #24: Fence, 4' vinyl coated chain link - The dog park was constructed in 2019-20 on acquired real estate. Item #25: Fence, 6' galvanized chain link - Fence encloses a recently acquired natural area adjacent to the main entrance at Kempsville Road. Item #26: Fence, 6' galvanized chain link, partial allowance - An allowance for partial replacement every 5 years is added to address damage from tree limbs. Item #27: Bench, metal (6') - Benches at the dog park were added in Mar. 2020 for \$2,917.

VALUATION EXCLUSIONS								
Excluded Items								
ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NEL	REL	REPLACEMENT COST (\$)	
	Site lighting fixtures at entry signs							EXCLUDED
	Miscellaneous signage							EXCLUDED
	Brick grill at Common Area #2							EXCLUDED
	Dog waste stations							EXCLUDED
	Bulletin boards and kiosks							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	REPLACEMENT COST (\$)	UNIT REL	REL	REPLACEMENT COST (\$)
	Full Replacement of Masonry features						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.

GOVERNMENT EXCLUSIONS							
Excluded Items							
ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	REPLACEMENT COST (\$)	UNIT REL	REL	REPLACEMENT COST (\$)
	Government, Dredging of Lake #1 and #2						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.

SECTION C - CALENDAR OF PROJECTED ANNUAL REPLACEMENTS

GENERAL STATEMENT. The 28 Projected Replacements in the Plantation Lakes 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	2023 - Study Year	\$	Item	2024 - YEAR 1	\$
1	Asphalt overlay of access roads PH 1	\$85,129	3	Asphalt overlay of Access Roads PH 2	\$85,129
26	Fence, 6' galvanized chain link, partial allowance	\$2,200	20	Miscellaneous signage, partial allowance	\$625
			21	Stormwater piping, partial	\$2,310
Total Scheduled Replacements		\$87,329	Total Scheduled Replacements		\$88,064

Item	2025 - YEAR 2	\$	Item	2026 - YEAR 3	\$
No Scheduled Replacements			28	Nature trail surfacing, wood mulch (3")	\$7,300
Total Scheduled Replacements			Total Scheduled Replacements		\$7,300

Item	2027 - YEAR 4	\$	Item	2028 - YEAR 5	\$
2	Asphalt sealcoat, PH 1	\$9,754	4	Asphalt sealcoat, PH 2	\$9,754
6	Steps at common area 1	\$2,490	15	Entrance sign, large, refurbish	\$1,278
			17	Entrance monument, Volvo median - tuckpointing	\$518
			26	Fence, 6' galvanized chain link, partial allowance	\$2,200
Total Scheduled Replacements		\$12,244	Total Scheduled Replacements		\$13,750

Item	2029 - YEAR 6	\$	Item	2030 - YEAR 7	\$
18	Entrance sign, small, refurbish	\$670	20	Miscellaneous signage, partial allowance	\$625
28	Nature trail surfacing, wood mulch (3")	\$7,300	23	Ornamental fence	\$34,155
Total Scheduled Replacements		\$7,970	Total Scheduled Replacements		\$34,780

Item	2031 - YEAR 8	\$	Item	2032 - YEAR 9	\$
No Scheduled Replacements			2	Asphalt sealcoat, PH 1	\$9,754
			5	Bulkhead at common area 1	\$18,850
			28	Nature trail surfacing, wood mulch (3")	\$7,300
Total Scheduled Replacements			Total Scheduled Replacements		\$35,904

PROJECTED REPLACEMENTS

Item	2033 - YEAR 10	\$	Item	2034 - YEAR 11	\$
4	Asphalt sealcoat, PH 2	\$9,754	15	Entrance sign, large, refurbish	\$1,278
12	Curb inlet, partial	\$6,495	27	Bench, metal (6')	\$3,285
13	Drop inlet, partial	\$5,290			
14	Entrance monument, main entrance - tuckpointing	\$690			
26	Fence, 6' galvanized chain link, partial allowance	\$2,200			
Total Scheduled Replacements		\$24,430	Total Scheduled Replacements		\$4,563

Item	2035 - YEAR 12	\$	Item	2036 - YEAR 13	\$
18	Entrance sign, small, refurbish	\$670	7	Bulkhead at common area 2	\$18,850
28	Nature trail surfacing, wood mulch (3")	\$7,300	8	Steps and dock at common area 2	\$4,490
			20	Miscellaneous signage, partial allowance	\$625
Total Scheduled Replacements		\$7,970	Total Scheduled Replacements		\$23,965

Item	2037 - YEAR 14	\$	Item	2038 - YEAR 15	\$
2	Asphalt sealcoat, PH 1	\$9,754	4	Asphalt sealcoat, PH 2	\$9,754
			26	Fence, 6' galvanized chain link, partial allowance	\$2,200
			28	Nature trail surfacing, wood mulch (3")	\$7,300
Total Scheduled Replacements		\$9,754	Total Scheduled Replacements		\$19,254

Item	2039 - YEAR 16	\$	Item	2040 - YEAR 17	\$
21	Stormwater piping, partial	\$2,310	15	Entrance sign, large, refurbish	\$1,278
			16	Entrance sign, large, replace	\$2,718
Total Scheduled Replacements		\$2,310	Total Scheduled Replacements		\$3,996

Item	2041 - YEAR 18	\$	Item	2042 - YEAR 19	\$
10	Concrete curb and gutter (20%)	\$4,864	2	Asphalt sealcoat, PH 1	\$9,754
18	Entrance sign, small, refurbish	\$670	20	Miscellaneous signage, partial allowance	\$625
19	Entrance sign, small, replace	\$1,558			
28	Nature trail surfacing, wood mulch (3")	\$7,300			
Total Scheduled Replacements		\$14,392	Total Scheduled Replacements		\$10,379

PROJECTED REPLACEMENTS

Item	2043 - YEAR 20	\$	Item	2044 - YEAR 21	\$
4	Asphalt sealcoat, PH 2	\$9,754	28	Nature trail surfacing, wood mulch (3")	\$7,300
17	Entrance monument, Volvo median - tuckpointing	\$518			
26	Fence, 6' galvanized chain link, partial allowance	\$2,200			
Total Scheduled Replacements		\$12,472	Total Scheduled Replacements		\$7,300

Item	2045 - YEAR 22	\$	Item	2046 - YEAR 23	\$
No Scheduled Replacements			15	Entrance sign, large, refurbish	\$1,278
			27	Bench, metal (6')	\$3,285
Total Scheduled Replacements			Total Scheduled Replacements		\$4,563

Item	2047 - YEAR 24	\$	Item	2048 - YEAR 25	\$
2	Asphalt sealcoat, PH 1	\$9,754	1	Asphalt overlay of access roads PH 1	\$85,129
6	Steps at common area 1	\$2,490	4	Asphalt sealcoat, PH 2	\$9,754
18	Entrance sign, small, refurbish	\$670	12	Curb inlet, partial	\$6,495
28	Nature trail surfacing, wood mulch (3")	\$7,300	13	Drop inlet, partial	\$5,290
Total Scheduled Replacements		\$20,214	14	Entrance monument, main entrance - tuckpointing	\$690
			20	Miscellaneous signage, partial allowance	\$625
			26	Fence, 6' galvanized chain link, partial allowance	\$2,200
Total Scheduled Replacements		\$20,214	Total Scheduled Replacements		\$110,184

Item	2049 - YEAR 26	\$	Item	2050 - YEAR 27	\$
3	Asphalt overlay of Access Roads PH 2	\$85,129	23	Ornamental fence	\$34,155
Total Scheduled Replacements		\$85,129	28	Nature trail surfacing, wood mulch (3")	\$7,300
Total Scheduled Replacements		\$85,129	Total Scheduled Replacements		\$41,455

Item	2051 - YEAR 28	\$	Item	2052 - YEAR 29	\$
24	Fence, 4' vinyl coated chain link	\$9,945	2	Asphalt sealcoat, PH 1	\$9,754
25	Fence, 6' galvanized chain link	\$21,863	15	Entrance sign, large, refurbish	\$1,278
Total Scheduled Replacements		\$31,808	Total Scheduled Replacements		\$11,032

PROJECTED REPLACEMENTS

Item	2053 - YEAR 30	\$	Item	2054 - YEAR 31	\$
4	Asphalt sealcoat, PH 2	\$9,754	20	Miscellaneous signage, partial allowance	\$625
18	Entrance sign, small, refurbish	\$670	21	Stormwater piping, partial	\$2,310
22	Mailboxes, replace	\$45,815			
26	Fence, 6' galvanized chain link, partial allowance	\$2,200			
28	Nature trail surfacing, wood mulch (3")	\$7,300			
Total Scheduled Replacements		\$65,739	Total Scheduled Replacements		\$2,935

Item	2055 - YEAR 32	\$	Item	2056 - YEAR 33	\$
No Scheduled Replacements			8	Steps and dock at common area 2	\$4,490
			28	Nature trail surfacing, wood mulch (3")	\$7,300
No Scheduled Replacements			Total Scheduled Replacements		\$11,790

Item	2057 - YEAR 34	\$	Item	2058 - YEAR 35	\$
2	Asphalt sealcoat, PH 1	\$9,754	4	Asphalt sealcoat, PH 2	\$9,754
			15	Entrance sign, large, refurbish	\$1,278
			17	Entrance monument, Volvo median - tuckpointing	\$518
			26	Fence, 6' galvanized chain link, partial allowance	\$2,200
			27	Bench, metal (6')	\$3,285
Total Scheduled Replacements		\$9,754	Total Scheduled Replacements		\$17,035

Item	2059 - YEAR 36	\$	Item	2060 - YEAR 37	\$
11	Concrete curb and gutter (20%)	\$4,864	20	Miscellaneous signage, partial allowance	\$625
18	Entrance sign, small, refurbish	\$670			
28	Nature trail surfacing, wood mulch (3")	\$7,300			
Total Scheduled Replacements		\$12,834	Total Scheduled Replacements		\$625

Item	2061 - YEAR 38	\$	Item	2062 - YEAR 39	\$
No Scheduled Replacements			2	Asphalt sealcoat, PH 1	\$9,754
			5	Bulkhead at common area 1	\$18,850
			28	Nature trail surfacing, wood mulch (3")	\$7,300
No Scheduled Replacements			Total Scheduled Replacements		\$35,904

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SECTION D - CONDITION ASSESSMENT

General Comments. MillerDodson Associates conducted a Reserve Study at Plantation Lakes in April 2022. Plantation Lakes is in generally mixed condition for a homeowner's association constructed in 1984. 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.

SITE ITEMS

Asphalt Pavement. The Association is responsible for the two feeder roads parallel to Volvo Parkway at the townhomes within the community; other roadways are maintained by the City. The Association maintains an inventory of 88,676 square feet of asphalt pavement.



The roadways do receive light duty traffic, but the ingress and egress areas display considerable wear and deterioration. Despite seal coating and partial crack filling, the age of the asphalt is well past the normal economic life and a full overlay with partial milling should be anticipated within one to two years.

As a rule of thumb, asphalt should be overlaid when approximately 5% of the surface area is cracked or otherwise deteriorated. The normal service life of asphalt pavement is typically 18 to 20 years. Due to the light duty of these roads and off-street parking we have increased the normal life for future replacement to 25-years. BUT THIS REQUIRES proper milling and overlay and regular seal coating to achieve this life expectancy.

In order 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 from 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 from 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 5 to 7 years. For this maintenance activity to be effective in extending the life of the asphalt, cleaning and crack repair should be performed first. The pricing used is based on recent contracts for a 2-inch overlay, which reflects the current local market for this work.



For seal coating, several different products are available. The older, more traditional seal coating products are simply paints. They coat the surface of the asphalt, and they are minimally effective. However, the newer coating materials, such as those from Total Asphalt Management, Asphalt Restoration Technologies, Inc., and others, are penetrating. They are engineered, so to speak, to 'remoisturize' the pavement. Asphalt pavement is intended to be flexible. Over time, the volatile chemicals in the pavement dry, the pavement becomes brittle, and degradation follows in the forms of cracking and potholes. Remoisturizing the pavement can return its flexibility and extend the life of the pavement.

Lastly, the resource links provided on our website may provide insight into the general terms and concerns, including maintenance related advantages and disadvantages, which may help the Association better manage the asphalt pavements throughout the community: <http://mdareserves.com/resources/links/site-components>.

(Continued Next Page)

Bulkhead at Kayak Launch Area. The common area #1 near the intersection of Volvo Parkway and Plantation Lakes Circle consists of timber access steps and a small length of bulkhead. The previous timber access steps are in marginal condition. Bulkhead was previously reported to have been replaced in 2006 and remains in fair overall condition. Water levels and erosion should be monitored to ensure undermining, or overturning does not occur. The launch area should be kept clean of trash and other debris to ensure safety for users. Cleaning of sand is not practical but additional sand can be added periodically for the benefit of users if warranted by Owner interest.



Picnic Area, Bulkhead, and Recreational Dock. The Common Area #2 along Plantation Lakes Circle consists of a shaded grass picnic area with a brick masonry barbecue grill, a small length of timber bulkhead with a recreational dock of pressure treated lumber. The bulkhead is believed to be in good condition and should last its full useful life. The decking and kayak launch appear to have been refurbished or partially replaced several years ago. The timber steps were replaced about 6 years ago and are in good condition. The gravel walk surfacing at the steps shows displacement and possible erosion that has exposed the filter fabric underlayment. This should be corrected as needed using operating funds.

The brick grill is in fair overall condition and as a long-lived component is excluded at the request of the Board. The signage and the bulletin board kiosk are excluded as low-value items per the Board.



Concrete Work. The concrete work includes the community curbs, along the feeder roads serving the townhomes parallel to Volvo Parkway. The Association maintains an inventory of approximately 3,300 linear feet of concrete curb and gutter at the feeder roads. We typically model for curb replacement when the asphalt pavement is milled and overlaid. The overall condition of the concrete work is mixed with several isolated areas of general deterioration, including differential settlement, cracking, spalling, and scale.

The Association intends to replace mailboxes within the next 12 months, and it is highly encouraged that the pads for the mailboxes be enlarged, and a portion of curb and gutter be removed to install an ADA compliant curb cut and a pad with a large enough turning radius to be fully accessible and to comply with the Fair Housing Act. None of the current mailbox locations are considered compliant and the mailbox replacement is an ideal opportunity to make them compliant.

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.



Entry Monument and Signage. The Association maintains three entry monuments. The main entrance at Plantation Lake Circle and Kempsville Road and two located in the median of Volvo Parkway. The monuments are made of brick masonry and are in good to fair overall condition, with no visible open masonry joints or loose and broken masonry units. The monument signage panels are acrylic or other synthetic material and in fair overall condition. These are expected to have a useful life of 10 to 15 years if not refurbished periodically. We have included funds for refurbishing as it can extend the life of the signs.



Full replacement of the brick monuments is excluded as a long-lived item. However, previous vehicle damage to the main sign has required substantial partial replacement in the past. We recommend repointing and replacement of defective areas of the masonry as needed and these should be examined annually. The Association may want to consider applying a coat of Siloxane or other appropriate breathable sealant to mitigate water penetration and further degradation of the masonry work. For additional information, please see the appropriate links on our web site at <http://mdareserves.com/resources/links/building-exterior>.

The bulletin board kiosks and the miscellaneous signage can be replaced as needed using operation funds, but we have included a small partial allowance for parking and traffic signage on the private roads and at the Common Areas around Lakes 1 and 2 as well as the new dog park.

Wood posts show a variety of age-related deterioration as well as damage around the base from grounds keeping.



Mailboxes. The cluster mailboxes located throughout the community townhome areas are original and are in poor overall condition. The community has a series of cluster mailboxes for the townhouse type residences spaced intermittently along the Volvo Parkway feeder roads. The mailboxes were previously reported to have been powder coated in 2008 and the normal and remaining life was increased at that time to reflect this level of maintenance. However, the life of the boxes and pedestals are no longer capable of being extended by maintenance or repair. At least one box was reported to have fallen over from the corroded pedestal and base.

The Association indicates they intend to replace all mailboxes in 2022. No firm bids for replacement have been obtained yet. The budget cost used in the study assumes a labor cost of \$500 for each mailbox cluster.

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

See the recommendations for enlarging the concrete pads and providing handicap accessibility by replacing curb and gutter with an ADA ramp for each mail location.



Ornamental Fencing. The Association maintains aluminum picket ornamental fencing that is in generally marginal to fair overall condition based primarily on age. This fence is located along the main entrance from Kempsville Road. Fencing systems have a large number of configurations and finishes and can usually be repaired as a maintenance activity by replacing individual components as they become damaged or weathered. Portions of the fence are largely obstructed from visual examination due to the hedge.

Previously damaged portions of the fence have been replaced and will be replaced as needed using operating funds. 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.

Aluminum fencing can have a useful life of 40 years or more. Periodic cleaning and touch-up painting may be required to keep the fence attractive. For more information on fencing, visit our website link to the American Fence Association.



Chain Link Fencing. The Association maintains a 42-inch chain link fence around the dog park established in 2019-2020 adjacent to the Kempsville Road entrance. There is also a long perimeter of 6-foot tall chain link to enclose the green space and natural area on the recently acquired parcel. These new amenities were purchased as a capital improvement and are in very good overall condition. The total reported cost of the fence in 2019-20 is approximately \$22,240 and includes gates.

The fences are added to the inventory for this update. The 6-foot fence has multiple damaged sections from tree limbs. In addition to a full fence replacement in the future a partial allowance of 10% every 5 years is anticipated to replace the damage sections as they occur.

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 if not damaged or allowed to become overgrown with vegetation. Periodic weed control may be required to protect and maintain the fence.



Nature Trail. The recently acquired parcel of land has a wooded area that has been partially cleared to create a walking path loop around the area. The path is on grade and has a wood mulch surface. The mulch will deteriorate over time through natural decomposition and the native vegetation will try to reclaim the space so a regular program of clearing and replenishment of the mulch is anticipated to be performed every 1-3 years.

Some surfaces of wood chips may be available from time to time from commercial tree companies. However, the large volume that will be needed and the equipment to place it will require some costs as either replacement reserves or operating funds.



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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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, homeowners 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 in 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 CAOnline.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				

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/pYSMZ013VjQ>

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?



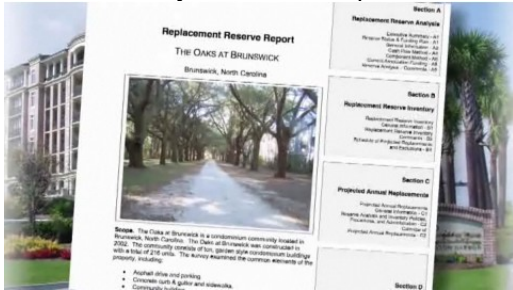
<https://youtu.be/aARD1B1Oa3o>

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



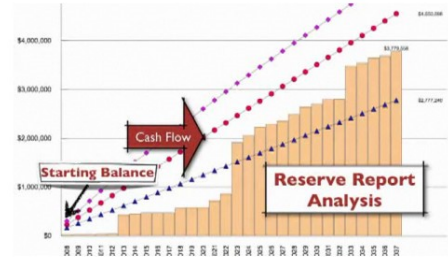
<https://youtu.be/diZfM1IyJYU>

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?



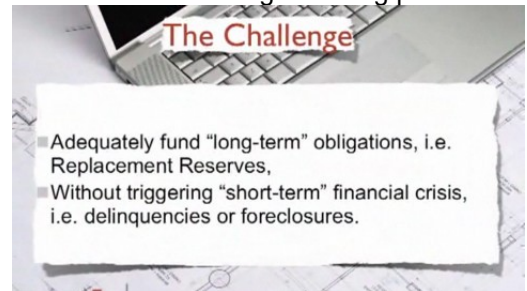
<https://youtu.be/SePdWVDvHWI>

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



<https://youtu.be/W8CDLwRlv68>

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



<https://youtu.be/hIxV9X1tlcA>

