

# LEVEL 1 REPLACEMENT RESERVE REPORT FY 2022 A SAMPLE HOMEOWNER'S ASSOCIATION



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A SAMPLE HOMEOWNER'S ASSOCIATION

Community Management by:

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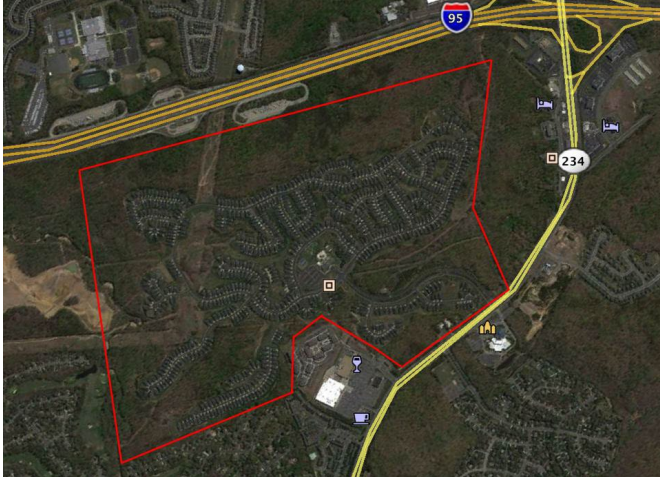
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# REPLACEMENT RESERVE REPORT

## A SAMPLE HOMEOWNER'S ASSOCIATION

ANNAPOLIS, MARYLAND  
January 18, 2022



**Description.** A Sample Homeowner's Association is a Homeowner's Association located in Annapolis, Maryland. Constructed between 2021 and 2022, the community consists of containing 801 units. The survey examined the common elements of the property, including:

- Asphalt roads and parking.  
Concrete sidewalks, and curb and gutter.
- Retaining walls, fencing, and railings.
- Swimming pools, courts, and other amenities.
- Community building, gatehouse, and maintenance buildings.

### EXECUTIVE SUMMARY

This Reserve Study has been prepared for the A Sample Homeowner's Association for the Fiscal Year 2022 covering the period from January 1, 2022 to December 31, 2022. The Replacement Reserves Starting Balance as of January 1, 2022 are reported to be \$4,201,358. The reported Current Annual Funding for Reserves is \$409,896. The Recommended Annual Reserve Funding level for 2022 is \$410,092.

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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**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](http://mdareserves.com).

**Purpose.** The purpose of this Replacement Reserve Study is to provide A Sample Homeowner's Association (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 January 18, 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 not used in the development of this study. We recommend the Association assemble and maintain a library of site and building plans of the entire facility. Record drawings should be scanned into an electronic format for safe storage and ease of distribution. Upon request for a nominal fee, Miller+Dodson can provide scanning services.

**Acknowledgment.** Miller+Dodson Associates would like to acknowledge the assistance and input of Ms. Liz Meusel who provided very helpful insight into the current operations of the property.

Mr. Peter B. Miller, RS, is a Founder and Principal of the firm Miller+Dodson Associates. Peter is widely recognized as a leading authority in the field of Reserve Studies and Strategic Reserve Planning for Community Associations. A graduate of the College of Architecture and Urban Studies at Virginia Tech, Peter began his work with Reserve Studies for community associations in the "Condo Boom" of the late 1970's. A popular speaker on the topic of Reserve Studies, he authored and presented Community Association Institute's (CAI) Webinar on Reserves and Reserve Funding. He frequently serves as an Expert Witness in matters concerning Replacement Reserve Studies and Reserve Funding. He has held the professional designation of Reserve Specialist (RS) since 1998.

Currently, Peter serves as a Member of the CAI National Board of Trustees. He was the 2020 Chair of CAI's Business Partners Council, and is a member of the CAI Foundation for Community Association Research (FCAR). Peter has previously served in leadership positions with several CAI Chapters. He served on the CAI National Reserves Standards Committee from 1997 to 2003 and again in 2016-2017 for the review and updating of the National Standards. Peter was selected in 2019 to serve on the Reserve Guidelines Review Committee for the Commonwealth of Virginia Department of Professional and Occupational Regulation, and was a Subject Matter consultant in the drafting of the Maryland Reserve Study Legislation.

Respectfully Submitted,

**millerdodson**  
CAPITAL RESERVE CONSULTANTS

*Peter Miller*

Peter B. Miller, RS

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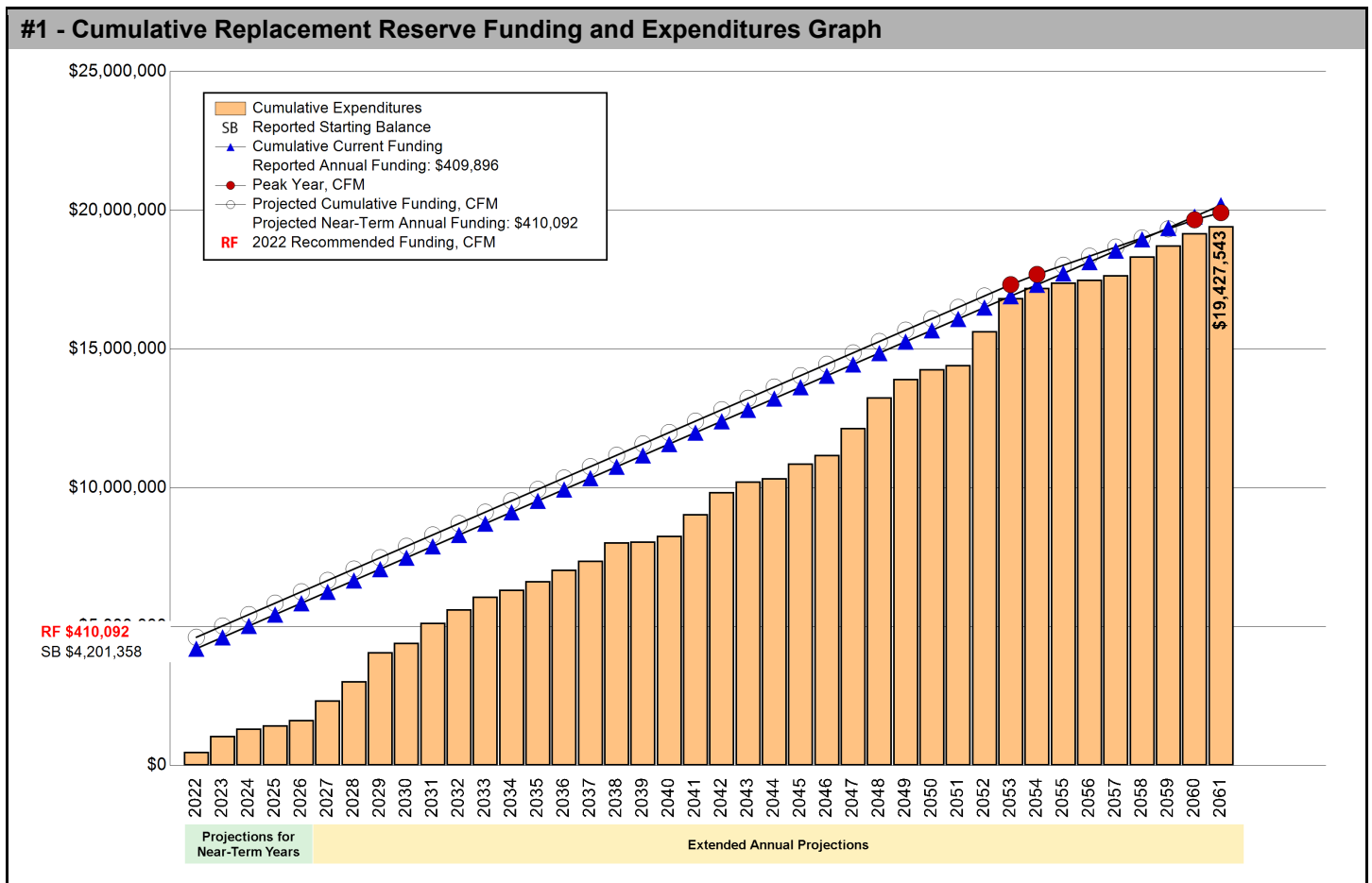
## SECTION A - FINANCIAL ANALYSIS

The A Sample Homeowner's Association Replacement Reserve Analysis uses the Cash Flow Method (CFM) to calculate Replacement Reserve funding for the periodic replacement of the 220 Projected Replacements identified in the Replacement Reserve Inventory.

**\$410,092** RECOMMENDED REPLACEMENT RESERVE FUNDING FOR THE STUDY YEAR, 2022  
 \$42.66 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.

A Sample Homeowner's Association reports a Starting Balance of \$4,201,358 and Annual Funding totaling \$409,896. The reported Current Annual Funding of \$409,896 adequately funds projected replacements for the near-term years. See Page A.3 for a more detailed evaluation.



**REPLACEMENT RESERVE ANALYSIS - GENERAL INFORMATION**

The A Sample Homeowner's Association Replacement Reserve Analysis calculations of recommended funding of Replacement Reserves by the Cash Flow Method (CFM) and the evaluation of the Current Funding are based upon the same Study Year, Study Period, Beginning Balance, Replacement Reserve Inventory and Level of Service.

**2022 | STUDY YEAR**

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

**40 Years | STUDY PERIOD**

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

**\$4,201,358 | STARTING BALANCE**

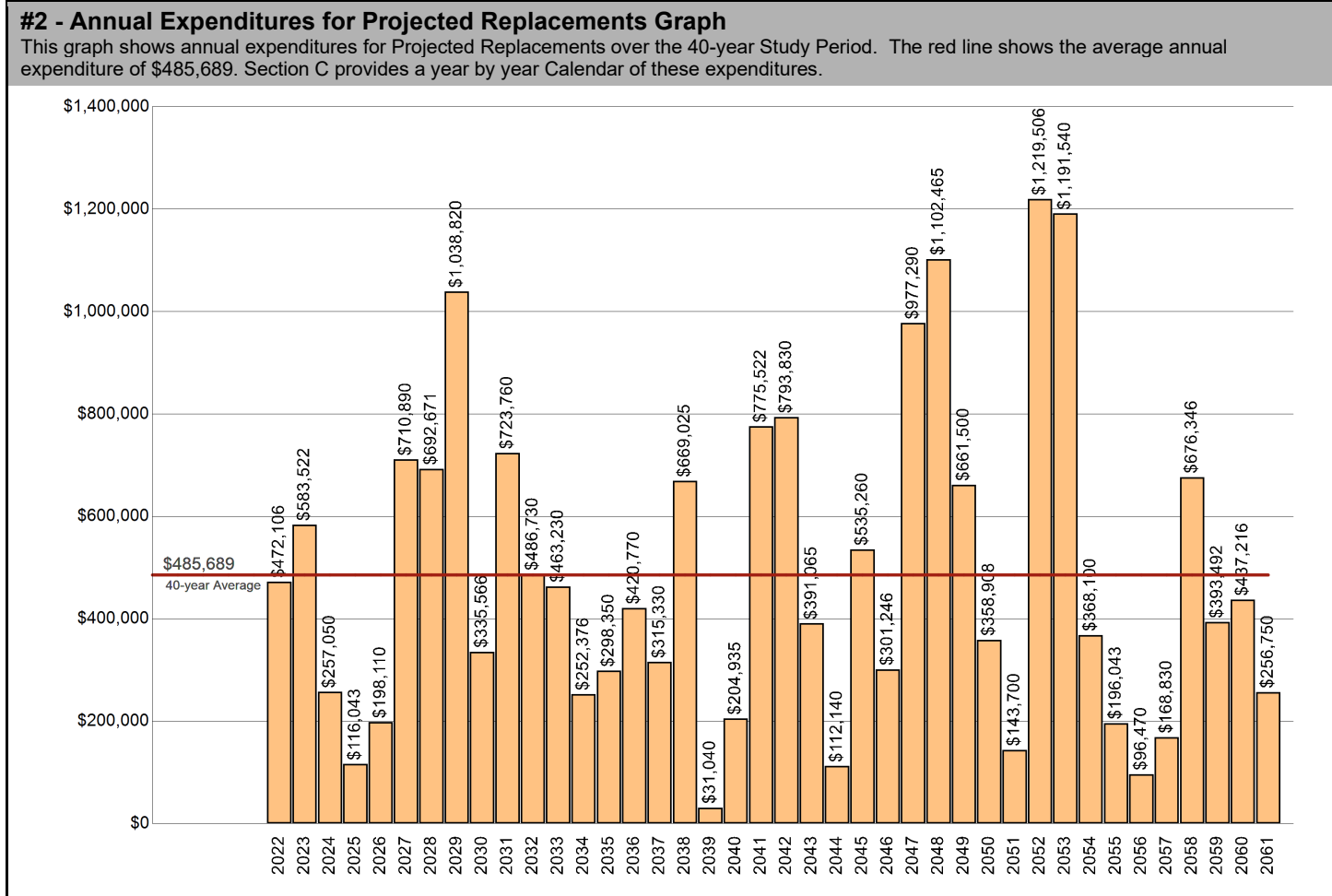
The Association reports Replacement Reserves on Deposit totaling \$4,201,358 at the start of the Study Year.

**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).

**\$19,427,543 | REPLACEMENT RESERVE INVENTORY - PROJECTED REPLACEMENTS**

The A Sample Homeowner's Association Replacement Reserve Inventory identifies 220 items that will require periodic replacement, that are to be funded from Replacement Reserves. We estimate the cost of these replacements will be \$19,427,543 over the 40-year Study Period. The Projected Replacements are divided into 4 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 \$19,427,543 of Projected Expenditures over the 40-year Study Period and the impact of the Association continuing to fund Replacement Reserves at the current level are detailed in Table 3.

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

Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Starting Balance	\$4,201,358									
Projected Replacements	(\$472,106)	(\$583,522)	(\$257,050)	(\$116,043)	(\$198,110)	(\$710,890)	(\$692,671)	(\$1,038,820)	(\$335,566)	(\$723,760)
Annual Deposit	\$409,896	\$409,896	\$409,896	\$409,896	\$409,896	\$409,896	\$409,896	\$409,896	\$409,896	\$409,896
End of Year Balance	\$4,139,148	\$3,965,522	\$4,118,368	\$4,412,221	\$4,624,007	\$4,323,013	\$4,040,238	\$3,411,314	\$3,485,644	\$3,171,780
Cumulative Expenditures	(\$472,106)	(\$1,055,628)	(\$1,312,678)	(\$1,428,721)	(\$1,626,831)	(\$2,337,721)	(\$3,030,392)	(\$4,069,212)	(\$4,404,778)	(\$5,128,538)
Cumulative Receipts	\$4,611,254	\$5,021,150	\$5,431,046	\$5,840,942	\$6,250,838	\$6,660,734	\$7,070,630	\$7,480,526	\$7,890,422	\$8,300,318
Year	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
Projected Replacements	(\$486,730)	(\$463,230)	(\$252,376)	(\$298,350)	(\$420,770)	(\$315,330)	(\$669,025)	(\$31,040)	(\$204,935)	(\$775,522)
Annual Deposit	\$409,896	\$409,896	\$409,896	\$409,896	\$409,896	\$409,896	\$409,896	\$409,896	\$409,896	\$409,896
End of Year Balance	\$3,094,946	\$3,041,612	\$3,199,132	\$3,310,678	\$3,299,804	\$3,394,370	\$3,135,241	\$3,514,097	\$3,719,059	\$3,353,432
Cumulative Expenditures	(\$5,615,268)	(\$6,078,498)	(\$6,330,874)	(\$6,629,224)	(\$7,049,994)	(\$7,365,324)	(\$8,034,349)	(\$8,065,389)	(\$8,270,323)	(\$9,045,846)
Cumulative Receipts	\$8,710,214	\$9,120,110	\$9,530,006	\$9,939,902	\$10,349,798	\$10,759,694	\$11,169,590	\$11,579,486	\$11,989,382	\$12,399,278
Year	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051
Projected Replacements	(\$793,830)	(\$391,065)	(\$112,140)	(\$535,260)	(\$301,246)	(\$977,290)	(\$1,102,465)	(\$661,500)	(\$358,908)	(\$143,700)
Annual Deposit	\$409,896	\$409,896	\$409,896	\$409,896	\$409,896	\$409,896	\$409,896	\$409,896	\$409,896	\$409,896
End of Year Balance	\$2,969,498	\$2,988,329	\$3,286,085	\$3,160,721	\$3,269,371	\$2,701,977	\$2,009,408	\$1,757,804	\$1,808,792	\$2,074,988
Cumulative Expenditures	(\$9,839,676)	(\$10,230,741)	(\$10,342,881)	(\$10,878,141)	(\$11,179,387)	(\$12,156,677)	(\$13,259,142)	(\$13,920,642)	(\$14,279,550)	(\$14,423,250)
Cumulative Receipts	\$12,809,174	\$13,219,070	\$13,628,966	\$14,038,862	\$14,448,758	\$14,858,654	\$15,268,550	\$15,678,446	\$16,088,342	\$16,498,238
Year	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061
Projected Replacements	(\$1,219,506)	(\$1,191,540)	(\$368,100)	(\$196,043)	(\$96,470)	(\$168,830)	(\$676,346)	(\$393,492)	(\$437,216)	(\$256,750)
Annual Deposit	\$409,896	\$409,896	\$409,896	\$409,896	\$409,896	\$409,896	\$409,896	\$409,896	\$409,896	\$409,896
End of Year Balance	\$1,265,378	\$483,734	\$525,530	\$739,384	\$1,052,810	\$1,293,876	\$1,027,426	\$1,043,829	\$1,016,509	\$1,169,655
Cumulative Expenditures	(\$15,642,756)	(\$16,834,296)	(\$17,202,396)	(\$17,398,438)	(\$17,494,908)	(\$17,663,738)	(\$18,340,084)	(\$18,733,577)	(\$19,170,793)	(\$19,427,543)
Cumulative Receipts	\$16,908,134	\$17,318,030	\$17,727,926	\$18,137,822	\$18,547,718	\$18,957,614	\$19,367,510	\$19,777,406	\$20,187,302	\$20,597,198

**EVALUATION OF CURRENT FUNDING**

The evaluation of Current Funding (Starting Balance of \$4,201,358 & annual funding of \$409,896), 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 220 Projected Replacements identified in the Replacement Reserve Inventory and that the Association will continue Annual Funding of \$409,896 throughout the 40-year Study Period.

Annual Funding of \$409,896 is approximately 100 percent of the \$410,092 recommended Annual Funding calculated by the Cash Flow Method for 2022, the Study Year.

See the Executive Summary for the Current Funding Statement.

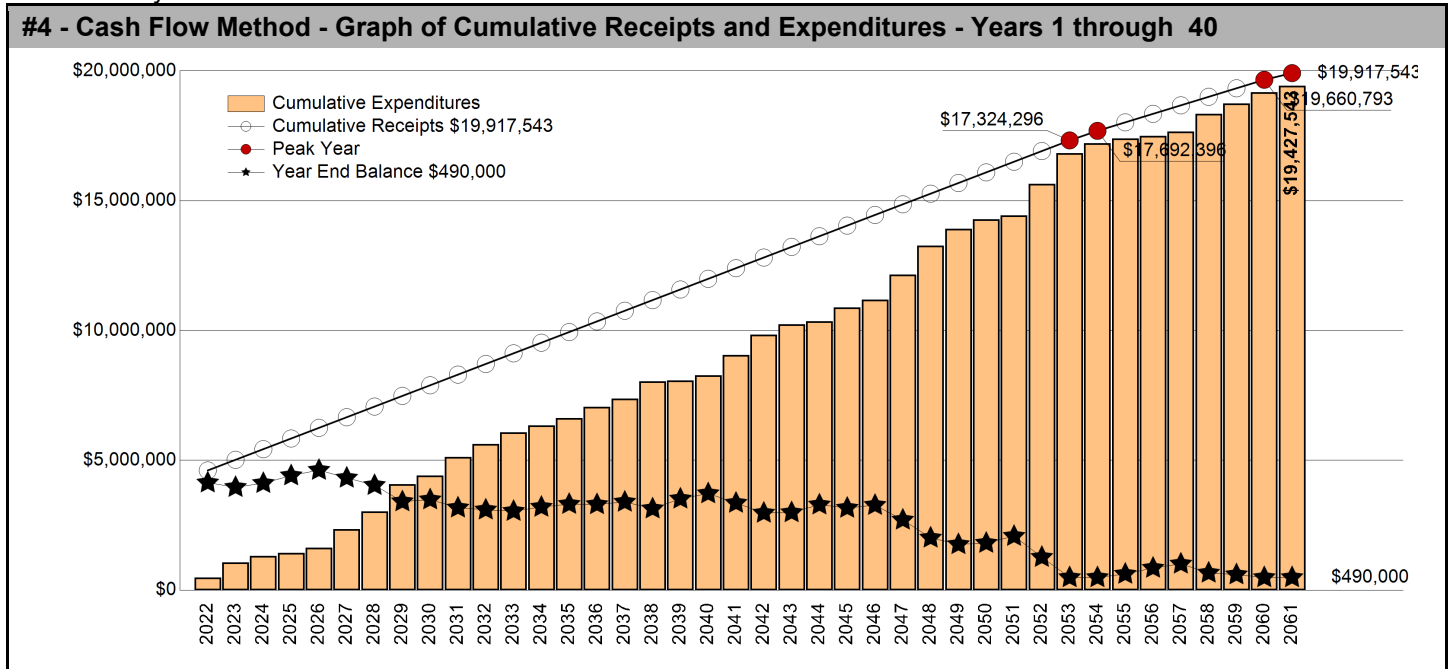
# CASH FLOW METHOD FUNDING

## **\$410,092** RECOMMENDED REPLACEMENT RESERVE FUNDING FOR 2022

\$42.66 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 \$16,834,296 of replacements from 2022 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 \$490,000 will always be held in reserve, which is calculated by rounding the 12-month 40-year average annual expenditure of \$485,689 as shown on Graph #2.
- Cash Flow Method Study Period.** Cash Flow Method calculates funding for \$19,427,543 of expenditures over the 40-year Study Period. It does not include funding for any projects beyond 2061 and in 2061, the end of year balance will always be the Minimum Balance.



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

Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Starting Balance	\$4,201,358									
Projected Replacements	(\$472,106)	(\$583,522)	(\$257,050)	(\$116,043)	(\$198,110)	(\$710,890)	(\$692,671)	(\$1,038,820)	(\$335,566)	(\$723,760)
Annual Deposit	\$410,092	\$410,092	\$410,092	\$410,092	\$410,092	\$410,092	\$410,092	\$410,092	\$410,092	\$410,092
End of Year Balance	\$4,139,344	\$3,965,913	\$4,118,955	\$4,413,004	\$4,624,986	\$4,324,188	\$4,041,609	\$3,412,881	\$3,487,406	\$3,173,738
Cumulative Expenditures	(\$472,106)	(\$1,055,628)	(\$1,312,678)	(\$1,428,721)	(\$1,626,831)	(\$2,337,721)	(\$3,030,392)	(\$4,069,212)	(\$4,404,778)	(\$5,128,538)
Cumulative Receipts	\$4,611,450	\$5,021,542	\$5,431,633	\$5,841,725	\$6,251,817	\$6,661,909	\$7,072,001	\$7,482,092	\$7,892,184	\$8,302,276
Year	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
Projected Replacements	(\$486,730)	(\$463,230)	(\$252,376)	(\$298,350)	(\$420,770)	(\$315,330)	(\$669,025)	(\$31,040)	(\$204,935)	(\$775,522)
Annual Deposit	\$410,092	\$410,092	\$410,092	\$410,092	\$410,092	\$410,092	\$410,092	\$410,092	\$410,092	\$410,092
End of Year Balance	\$3,097,100	\$3,043,962	\$3,201,678	\$3,313,419	\$3,302,741	\$3,397,503	\$3,138,570	\$3,517,622	\$3,722,779	\$3,357,348
Cumulative Expenditures	(\$5,615,268)	(\$6,078,498)	(\$6,330,874)	(\$6,629,224)	(\$7,049,994)	(\$7,365,324)	(\$8,034,349)	(\$8,065,389)	(\$8,270,323)	(\$9,045,846)
Cumulative Receipts	\$8,712,368	\$9,122,460	\$9,532,552	\$9,942,643	\$10,352,735	\$10,762,827	\$11,172,919	\$11,583,011	\$11,993,102	\$12,403,194
Year	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051
Projected Replacements	(\$793,830)	(\$391,065)	(\$112,140)	(\$535,260)	(\$301,246)	(\$977,290)	(\$1,102,465)	(\$661,500)	(\$358,908)	(\$143,700)
Annual Deposit	\$410,092	\$410,092	\$410,092	\$410,092	\$410,092	\$410,092	\$410,092	\$410,092	\$410,092	\$410,092
End of Year Balance	\$2,973,610	\$2,992,637	\$3,290,589	\$3,165,421	\$3,274,266	\$2,707,068	\$2,014,695	\$1,763,287	\$1,814,471	\$2,080,862
Cumulative Expenditures	(\$9,839,676)	(\$10,230,741)	(\$10,342,881)	(\$10,878,141)	(\$11,179,387)	(\$12,156,677)	(\$13,259,142)	(\$13,920,642)	(\$14,279,550)	(\$14,423,250)
Cumulative Receipts	\$12,813,286	\$13,223,378	\$13,633,470	\$14,043,561	\$14,453,653	\$14,863,745	\$15,273,837	\$15,683,929	\$16,094,021	\$16,504,112
Year	2052	1st Peak - 2053	2nd Peak - 2054	2055	2056	2057	2058	2059	3rd Peak - 2060	4th Peak - 2061
Projected Replacements	(\$1,219,506)	(\$1,191,540)	(\$368,100)	(\$196,043)	(\$96,470)	(\$168,830)	(\$676,346)	(\$393,492)	(\$437,216)	(\$256,750)
Annual Deposit	\$410,092	\$410,092	\$368,100	\$328,066	\$328,066	\$328,066	\$328,066	\$328,066	\$328,066	\$256,750
End of Year Balance	\$1,271,448	\$490,000	\$490,000	\$622,024	\$853,620	\$1,012,856	\$664,576	\$599,150	\$490,000	\$490,000
Cumulative Expenditures	(\$15,642,756)	(\$16,834,296)	(\$17,202,396)	(\$17,398,438)	(\$17,494,908)	(\$17,663,738)	(\$18,340,084)	(\$18,733,577)	(\$19,170,793)	(\$19,427,543)
Cumulative Receipts	\$16,914,204	\$17,324,296	\$17,692,396	\$18,020,462	\$18,348,528	\$18,676,594	\$19,004,661	\$19,332,727	\$19,660,793	\$19,917,543

## 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.

### **\$410,092** 2022 - CASH FLOW METHOD RECOMMENDED FUNDING

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

### **\$419,524** 2023 - INFLATION ADJUSTED FUNDING

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

- Replacement Reserves on Deposit totaling \$4,139,344 on January 1, 2023.
- All 2022 Projected Replacements listed on Page C.2 accomplished at a cost to Replacement Reserves less than \$472,106.
- Construction Cost Inflation of 4.00 percent in 2022.

The \$419,524 inflation adjusted funding in 2023 is a 2.30 percent increase over the non-inflation adjusted funding of \$410,092.

### **\$429,173** 2024 - INFLATION ADJUSTED FUNDING

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

- Replacement Reserves on Deposit totaling \$4,025,458 on January 1, 2024.
- All 2023 Projected Replacements listed on Page C.2 accomplished at a cost to Replacement Reserves less than \$586,249.
- Construction Cost Inflation of 4.00 percent in 2023.

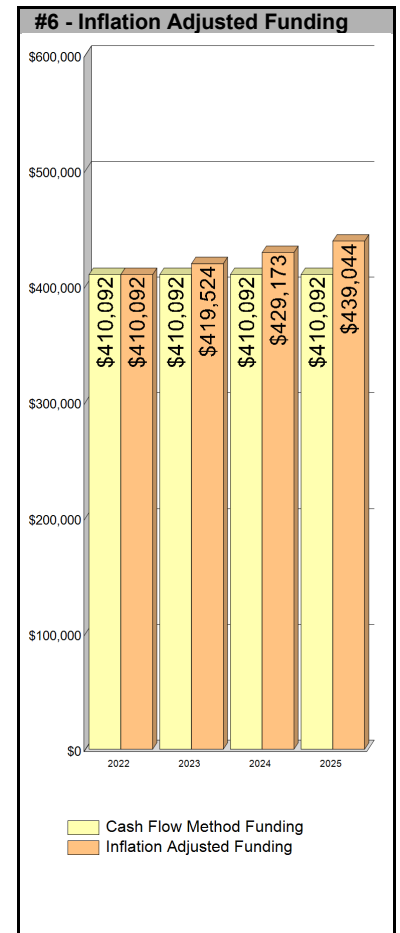
The \$429,173 inflation adjusted funding in 2024 is a 4.65 percent increase over the non-inflation adjusted funding of \$410,092.

### **\$439,044** 2025 - INFLATION ADJUSTED FUNDING

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

- Replacement Reserves on Deposit totaling \$4,353,508 on January 1, 2025.
- All 2024 Projected Replacements listed on Page C.2 accomplished at a cost to Replacement Reserves less than \$263,198.
- Construction Cost Inflation of 4.00 percent in 2024.

The \$439,044 inflation adjusted funding in 2025 is a 7.05 percent increase over the non-inflation adjusted funding of \$410,092.



### 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 2023, 2024 and 2025 inflation-adjusted funding calculations above, the 4.00 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 2022, based on a 1.00 percent interest rate, we estimate the Association may earn \$41,704 on an average balance of \$4,170,351, \$40,824 on an average balance of \$4,082,401 in 2023, and \$41,895 on \$4,189,483 in 2024. The Association may elect to attribute 100 percent of the earned interest to Reserves, resulting in a reduction in the 2022 funding from \$410,092 to \$368,388 (a 10.16 percent reduction), \$419,524 to \$378,700 in 2023 (a 9.73 percent reduction), and \$429,173 to \$387,278 in 2024 (a 9.76 percent reduction).

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## SECTION B - REPLACEMENT RESERVE INVENTORY

- **PROJECTED REPLACEMENTS.** A Sample Homeowner's Association - Replacement Reserve Inventory identifies 220 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 \$7,712,284. Cumulative Replacements totaling \$19,427,543 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 220 items included in the A Sample Homeowner's Association Replacement Reserve Inventory are divided into 4 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 220 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 220 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	Asphalt Pavement, rejuvenate	sf	1,084,000	\$0.20	6	2	\$216,800
2	Asphalt Pvmt, Mill & Overlay, Entry	sf	223,000	\$1.44	12	7	\$321,120
3	Asphalt pavement, mill and overlay, P1	sf	341,500	\$1.44	18	5	\$491,760
4	Asphalt pavement, mill and overlay, P2	sf	341,500	\$1.44	18	7	\$491,760
5	Asphalt pavement, mill and overlay, P3	sf	341,500	\$1.44	18	9	\$491,760
6	Full depth pavement (1% allowance)	sf	11,000	\$2.75	6	2	\$30,250
7	Concrete work (3%)	sf	4,200	\$8.50	6	3	\$35,700
8	Asphalt path, seal coat	sf	47,400	\$0.24	6	none	\$11,376
9	Asphalt path, repair and overlay (1/3)	sf	15,800	\$3.25	6	none	\$51,350
10	Asphalt path, root trim (allowance)	ft	1,600	\$5.00	6	none	\$8,000
11	Wooden bridge, structure	sf	415	\$45.00	30	16	\$18,675
12	Wooden bridge, railing	ft	92	\$25.00	15	3	\$2,300
13	Wooden bridge, PTL decking	sf	415	\$9.50	15	3	\$3,943
14	Steel bridge, structure	ea	240	\$140.00	50	36	\$33,600
15	Steel bridge, IPE decking	sf	240	\$28.00	25	11	\$6,720
Replacement Costs - Page Subtotal							\$2,215,114

COMMENTS

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 (\$)	
16	Reset pavers (20%)	sf	1,900	\$3.50	6	6	\$6,650	
17	Repoint site & building masonry (10%)	sf	1,100	\$15.00	10	10	\$16,500	
18	Entry signs, structure and sign	ea	2	\$7,500.00	15	1	\$15,000	
19	Entry fencing, picket	ft	100	\$36.00	20	6	\$3,600	
20	Entry fencing, rail	ft	1,600	\$34.00	20	6	\$54,400	
21	Entry fountain, lining	sf	1,100	\$8.00	15	11	\$8,800	
22	Entry fountain (repair allowance)	sf	220	\$25.00	10	10	\$5,500	
23	Entry fountain pump, rebuild	ea	1	\$3,500.00	10	10	\$3,500	
24	Entry fountain pump, replace & repipe	ea	1	\$18,000.00	20	15	\$18,000	
25	Flag poles	ea	9	\$1,800.00	30	16	\$16,200	
	Mailbox and post						EXCLUDED	
26	Landscape lighting, ground, bollard, post	ea	1	\$15,000.00	15	5	\$15,000	
27	Site and parking light, heads	ea	70	\$450.00	20	6	\$31,500	
28	Site and parking light, poles	ea	60	\$2,100.00	40	26	\$126,000	
29	Irrigation controller	ea	3	\$10,000.00	8	4	\$30,000	
30	Foundation planting (allowance)	ls	1	\$53,000.00	5	1	\$53,000	
Replacement Costs - Page Subtotal							\$403,650	

COMMENTS
<ul style="list-style-type: none"> <li>Mailbox and post - [01/18/2022] excluded per board</li> </ul>



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 (\$)	
31	Guardhouse, roof, shingles	sf	1,150	\$4.80	20	6	\$5,520	
32	Guardhouse, trim, cupola & columns	ls	1	\$15,000.00	30	16	\$15,000	
33	Guardhouse, windows & doors	ls	1	\$5,000.00	30	16	\$5,000	
34	Guardhouse, HVAC	ls	1	\$2,800.00	15	12	\$2,800	
35	Guardhouse, refurbish interior	ls	1	\$1,000.00	20	6	\$1,000	
36	Entry gates, steel (25%)	ea	2	\$7,500.00	10	10	\$15,000	
37	Gate actuators	ea	6	\$3,000.00	15	13	\$18,000	
38	Barrier arm, sensor eye, loop det.	ea	2	\$4,000.00	15	13	\$8,000	
39	Key pad system, Liftmaster	ea	1	\$6,500.00	15	13	\$6,500	
40	Gate video security (allowance)	ea	1	\$6,500.00	10	8	\$6,500	
41	Community entry gazebo	ea	1	\$5,000.00	15	1	\$5,000	
42	Large gazebo, roof, shingles	ea	3	\$2,400.00	20	6	\$7,200	
43	Large gazebo, trim, cupola & columns	ea	3	\$12,000.00	20	6	\$36,000	
44	Reset CMU retaining wall (5%)	sf	3,100	\$35.00	30	28	\$108,500	
45	RW Railing, aluminum (20%)	ft	1,350	\$75.00	30	14	\$101,250	
46	RW Railing, aluminum (20%)	ft	1,350	\$75.00	30	20	\$101,250	
47	RW Railing, aluminum (20%)	ft	1,350	\$75.00	30	26	\$101,250	
48	RW Railing, aluminum (20%)	ft	1,350	\$75.00	30	32	\$101,250	
49	RW Railing, aluminum (20%)	ft	1,350	\$75.00	30	38	\$101,250	
Replacement Costs - Page Subtotal							\$746,270	

COMMENTS

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 (\$)
50	Dredge ponds (allowance)	cy	1,200	\$60.00	20	10	\$72,000
51	Front pond liner (5% repair allowance)	sf	1,000	\$12.00	10	none	\$12,000
52	Front pond liner, replace	sf	19,800	\$7.00	40	25	\$138,600
53	Pond fountains	ea	4	\$7,000.00	10	10	\$28,000
54	Pond bubbles	ea	12	\$1,000.00	5	5	\$12,000
55	Air compressor	ea	3	\$800.00	5	5	\$2,400
56	Pond transfer pump	ea	1	\$5,000.00	5	5	\$5,000
57	Stormwater management, system (allowance)	ls	1	\$450,000.00	30	30	\$450,000
58	French drain (reconstruction)	ft	500	\$30.00	3	none	\$15,000
59	Water & Sanitary lines & Mains (allowance)	ls	1	\$80,000.00	50	33	\$80,000
60	Maintenance Shed roof, shingles	sf	900	\$4.50	20	6	\$4,050
61	Maintenance Shed, siding & trim	sf	760	\$7.50	25	11	\$5,700
62	Maintenance Shed, doors	ls	1	\$2,500.00	20	6	\$2,500
63	Maintenance Shed, restroom/miscellaneous	ls	1	\$1,200.00	20	6	\$1,200
64	Storage Lot, pavement	sf	7,000	\$1.40	12	8	\$9,800
65	Storage Lot, fence	ft	270	\$21.00	30	26	\$5,670
66	Storage Lot, gate	ea	1	\$7,500.00	10	6	\$7,500
Replacement Costs - Page Subtotal							\$851,420

COMMENTS
<ul style="list-style-type: none"> <li>Ponds have rubber liner. Dredging may require drain and refill.</li> </ul>

CLUBHOUSE COMPONENTS 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 (\$)	
67	CH Shingle roof	sf	24,300	\$4.80	25	11	\$116,640	
68	CH Gutter & downspout	ft	1,180	\$6.50	35	21	\$7,670	
69	CH Siding & trim	sf	8,050	\$9.50	35	21	\$76,475	
70	CH Shutters, vinyl	pr	16	\$150.00	10	4	\$2,400	
71	CH Windows	sf	1,100	\$44.00	35	21	\$48,400	
72	CH Window film	sf	1,100	\$13.70	10	4	\$15,070	
73	CH Back entrance, double doors	ea	9	\$2,400.00	20	6	\$21,600	
74	CH Exterior doors	ea	7	\$950.00	35	21	\$6,650	
75	Pool Atrium, fiberglass roof	sf	3,200	\$58.00	30	16	\$185,600	
76	Pool Atrium, fixed window replacement	sf	2,200	\$58.00	25	16	\$127,600	
77	Pool Atrium, roof, mechanical restoration	ea	1	\$19,000.00	30	16	\$19,000	
78	Pool Atrium, roof, rebuild/reglaze/replace	ea	1	\$10,000.00	15	1	\$10,000	
79	Carpet, vinyl & wood flooring	sf	13,200	\$8.00	6	1	\$105,600	
80	Marble flooring	sf	1,160	\$45.00	42	28	\$52,200	
81	Tile flooring	sf	1,990	\$36.00	18	4	\$71,640	
82	Refurnish lobby	sf	2,000	\$20.00	6	1	\$40,000	
83	Refurbish lobby	sf	2,000	\$35.00	12	1	\$70,000	
Replacement Costs - Page Subtotal								\$976,545

COMMENTS

CLUBHOUSE COMPONENTS 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 (\$)
84	Refurnish library	sf	550	\$15.00	10	5	\$8,250
85	Refurbish library	sf	550	\$25.00	10	5	\$13,750
86	Gas fire place, library	ea	1	\$1,500.00	20	5	\$1,500
87	Cafe, refurnish & refurbish	sf	1,000	\$45.00	10	4	\$45,000
88	Gas fire place, cafe	ea	1	\$1,500.00	20	4	\$1,500
89	Bar counter & cabinets	ft	30	\$450.00	20	4	\$13,500
90	Ice maker	ea	1	\$1,800.00	10	none	\$1,800
91	Kitchen counter & cabinets	ft	25	\$450.00	20	9	\$11,250
92	Refrigerator	ea	2	\$2,000.00	10	none	\$4,000
93	Stove/oven with microwave hood	ls	1	\$1,800.00	10	none	\$1,800
94	Dishwasher & miscellaneous small equip.	ea	1	\$1,000.00	10	none	\$1,000
95	Card room, refurnish & refurbish	sf	1,000	\$40.00	10	none	\$40,000
96	Meeting room, refurnish & refurbish	sf	450	\$40.00	10	none	\$18,000
97	Billiard room, refurnish & refurbish	sf	580	\$45.00	20	6	\$26,100
98	Pool tables	ea	2	\$5,000.00	20	6	\$10,000
99	Locker room, refurbish	ea	2	\$35,000.00	15	11	\$70,000
100	Restroom, refurbish	ea	2	\$8,000.00	15	none	\$16,000
Replacement Costs - Page Subtotal							\$283,450

COMMENTS

<b>CLUBHOUSE COMPONENTS</b>						NEL- Normal Economic Life (yrs)		REPLACEMENT COST (\$)
PROJECTED REPLACEMENTS						REL- Remaining Economic Life (yrs)		
ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NEL	REL	REPLACEMENT COST (\$)	
101	Refurbish fitness room	sf	1,750	\$20.00	20	6	\$35,000	
102	Fitness room, flooring	sf	1,750	\$6.00	10	none	\$10,500	
103	Treadmill	ea	5	\$5,460.00	10	6	\$27,300	
104	Elliptical trainer	ea	4	\$3,780.00	10	6	\$15,120	
105	Recumbent bike	ea	3	\$2,520.00	10	6	\$7,560	
106	Upright bike	ea	2	\$2,580.00	10	6	\$5,160	
107	Rower	ea	2	\$1,100.00	10	6	\$2,200	
108	Leg extension	ea	1	\$2,420.00	10	5	\$2,420	
109	Seated leg curl	ea	1	\$2,420.00	10	5	\$2,420	
110	Seated leg press	ea	1	\$3,550.00	10	5	\$3,550	
111	Deltoid raise	ea	1	\$2,420.00	10	5	\$2,420	
112	Vertical bench press	ea	1	\$2,420.00	10	5	\$2,420	
113	Lat pull down	ea	1	\$2,100.00	10	5	\$2,100	
114	Lat row	ea	1	\$2,340.00	10	5	\$2,340	
115	Biceps arm curl	ea	1	\$2,200.00	10	5	\$2,200	
116	Tricep extension	ea	1	\$2,200.00	10	5	\$2,200	
117	Abdominal 250	ea	1	\$2,340.00	10	5	\$2,340	
118	Straight line smith press	ea	1	\$2,390.00	10	5	\$2,390	
119	Flat to incline with wheel	ea	2	\$1,200.00	10	5	\$2,400	
120	Miscellaneous fitness equipment (30%)	ls	1	\$1,370.00	5	1	\$1,370	
121	Medical life pack	ea	2	\$1,800.00	3	none	\$3,600	
Replacement Costs - Page Subtotal							\$137,010	

**COMMENTS**

CLUBHOUSE COMPONENTS 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 (\$)	
122	Multipurpose room, refurbish & refurbish	sf	780	\$25.00	10	1	\$19,500	
123	Ballroom, refurbish & refurbish	sf	3,000	\$25.00	10	1	\$75,000	
124	Lifetime folding tables, lifetime round	ea	20	\$180.00	15	11	\$3,600	
125	Stacking chairs	ea	200	\$250.00	15	none	\$50,000	
126	Ballroom retractable screen	ea	1	\$2,300.00	40	41	\$2,300	
127	Ballroom projector	ea	1	\$9,300.00	40	41	\$9,300	
128	Ballroom sound & video system	ls	1	\$40,000.00	10	9	\$40,000	
129	Ballroom portable stage	ea	1	\$6,500.00	15	7	\$6,500	
130	Electric piano	ea	1	\$4,500.00	10	3	\$4,500	
131	Game room, refurbish & refurbish	sf	590	\$40.00	40	41	\$23,600	
	CC Retractable screen						EXCLUDED	
	CC Projector with sound						EXCLUDED	
132	Office, refurbish & refurbish	sf	400	\$30.00	10	6	\$12,000	
133	Front desk, refurbish	ls	1	\$8,000.00	10	6	\$8,000	
134	Computers	ea	15	\$1,300.00	3	3	\$19,500	
135	Security system computer	ea	1	\$4,500.00	5	5	\$4,500	
136	Security cameras (allowance)	ls	1	\$5,000.00	5	5	\$5,000	
137	Security entry pad system, 6 points	ea	1	\$16,000.00	15	8	\$16,000	
Replacement Costs - Page Subtotal							\$299,300	

COMMENTS
<ul style="list-style-type: none"> <li>• CC Retractable screen - [01/18/2022] excluded per board</li> <li>• CC Projector with sound - [01/18/2022] excluded per board</li> </ul>

<b>CLUBHOUSE COMPONENTS</b>						NEL- Normal Economic Life (yrs)		REPLACEMENT COST (\$)
PROJECTED REPLACEMENTS						REL- Remaining Economic Life (yrs)		
ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NEL	REL	REPLACEMENT COST (\$)	
138	Access control, entry doors & maglock (allow	ls	1	\$17,000.00	10	3	\$17,000	
139	Facility audio & paging system	ls	1	\$3,600.00	10	1	\$3,600	
140	Telephone system, VOIP	ls	1	\$10,000.00	15	1	\$10,000	
141	Flat Panel TV, 80"	ea	3	\$3,200.00	5	1	\$9,600	
142	Flat Panel TV, 48"	ea	2	\$750.00	5	1	\$1,500	
143	Flat Panel TV, 36"	ea	6	\$330.00	5	none	\$1,980	
144	Amp and miscellaneous (allowance)	ea	6	\$300.00	5	none	\$1,800	
145	Gas furnace	ea	15	\$2,400.00	24	6	\$36,000	
146	AC Compressor, split	ea	2	\$12,000.00	12	none	\$24,000	
147	AC Compressor, 5 ton	ea	4	\$8,000.00	12	none	\$32,000	
148	AC Compressor, 3 ton	ea	5	\$6,000.00	12	none	\$30,000	
149	Energy recovery system (EVR)	ea	5	\$10,000.00	10	none	\$50,000	
150	Hot water tank	ea	3	\$10,500.00	10	none	\$31,500	
151	Dectron dehumidifier & pump	ea	1	\$80,000.00	25	11	\$80,000	
152	Fulton boiler (3) pumps	ea	1	\$24,000.00	15	1	\$24,000	
153	Spa exhaust fan	ea	1	\$2,000.00	15	13	\$2,000	
154	Fire alarm & suppression (allowance)	ls	1	\$20,000.00	15	13	\$20,000	
155	Maintenance vehicle, kubota	ea	2	\$10,000.00	10	8	\$20,000	
156	Plow	ea	1	\$2,200.00	5	none	\$2,200	
157	Turf Tiger mower	ea	1	\$12,000.00	10	5	\$12,000	
Replacement Costs - Page Subtotal							\$409,180	

<b>COMMENTS</b>

CLUBHOUSE COMPONENTS - (cont.)					NEL- Normal Economic Life (yrs)		REPLACEMENT COST (\$)
PROJECTED REPLACEMENTS					REL- Remaining Economic Life (yrs)		
ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NEL	REL	REPLACEMENT COST (\$)
158	Tractor, John Deere	ea	1	\$20,216.00	10	8	\$20,216
159	Water tank/trailer, 300 gal	ea	1	\$3,000.00	10	5	\$3,000
160	Sprayer & pump, 100 gal	ea	1	\$2,400.00	5	none	\$2,400
Replacement Costs - Page Subtotal							\$25,616

**COMMENTS**



RECREATION ITEMS					NEL- Normal Economic Life (yrs)			
PROJECTED REPLACEMENTS					REL- Remaining Economic Life (yrs)			
ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NEL	REL	REPLACEMENT COST (\$)	
161	Main Pool, structure	sf	5,200	\$65.00	45	31	\$338,000	
162	Main Pool, whitecoat	sf	5,200	\$5.25	10	6	\$27,300	
163	Main Pool, waterline tile	ft	300	\$15.00	10	6	\$4,500	
164	Main Pool, coping	ft	300	\$50.00	10	6	\$15,000	
165	Indoor Pool, structure	sf	2,200	\$65.00	45	31	\$143,000	
166	Indoor Pool, quartz diamond bright	sf	2,200	\$13.00	10	9	\$28,600	
167	Indoor Pool, waterline tile	ft	150	\$15.00	10	9	\$2,250	
168	Indoor Pool, coping	ft	150	\$50.00	10	9	\$7,500	
169	Indoor Spa, structure	sf	250	\$65.00	45	31	\$16,250	
170	Indoor Spa, quartz diamond bright	sf	250	\$13.00	10	9	\$3,250	
171	Indoor Spa, waterline tile	ft	50	\$15.00	10	9	\$750	
172	Indoor Spa, coping	ft	50	\$50.00	10	9	\$2,500	
173	Pool Trellis	sf	970	\$12.00	20	6	\$11,640	
174	Pool Fence	ft	560	\$34.00	30	16	\$19,040	
175	Pool Bridge	sf	75	\$45.00	20	6	\$3,375	
176	Pool, Pond lining & pump	ls	1	\$3,000.00	10	none	\$3,000	
177	Pump, 5-HP	ea	3	\$4,500.00	10	none	\$13,500	
178	Pump, small	ea	4	\$1,600.00	5	none	\$6,400	
179	Filter	ea	5	\$1,800.00	20	4	\$9,000	
180	Pool heaters	ea	2	\$5,600.00	6	3	\$11,200	
181	Concrete Pool deck, interior	sf	700	\$13.00	20	6	\$9,100	
182	Concrete Pool deck, exterior	sf	7,000	\$11.00	20	6	\$77,000	
Replacement Costs - Page Subtotal							\$752,155	

COMMENTS

RECREATION ITEMS - (cont.) 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 (\$)	
183	Indoor Pool & Spa lighting	ea	15	\$250.00	15	13	\$3,750	
184	Pool Lights, overhead LED	ea	8	\$600.00	15	12	\$4,800	
185	Pool Lounge	ea	35	\$350.00	10	none	\$12,250	
186	Patio Tables	ea	10	\$400.00	10	none	\$4,000	
187	Chairs	ea	88	\$250.00	10	10	\$22,000	
188	Umbrellas	ea	23	\$350.00	5	none	\$8,050	
189	Refabric (exterior furniture)	ls	1	\$3,300.00	3	3	\$3,300	
Replacement Costs - Page Subtotal							\$58,150	

COMMENTS

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 (\$)	
190	Tennis Court, resurface/overlay	ea	2	\$18,000.00	20	19	\$36,000	
191	Tennis Court, net post/footings	ea	4	\$2,600.00	20	7	\$10,400	
192	Tennis Court, nets	ea	2	\$700.00	5	none	\$1,400	
193	Tennis Court, color coat	ea	2	\$5,000.00	5	4	\$10,000	
194	Tennis Court, fence, 10'	ft	480	\$28.00	20	7	\$13,440	
195	Tennis Court, lights	ea	12	\$2,500.00	20	7	\$30,000	
196	Bocce Ball Court, surface	ls	1	\$10,000.00	5	2	\$10,000	
197	Bocce Ball Court, borders	ls	1	\$10,000.00	10	7	\$10,000	
198	Bocce Ball Court, trellis	sf	920	\$12.00	20	17	\$11,040	
199	Driving Cage, turf & net	ls	1	\$4,000.00	5	5	\$4,000	
200	Putting Green, rebuild	ea	1	\$26,000.00	10	9	\$26,000	
201	Miscellaneous benches & tables (20%)	ls	1	\$2,000.00	10	9	\$2,000	
202	Outdoor grill	ea	2	\$4,800.00	10	9	\$9,600	
Replacement Costs - Page Subtotal							\$173,880	

COMMENTS

ADDITIONS TO STUDY 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 (\$)	
203	Asphalt pavement, mill & overlay, parking	sf	97,467	\$1.44	18	1	\$140,352	
204	Irrigation pipe, valve, head (allowance)	ls	1	\$6,500.00	5	5	\$6,500	
205	Lifetime folding tables, rectangle	ea	20	\$110.00	15	11	\$2,200	
206	Pickup truck	ea	1	\$16,000.00	10	8	\$16,000	
207	Storage lot, building	ea	1	\$44,242.00	30	28	\$44,242	
208	Pool Atrium, sliding doors	ea	16	\$4,550.00	25	5	\$72,800	
209	AC Compressor, 5 ton	ea	3	\$8,000.00	12	10	\$24,000	
210	AC Compressor, 3 ton	ea	1	\$6,000.00	12	11	\$6,000	
211	Pavement crack sealer	ea	1	\$3,000.00	15	13	\$3,000	
212	Tractor Implements Backhow, Bucket, etc.	ls	1	\$10,000.00	15	15	\$10,000	
213	Filter	ea	1	\$1,800.00	20	16	\$1,800	
214	Indoor pool, sundeck (coating)	ls	1	\$16,250.00	10	10	\$16,250	
215	Hayward Conditioning system	ea	3	\$4,000.00	10	10	\$12,000	
216	Indoor Pool (UV)	ea	2	\$2,500.00	10	10	\$5,000	
217	Outdoor Pool, lights	ea	8	\$400.00	15	none	\$3,200	
218	Storage Lot, building roof	sf	1,200	\$4.00	20	18	\$4,800	
219	Storage Lot, overhead doors	ea	3	\$1,800.00	20	18	\$5,400	
220	Storage Lot, siding	sf	1,400	\$5.00	30	18	\$7,000	
Replacement Costs - Page Subtotal							\$380,544	

COMMENTS

VALUATION EXCLUSIONS							
Excluded Items							
ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NEL	REL	REPLACEMENT COST (\$)
	Miscellaneous signage						EXCLUDED
	Bollard/access control devices						EXCLUDED
	Sprinkler head						EXCLUDED
	Interior doors						EXCLUDED
	Electric heaters						EXCLUDED

VALUATION EXCLUSIONS
Comments
<ul style="list-style-type: none"> <li>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.</li> <li>The list above exemplifies exclusions by the cited standard(s) and is not intended to be comprehensive.</li> </ul>

LONG-LIFE EXCLUSIONS							
Excluded Items							
ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NEL	REL	REPLACEMENT COST (\$)
	Masonry features						EXCLUDED
	Segmental retaining walls						EXCLUDED
	Exterior stone veneer						EXCLUDED
	Building foundation(s)						EXCLUDED
	Concrete floor slabs (interior)						EXCLUDED
	Wall, floor, and roof structure						EXCLUDED
	Electrical wiring						EXCLUDED
	Stainless steel pool fixtures						EXCLUDED

**LONG-LIFE EXCLUSIONS**  
 Comments

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

UNIT IMPROVEMENTS EXCLUSIONS								
Excluded Items								
ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NEL	REL	REPLACEMENT COST (\$)	
	Domestic water pipes serving one unit							EXCLUDED
	Sanitary sewers serving one unit							EXCLUDED
	Electrical wiring serving one unit							EXCLUDED
	Cable TV service serving one unit							EXCLUDED
	Telephone service serving one unit							EXCLUDED
	Driveway 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 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
	Painting of curbs						EXCLUDED
	Striping of parking spaces						EXCLUDED
	Landscaping and site grading						EXCLUDED
	Exterior painting						EXCLUDED
	Interior painting						EXCLUDED
	Janitorial service						EXCLUDED
	Repair services						EXCLUDED
	Partial replacements						EXCLUDED
	Capital improvements						EXCLUDED

**MAINTENANCE AND REPAIR EXCLUSIONS**  
Comments

- Maintenance activities, one-time-only repairs, and capital improvements. These activities are NOT appropriately funded from Replacement Reserves. The inclusion of such component in the Replacement Reserve Inventory could jeopardize the special tax status of ALL Replacement Reserves, exposing the Association to significant tax liabilities. We recommend that the Board of Directors discuss these exclusions and Revenue Ruling 75-370 with a Certified Public Accountant.
- Examples of items excluded from funding by Replacement Reserves are listed above. The list above exemplifies exclusions by the cited standard(s) and is not intended to be comprehensive.

GOVERNMENT EXCLUSIONS							
Excluded Items							
ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	REPLACEMENT COST (\$)	UNIT REL	REL	REPLACEMENT COST (\$)
	Government, roadways and parking						EXCLUDED
	Government, lighting						EXCLUDED
	Government, stormwater mgmt.						EXCLUDED
	Government, ponds						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 220 Projected Replacements in the A Sample Homeowner's Association 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	2022 - Study Year	\$	Item	2023 - YEAR 1	\$
8	Asphalt path, seal coat	\$11,376	18	Entry signs, structure and sign	\$15,000
9	Asphalt path, repair and overlay (1/3)	\$51,350	30	Foundation planting (allowance)	\$53,000
10	Asphalt path, root trim (allowance)	\$8,000	41	Community entry gazebo	\$5,000
51	Front pond liner (5% repair allowance)	\$12,000	78	Pool Atrium, roof, rebuild/reglaze/replace	\$10,000
58	French drain (reconstruction)	\$15,000	79	Carpet, vinyl & wood flooring	\$105,600
90	Ice maker	\$1,800	82	Refurnish lobby	\$40,000
92	Refrigerator	\$4,000	83	Refurbish lobby	\$70,000
93	Stove/oven with microwave hood	\$1,800	120	Miscellaneous fitness equipment (30%)	\$1,370
94	Dishwasher & miscellaneous small equip.	\$1,000	122	Multipurpose room, refurnish & refurbish	\$19,500
95	Card room, refurnish & refurbish	\$40,000	123	Ballroom, refurnish & refurbish	\$75,000
96	Meeting room, refurnish & refurbish	\$18,000	139	Facility audio & paging system	\$3,600
100	Restroom, refurbish	\$16,000	140	Telephone system, VOIP	\$10,000
102	Fitness room, flooring	\$10,500	141	Flat Panel TV, 80"	\$9,600
121	Medical life pack	\$3,600	142	Flat Panel TV, 48"	\$1,500
125	Stacking chairs	\$50,000	152	Fulton boiler (3) pumps	\$24,000
143	Flat Panel TV, 36"	\$1,980	203	Asphalt pavement, mill & overlay, parking	\$140,352
144	Amp and miscellaneous (allowance)	\$1,800			
146	AC Compressor, split	\$24,000			
147	AC Compressor, 5 ton	\$32,000			
148	AC Compressor, 3 ton	\$30,000			
149	Energy recovery system (EVR)	\$50,000			
150	Hot water tank	\$31,500			
156	Plow	\$2,200			
160	Sprayer & pump, 100 gal	\$2,400			
176	Pool, Pond lining & pump	\$3,000			
177	Pump, 5-HP	\$13,500			
178	Pump, small	\$6,400			
185	Pool Lounge	\$12,250			
186	Patio Tables	\$4,000			
188	Umbrellas	\$8,050			
192	Tennis Court, nets	\$1,400			
217	Outdoor Pool, lights	\$3,200			
Total Scheduled Replacements		\$472,106	Total Scheduled Replacements		\$583,522

**PROJECTED REPLACEMENTS**

Item	2024 - YEAR 2	\$	Item	2025 - YEAR 3	\$
1	Asphalt Pavement, rejuvenate	\$216,800	7	Concrete work (3%)	\$35,700
6	Full depth pavement (1% allowance)	\$30,250	12	Wooden bridge, railing	\$2,300
196	Bocce Ball Court, surface	\$10,000	13	Wooden bridge, PTL decking	\$3,943
			58	French drain (reconstruction)	\$15,000
			121	Medical life pack	\$3,600
			130	Electric piano	\$4,500
			134	Computers	\$19,500
			138	Access control, entry doors & maglock (allow	\$17,000
			180	Pool heaters	\$11,200
			189	Refabric (exterior furniture)	\$3,300
Total Scheduled Replacements		\$257,050	Total Scheduled Replacements		\$116,043

**PROJECTED REPLACEMENTS**

2026 - YEAR 4			2027 - YEAR 5		
Item		\$	Item		\$
29	Irrigation controller	\$30,000	3	Asphalt pavement, mill and overlay, P1	\$491,760
70	CH Shutters, vinyl	\$2,400	26	Landscape lighting, ground, bollard, post	\$15,000
72	CH Window film	\$15,070	54	Pond bubbles	\$12,000
81	Tile flooring	\$71,640	55	Air compressor	\$2,400
87	Cafe, refurbish & refurbish	\$45,000	56	Pond transfer pump	\$5,000
88	Gas fire place, cafe	\$1,500	84	Refurnish library	\$8,250
89	Bar counter & cabinets	\$13,500	85	Refurbish library	\$13,750
179	Filter	\$9,000	86	Gas fire place, library	\$1,500
193	Tennis Court, color coat	\$10,000	108	Leg extension	\$2,420
			109	Seated leg curl	\$2,420
			110	Seated leg press	\$3,550
			111	Deltoid raise	\$2,420
			112	Vertical bench press	\$2,420
			113	Lat pull down	\$2,100
			114	Lat row	\$2,340
			115	Biceps arm curl	\$2,200
			116	Tricep extension	\$2,200
			117	Abdominal 250	\$2,340
			118	Straight line smith press	\$2,390
			119	Flat to incline with wheel	\$2,400
			135	Security system computer	\$4,500
			136	Security cameras (allowance)	\$5,000
			143	Flat Panel TV, 36"	\$1,980
			144	Amp and miscellaneous (allowance)	\$1,800
			156	Plow	\$2,200
			157	Turf Tiger mower	\$12,000
			159	Water tank/trailer, 300 gal	\$3,000
			160	Sprayer & pump, 100 gal	\$2,400
			178	Pump, small	\$6,400
			188	Umbrellas	\$8,050
			192	Tennis Court, nets	\$1,400
			199	Driving Cage, turf & net	\$4,000
			204	Irrigation pipe, valve, head (allowance)	\$6,500
			208	Pool Atrium, sliding doors	\$72,800
Total Scheduled Replacements		\$198,110	Total Scheduled Replacements		\$710,890

**PROJECTED REPLACEMENTS**

2028 - YEAR 6			2029 - YEAR 7		
Item		\$	Item		\$
8	Asphalt path, seal coat	\$11,376	2	Asphalt Pvmnt, Mill & Overlay, Entry	\$321,120
9	Asphalt path, repair and overlay (1/3)	\$51,350	4	Asphalt pavement, mill and overlay, P2	\$491,760
10	Asphalt path, root trim (allowance)	\$8,000	79	Carpet, vinyl & wood flooring	\$105,600
16	Reset pavers (20%)	\$6,650	82	Refurnish lobby	\$40,000
19	Entry fencing, picket	\$3,600	129	Ballroom portable stage	\$6,500
20	Entry fencing, rail	\$54,400	191	Tennis Court, net post/footings	\$10,400
27	Site and parking light, heads	\$31,500	194	Tennis Court, fence, 10'	\$13,440
30	Foundation planting (allowance)	\$53,000	195	Tennis Court, lights	\$30,000
31	Guardhouse, roof, shingles	\$5,520	196	Bocce Ball Court, surface	\$10,000
35	Guardhouse, refurbish interior	\$1,000	197	Bocce Ball Court, borders	\$10,000
42	Large gazebo, roof, shingles	\$7,200			
43	Large gazebo, trim, cupola & columns	\$36,000			
58	French drain (reconstruction)	\$15,000			
60	Maintenance Shed roof, shingles	\$4,050			
62	Maintenance Shed, doors	\$2,500			
63	Maintenance Shed, restroom/miscellaneous	\$1,200			
66	Storage Lot, gate	\$7,500			
73	CH Back entrance, double doors	\$21,600			
97	Billiard room, refurbish & refurbish	\$26,100			
98	Pool tables	\$10,000			
101	Refurbish fitness room	\$35,000			
103	Treadmill	\$27,300			
104	Elliptical trainer	\$15,120			
105	Recumbent bike	\$7,560			
106	Upright bike	\$5,160			
107	Rower	\$2,200			
120	Miscellaneous fitness equipment (30%)	\$1,370			
121	Medical life pack	\$3,600			
132	Office, refurbish & refurbish	\$12,000			
133	Front desk, refurbish	\$8,000			
134	Computers	\$19,500			
141	Flat Panel TV, 80"	\$9,600			
142	Flat Panel TV, 48"	\$1,500			
145	Gas furnace	\$36,000			
162	Main Pool, whitecoat	\$27,300			
163	Main Pool, waterline tile	\$4,500			
164	Main Pool, coping	\$15,000			
173	Pool Trellis	\$11,640			
175	Pool Bridge	\$3,375			
181	Concrete Pool deck, interior	\$9,100			
182	Concrete Pool deck, exterior	\$77,000			
189	Refabric (exterior furniture)	\$3,300			
Total Scheduled Replacements		\$692,671	Total Scheduled Replacements		\$1,038,820

**PROJECTED REPLACEMENTS**

2030 - YEAR 8			2031 - YEAR 9		
Item		\$	Item		\$
1	Asphalt Pavement, rejuvenate	\$216,800	5	Asphalt pavement, mill and overlay, P3	\$491,760
6	Full depth pavement (1% allowance)	\$30,250	7	Concrete work (3%)	\$35,700
40	Gate video security (allowance)	\$6,500	58	French drain (reconstruction)	\$15,000
64	Storage Lot, pavement	\$9,800	91	Kitchen counter & cabinets	\$11,250
137	Security entry pad system, 6 points	\$16,000	121	Medical life pack	\$3,600
155	Maintenance vehicle, kubota	\$20,000	128	Ballroom sound & video system	\$40,000
158	Tractor, John Deere	\$20,216	134	Computers	\$19,500
206	Pickup truck	\$16,000	166	Indoor Pool, quartz diamond bright	\$28,600
			167	Indoor Pool, waterline tile	\$2,250
			168	Indoor Pool, coping	\$7,500
			170	Indoor Spa, quartz diamond bright	\$3,250
			171	Indoor Spa, waterline tile	\$750
			172	Indoor Spa, coping	\$2,500
			180	Pool heaters	\$11,200
			189	Refabric (exterior furniture)	\$3,300
			193	Tennis Court, color coat	\$10,000
			200	Putting Green, rebuild	\$26,000
			201	Miscellaneous benches & tables (20%)	\$2,000
			202	Outdoor grill	\$9,600
Total Scheduled Replacements		\$335,566	Total Scheduled Replacements		\$723,760



**PROJECTED REPLACEMENTS**

2032 - YEAR 10			2033 - YEAR 11		
Item		\$	Item		\$
17	Repoint site & building masonry (10%)	\$16,500	15	Steel bridge, IPE decking	\$6,720
22	Entry fountain (repair allowance)	\$5,500	21	Entry fountain, lining	\$8,800
23	Entry fountain pump, rebuild	\$3,500	30	Foundation planting (allowance)	\$53,000
36	Entry gates, steel (25%)	\$15,000	61	Maintenance Shed, siding & trim	\$5,700
50	Dredge ponds (allowance)	\$72,000	67	CH Shingle roof	\$116,640
51	Front pond liner (5% repair allowance)	\$12,000	99	Locker room, refurbish	\$70,000
53	Pond fountains	\$28,000	120	Miscellaneous fitness equipment (30%)	\$1,370
54	Pond bubbles	\$12,000	122	Multipurpose room, refurbish & refurbish	\$19,500
55	Air compressor	\$2,400	123	Ballroom, refurbish & refurbish	\$75,000
56	Pond transfer pump	\$5,000	124	Lifetime folding tables, lifetime round	\$3,600
90	Ice maker	\$1,800	139	Facility audio & paging system	\$3,600
92	Refrigerator	\$4,000	141	Flat Panel TV, 80"	\$9,600
93	Stove/oven with microwave hood	\$1,800	142	Flat Panel TV, 48"	\$1,500
94	Dishwasher & miscellaneous small equip.	\$1,000	151	Dectron dehumidifier & pump	\$80,000
95	Card room, refurbish & refurbish	\$40,000	205	Lifetime folding tables, rectangle	\$2,200
96	Meeting room, refurbish & refurbish	\$18,000	210	AC Compressor, 3 ton	\$6,000
102	Fitness room, flooring	\$10,500			
135	Security system computer	\$4,500			
136	Security cameras (allowance)	\$5,000			
143	Flat Panel TV, 36"	\$1,980			
144	Amp and miscellaneous (allowance)	\$1,800			
149	Energy recovery system (EVR)	\$50,000			
150	Hot water tank	\$31,500			
156	Plow	\$2,200			
160	Sprayer & pump, 100 gal	\$2,400			
176	Pool, Pond lining & pump	\$3,000			
177	Pump, 5-HP	\$13,500			
178	Pump, small	\$6,400			
185	Pool Lounge	\$12,250			
186	Patio Tables	\$4,000			
187	Chairs	\$22,000			
188	Umbrellas	\$8,050			
192	Tennis Court, nets	\$1,400			
199	Driving Cage, turf & net	\$4,000			
204	Irrigation pipe, valve, head (allowance)	\$6,500			
209	AC Compressor, 5 ton	\$24,000			
214	Indoor pool, sundeck (coating)	\$16,250			
215	Hayward Conditioning system	\$12,000			
216	Indoor Pool (UV)	\$5,000			
Total Scheduled Replacements		\$486,730	Total Scheduled Replacements		\$463,230

**PROJECTED REPLACEMENTS**

Item	2034 - YEAR 12	\$	Item	2035 - YEAR 13	\$
8	Asphalt path, seal coat	\$11,376	37	Gate actuators	\$18,000
9	Asphalt path, repair and overlay (1/3)	\$51,350	38	Barrier arm, sensor eye, loop det.	\$8,000
10	Asphalt path, root trim (allowance)	\$8,000	39	Key pad system, Liftmaster	\$6,500
16	Reset pavers (20%)	\$6,650	79	Carpet, vinyl & wood flooring	\$105,600
29	Irrigation controller	\$30,000	82	Refurnish lobby	\$40,000
34	Guardhouse, HVAC	\$2,800	83	Refurbish lobby	\$70,000
58	French drain (reconstruction)	\$15,000	130	Electric piano	\$4,500
121	Medical life pack	\$3,600	138	Access control, entry doors & maglock (allow	\$17,000
134	Computers	\$19,500	153	Spa exhaust fan	\$2,000
146	AC Compressor, split	\$24,000	154	Fire alarm & suppression (allowance)	\$20,000
147	AC Compressor, 5 ton	\$32,000	183	Indoor Pool & Spa lighting	\$3,750
148	AC Compressor, 3 ton	\$30,000	211	Pavement crack sealer	\$3,000
184	Pool Lights, overhead LED	\$4,800			
189	Refabric (exterior furniture)	\$3,300			
196	Bocce Ball Court, surface	\$10,000			
Total Scheduled Replacements		\$252,376	Total Scheduled Replacements		\$298,350

**PROJECTED REPLACEMENTS**

Item	2036 - YEAR 14	\$	Item	2037 - YEAR 15	\$
1	Asphalt Pavement, rejuvenate	\$216,800	7	Concrete work (3%)	\$35,700
6	Full depth pavement (1% allowance)	\$30,250	24	Entry fountain pump, replace & repipe	\$18,000
45	RW Railing, aluminum (20%)	\$101,250	54	Pond bubbles	\$12,000
70	CH Shutters, vinyl	\$2,400	55	Air compressor	\$2,400
72	CH Window film	\$15,070	56	Pond transfer pump	\$5,000
87	Cafe, refurbish & refurbish	\$45,000	58	French drain (reconstruction)	\$15,000
193	Tennis Court, color coat	\$10,000	84	Refurnish library	\$8,250
			85	Refurbish library	\$13,750
			100	Restroom, refurbish	\$16,000
			108	Leg extension	\$2,420
			109	Seated leg curl	\$2,420
			110	Seated leg press	\$3,550
			111	Deltoid raise	\$2,420
			112	Vertical bench press	\$2,420
			113	Lat pull down	\$2,100
			114	Lat row	\$2,340
			115	Biceps arm curl	\$2,200
			116	Tricep extension	\$2,200
			117	Abdominal 250	\$2,340
			118	Straight line smith press	\$2,390
			119	Flat to incline with wheel	\$2,400
			121	Medical life pack	\$3,600
			125	Stacking chairs	\$50,000
			134	Computers	\$19,500
			135	Security system computer	\$4,500
			136	Security cameras (allowance)	\$5,000
			143	Flat Panel TV, 36"	\$1,980
			144	Amp and miscellaneous (allowance)	\$1,800
			156	Plow	\$2,200
			157	Turf Tiger mower	\$12,000
			159	Water tank/trailer, 300 gal	\$3,000
			160	Sprayer & pump, 100 gal	\$2,400
			178	Pump, small	\$6,400
			180	Pool heaters	\$11,200
			188	Umbrellas	\$8,050
			189	Refabric (exterior furniture)	\$3,300
			192	Tennis Court, nets	\$1,400
			199	Driving Cage, turf & net	\$4,000
			204	Irrigation pipe, valve, head (allowance)	\$6,500
			212	Tractor Implements Backhow, Bucket, etc.	\$10,000
			217	Outdoor Pool, lights	\$3,200
Total Scheduled Replacements		\$420,770	Total Scheduled Replacements		\$315,330

**PROJECTED REPLACEMENTS**

Item	2038 - YEAR 16	\$	Item	2039 - YEAR 17	\$
11	Wooden bridge, structure	\$18,675	196	Bocce Ball Court, surface	\$10,000
18	Entry signs, structure and sign	\$15,000	197	Bocce Ball Court, borders	\$10,000
25	Flag poles	\$16,200	198	Bocce Ball Court, trellis	\$11,040
30	Foundation planting (allowance)	\$53,000			
32	Guardhouse, trim, cupola & columns	\$15,000			
33	Guardhouse, windows & doors	\$5,000			
41	Community entry gazebo	\$5,000			
66	Storage Lot, gate	\$7,500			
75	Pool Atrium, fiberglass roof	\$185,600			
76	Pool Atrium, fixed window replacement	\$127,600			
77	Pool Atrium, roof, mechanical restoration	\$19,000			
78	Pool Atrium, roof, rebuild/reglaze/replace	\$10,000			
103	Treadmill	\$27,300			
104	Elliptical trainer	\$15,120			
105	Recumbent bike	\$7,560			
106	Upright bike	\$5,160			
107	Rower	\$2,200			
120	Miscellaneous fitness equipment (30%)	\$1,370			
132	Office, furnish & refurbish	\$12,000			
133	Front desk, refurbish	\$8,000			
140	Telephone system, VOIP	\$10,000			
141	Flat Panel TV, 80"	\$9,600			
142	Flat Panel TV, 48"	\$1,500			
152	Fulton boiler (3) pumps	\$24,000			
162	Main Pool, whitecoat	\$27,300			
163	Main Pool, waterline tile	\$4,500			
164	Main Pool, coping	\$15,000			
174	Pool Fence	\$19,040			
213	Filter	\$1,800			
Total Scheduled Replacements		\$669,025	Total Scheduled Replacements		\$31,040

**PROJECTED REPLACEMENTS**

Item	2040 - YEAR 18	\$	Item	2041 - YEAR 19	\$
8	Asphalt path, seal coat	\$11,376	2	Asphalt Pvmnt, Mill & Overlay, Entry	\$321,120
9	Asphalt path, repair and overlay (1/3)	\$51,350	79	Carpet, vinyl & wood flooring	\$105,600
10	Asphalt path, root trim (allowance)	\$8,000	82	Refurnish lobby	\$40,000
12	Wooden bridge, railing	\$2,300	128	Ballroom sound & video system	\$40,000
13	Wooden bridge, PTL decking	\$3,943	166	Indoor Pool, quartz diamond bright	\$28,600
16	Reset pavers (20%)	\$6,650	167	Indoor Pool, waterline tile	\$2,250
40	Gate video security (allowance)	\$6,500	168	Indoor Pool, coping	\$7,500
58	French drain (reconstruction)	\$15,000	170	Indoor Spa, quartz diamond bright	\$3,250
121	Medical life pack	\$3,600	171	Indoor Spa, waterline tile	\$750
134	Computers	\$19,500	172	Indoor Spa, coping	\$2,500
155	Maintenance vehicle, kubota	\$20,000	190	Tennis Court, resurface/overlay	\$36,000
158	Tractor, John Deere	\$20,216	193	Tennis Court, color coat	\$10,000
189	Refabric (exterior furniture)	\$3,300	200	Putting Green, rebuild	\$26,000
206	Pickup truck	\$16,000	201	Miscellaneous benches & tables (20%)	\$2,000
218	Storage Lot, building roof	\$4,800	202	Outdoor grill	\$9,600
219	Storage Lot, overhead doors	\$5,400	203	Asphalt pavement, mill & overlay, parking	\$140,352
220	Storage Lot, siding	\$7,000			
Total Scheduled Replacements		\$204,935	Total Scheduled Replacements		\$775,522

**PROJECTED REPLACEMENTS**

2042 - YEAR 20		\$	2043 - YEAR 21		\$
1	Asphalt Pavement, rejuvenate	\$216,800	7	Concrete work (3%)	\$35,700
6	Full depth pavement (1% allowance)	\$30,250	30	Foundation planting (allowance)	\$53,000
17	Repoint site & building masonry (10%)	\$16,500	58	French drain (reconstruction)	\$15,000
22	Entry fountain (repair allowance)	\$5,500	68	CH Gutter & downspout	\$7,670
23	Entry fountain pump, rebuild	\$3,500	69	CH Siding & trim	\$76,475
26	Landscape lighting, ground, bollard, post	\$15,000	71	CH Windows	\$48,400
29	Irrigation controller	\$30,000	74	CH Exterior doors	\$6,650
36	Entry gates, steel (25%)	\$15,000	120	Miscellaneous fitness equipment (30%)	\$1,370
46	RW Railing, aluminum (20%)	\$101,250	121	Medical life pack	\$3,600
51	Front pond liner (5% repair allowance)	\$12,000	122	Multipurpose room, refurbish & refurbish	\$19,500
53	Pond fountains	\$28,000	123	Ballroom, refurbish & refurbish	\$75,000
54	Pond bubbles	\$12,000	134	Computers	\$19,500
55	Air compressor	\$2,400	139	Facility audio & paging system	\$3,600
56	Pond transfer pump	\$5,000	141	Flat Panel TV, 80"	\$9,600
64	Storage Lot, pavement	\$9,800	142	Flat Panel TV, 48"	\$1,500
90	Ice maker	\$1,800	180	Pool heaters	\$11,200
92	Refrigerator	\$4,000	189	Refabric (exterior furniture)	\$3,300
93	Stove/oven with microwave hood	\$1,800			
94	Dishwasher & miscellaneous small equip.	\$1,000			
95	Card room, refurbish & refurbish	\$40,000			
96	Meeting room, refurbish & refurbish	\$18,000			
102	Fitness room, flooring	\$10,500			
135	Security system computer	\$4,500			
136	Security cameras (allowance)	\$5,000			
143	Flat Panel TV, 36"	\$1,980			
144	Amp and miscellaneous (allowance)	\$1,800			
149	Energy recovery system (EVR)	\$50,000			
150	Hot water tank	\$31,500			
156	Plow	\$2,200			
160	Sprayer & pump, 100 gal	\$2,400			
176	Pool, Pond lining & pump	\$3,000			
177	Pump, 5-HP	\$13,500			
178	Pump, small	\$6,400			
185	Pool Lounge	\$12,250			
186	Patio Tables	\$4,000			
187	Chairs	\$22,000			
188	Umbrellas	\$8,050			
192	Tennis Court, nets	\$1,400			
199	Driving Cage, turf & net	\$4,000			
204	Irrigation pipe, valve, head (allowance)	\$6,500			
214	Indoor pool, sundeck (coating)	\$16,250			
215	Hayward Conditioning system	\$12,000			
216	Indoor Pool (UV)	\$5,000			
Total Scheduled Replacements		\$793,830	Total Scheduled Replacements		\$391,065

**PROJECTED REPLACEMENTS**

Item	2044 - YEAR 22	\$	Item	2045 - YEAR 23	\$
81	Tile flooring	\$71,640	3	Asphalt pavement, mill and overlay, P1	\$491,760
129	Ballroom portable stage	\$6,500	130	Electric piano	\$4,500
196	Bocce Ball Court, surface	\$10,000	137	Security entry pad system, 6 points	\$16,000
209	AC Compressor, 5 ton	\$24,000	138	Access control, entry doors & maglock (allow	\$17,000
			210	AC Compressor, 3 ton	\$6,000
Total Scheduled Replacements			Total Scheduled Replacements		
		\$112,140			\$535,260

**PROJECTED REPLACEMENTS**

Item	2046 - YEAR 24	\$	Item	2047 - YEAR 25	\$
8	Asphalt path, seal coat	\$11,376	4	Asphalt pavement, mill and overlay, P2	\$491,760
9	Asphalt path, repair and overlay (1/3)	\$51,350	52	Front pond liner, replace	\$138,600
10	Asphalt path, root trim (allowance)	\$8,000	54	Pond bubbles	\$12,000
16	Reset pavers (20%)	\$6,650	55	Air compressor	\$2,400
58	French drain (reconstruction)	\$15,000	56	Pond transfer pump	\$5,000
70	CH Shutters, vinyl	\$2,400	79	Carpet, vinyl & wood flooring	\$105,600
72	CH Window film	\$15,070	82	Refurnish lobby	\$40,000
87	Cafe, refurnish & refurbish	\$45,000	83	Refurbish lobby	\$70,000
88	Gas fire place, cafe	\$1,500	84	Refurnish library	\$8,250
89	Bar counter & cabinets	\$13,500	85	Refurbish library	\$13,750
121	Medical life pack	\$3,600	86	Gas fire place, library	\$1,500
134	Computers	\$19,500	108	Leg extension	\$2,420
146	AC Compressor, split	\$24,000	109	Seated leg curl	\$2,420
147	AC Compressor, 5 ton	\$32,000	110	Seated leg press	\$3,550
148	AC Compressor, 3 ton	\$30,000	111	Deltoid raise	\$2,420
179	Filter	\$9,000	112	Vertical bench press	\$2,420
189	Refabric (exterior furniture)	\$3,300	113	Lat pull down	\$2,100
193	Tennis Court, color coat	\$10,000	114	Lat row	\$2,340
			115	Biceps arm curl	\$2,200
			116	Tricep extension	\$2,200
			117	Abdominal 250	\$2,340
			118	Straight line smith press	\$2,390
			119	Flat to incline with wheel	\$2,400
			135	Security system computer	\$4,500
			136	Security cameras (allowance)	\$5,000
			143	Flat Panel TV, 36"	\$1,980
			144	Amp and miscellaneous (allowance)	\$1,800
			156	Plow	\$2,200
			157	Turf Tiger mower	\$12,000
			159	Water tank/trailer, 300 gal	\$3,000
			160	Sprayer & pump, 100 gal	\$2,400
			178	Pump, small	\$6,400
			188	Umbrellas	\$8,050
			192	Tennis Court, nets	\$1,400
			199	Driving Cage, turf & net	\$4,000
			204	Irrigation pipe, valve, head (allowance)	\$6,500
Total Scheduled Replacements		\$301,246	Total Scheduled Replacements		\$977,290



**PROJECTED REPLACEMENTS**

2048 - YEAR 26			2049 - YEAR 27		
Item		\$	Item		\$
1	Asphalt Pavement, rejuvenate	\$216,800	5	Asphalt pavement, mill and overlay, P3	\$491,760
6	Full depth pavement (1% allowance)	\$30,250	7	Concrete work (3%)	\$35,700
19	Entry fencing, picket	\$3,600	34	Guardhouse, HVAC	\$2,800
20	Entry fencing, rail	\$54,400	58	French drain (reconstruction)	\$15,000
21	Entry fountain, lining	\$8,800	121	Medical life pack	\$3,600
27	Site and parking light, heads	\$31,500	134	Computers	\$19,500
28	Site and parking light, poles	\$126,000	180	Pool heaters	\$11,200
30	Foundation planting (allowance)	\$53,000	184	Pool Lights, overhead LED	\$4,800
31	Guardhouse, roof, shingles	\$5,520	189	Refabric (exterior furniture)	\$3,300
35	Guardhouse, refurbish interior	\$1,000	191	Tennis Court, net post/footings	\$10,400
42	Large gazebo, roof, shingles	\$7,200	194	Tennis Court, fence, 10'	\$13,440
43	Large gazebo, trim, cupola & columns	\$36,000	195	Tennis Court, lights	\$30,000
47	RW Railing, aluminum (20%)	\$101,250	196	Bocce Ball Court, surface	\$10,000
60	Maintenance Shed roof, shingles	\$4,050	197	Bocce Ball Court, borders	\$10,000
62	Maintenance Shed, doors	\$2,500			
63	Maintenance Shed, restroom/miscellaneous	\$1,200			
65	Storage Lot, fence	\$5,670			
66	Storage Lot, gate	\$7,500			
73	CH Back entrance, double doors	\$21,600			
97	Billiard room, refurbish & refurbish	\$26,100			
98	Pool tables	\$10,000			
99	Locker room, refurbish	\$70,000			
101	Refurbish fitness room	\$35,000			
103	Treadmill	\$27,300			
104	Elliptical trainer	\$15,120			
105	Recumbent bike	\$7,560			
106	Upright bike	\$5,160			
107	Rower	\$2,200			
120	Miscellaneous fitness equipment (30%)	\$1,370			
124	Lifetime folding tables, lifetime round	\$3,600			
132	Office, refurbish & refurbish	\$12,000			
133	Front desk, refurbish	\$8,000			
141	Flat Panel TV, 80"	\$9,600			
142	Flat Panel TV, 48"	\$1,500			
162	Main Pool, whitecoat	\$27,300			
163	Main Pool, waterline tile	\$4,500			
164	Main Pool, coping	\$15,000			
173	Pool Trellis	\$11,640			
175	Pool Bridge	\$3,375			
181	Concrete Pool deck, interior	\$9,100			
182	Concrete Pool deck, exterior	\$77,000			
205	Lifetime folding tables, rectangle	\$2,200			
Total Scheduled Replacements		\$1,102,465	Total Scheduled Replacements		\$661,500

**PROJECTED REPLACEMENTS**

Item	2050 - YEAR 28	\$	Item	2051 - YEAR 29	\$
29	Irrigation controller	\$30,000	91	Kitchen counter & cabinets	\$11,250
37	Gate actuators	\$18,000	128	Ballroom sound & video system	\$40,000
38	Barrier arm, sensor eye, loop det.	\$8,000	166	Indoor Pool, quartz diamond bright	\$28,600
39	Key pad system, Liftmaster	\$6,500	167	Indoor Pool, waterline tile	\$2,250
40	Gate video security (allowance)	\$6,500	168	Indoor Pool, coping	\$7,500
44	Reset CMU retaining wall (5%)	\$108,500	170	Indoor Spa, quartz diamond bright	\$3,250
80	Marble flooring	\$52,200	171	Indoor Spa, waterline tile	\$750
153	Spa exhaust fan	\$2,000	172	Indoor Spa, coping	\$2,500
154	Fire alarm & suppression (allowance)	\$20,000	193	Tennis Court, color coat	\$10,000
155	Maintenance vehicle, kubota	\$20,000	200	Putting Green, rebuild	\$26,000
158	Tractor, John Deere	\$20,216	201	Miscellaneous benches & tables (20%)	\$2,000
183	Indoor Pool & Spa lighting	\$3,750	202	Outdoor grill	\$9,600
206	Pickup truck	\$16,000			
207	Storage lot, building	\$44,242			
211	Pavement crack sealer	\$3,000			
Total Scheduled Replacements		\$358,908	Total Scheduled Replacements		\$143,700

**PROJECTED REPLACEMENTS**

Item	2052 - YEAR 30	\$	Item	2053 - YEAR 31	\$
8	Asphalt path, seal coat	\$11,376	2	Asphalt Pvmnt, Mill & Overlay, Entry	\$321,120
9	Asphalt path, repair and overlay (1/3)	\$51,350	18	Entry signs, structure and sign	\$15,000
10	Asphalt path, root trim (allowance)	\$8,000	30	Foundation planting (allowance)	\$53,000
16	Reset pavers (20%)	\$6,650	41	Community entry gazebo	\$5,000
17	Repoint site & building masonry (10%)	\$16,500	78	Pool Atrium, roof, rebuild/reglaze/replace	\$10,000
22	Entry fountain (repair allowance)	\$5,500	79	Carpet, vinyl & wood flooring	\$105,600
23	Entry fountain pump, rebuild	\$3,500	82	Refurnish lobby	\$40,000
36	Entry gates, steel (25%)	\$15,000	120	Miscellaneous fitness equipment (30%)	\$1,370
50	Dredge ponds (allowance)	\$72,000	122	Multipurpose room, refurnish & refurbish	\$19,500
51	Front pond liner (5% repair allowance)	\$12,000	123	Ballroom, refurnish & refurbish	\$75,000
53	Pond fountains	\$28,000	139	Facility audio & paging system	\$3,600
54	Pond bubbles	\$12,000	140	Telephone system, VOIP	\$10,000
55	Air compressor	\$2,400	141	Flat Panel TV, 80"	\$9,600
56	Pond transfer pump	\$5,000	142	Flat Panel TV, 48"	\$1,500
57	Stormwater management, system (allowance)	\$450,000	152	Fulton boiler (3) pumps	\$24,000
58	French drain (reconstruction)	\$15,000	161	Main Pool, structure	\$338,000
90	Ice maker	\$1,800	165	Indoor Pool, structure	\$143,000
92	Refrigerator	\$4,000	169	Indoor Spa, structure	\$16,250
93	Stove/oven with microwave hood	\$1,800			
94	Dishwasher & miscellaneous small equip.	\$1,000			
95	Card room, refurnish & refurbish	\$40,000			
96	Meeting room, refurnish & refurbish	\$18,000			
100	Restroom, refurbish	\$16,000			
102	Fitness room, flooring	\$10,500			
121	Medical life pack	\$3,600			
125	Stacking chairs	\$50,000			
134	Computers	\$19,500			
135	Security system computer	\$4,500			
136	Security cameras (allowance)	\$5,000			
143	Flat Panel TV, 36"	\$1,980			
144	Amp and miscellaneous (allowance)	\$1,800			
145	Gas furnace	\$36,000			
149	Energy recovery system (EVR)	\$50,000			
150	Hot water tank	\$31,500			
156	Plow	\$2,200			
160	Sprayer & pump, 100 gal	\$2,400			
176	Pool, Pond lining & pump	\$3,000			
177	Pump, 5-HP	\$13,500			
178	Pump, small	\$6,400			
185	Pool Lounge	\$12,250			
186	Patio Tables	\$4,000			
187	Chairs	\$22,000			
188	Umbrellas	\$8,050			
189	Refabric (exterior furniture)	\$3,300			
192	Tennis Court, nets	\$1,400			
199	Driving Cage, turf & net	\$4,000			
204	Irrigation pipe, valve, head (allowance)	\$6,500			
208	Pool Atrium, sliding doors	\$72,800			
212	Tractor Implements Backhow, Bucket, etc.	\$10,000			
214	Indoor pool, sundeck (coating)	\$16,250			
215	Hayward Conditioning system	\$12,000			
216	Indoor Pool (UV)	\$5,000			
217	Outdoor Pool, lights	\$3,200			
<b>Total Scheduled Replacements</b>		<b>\$1,219,506</b>	<b>Total Scheduled Replacements</b>		<b>\$1,191,540</b>

**PROJECTED REPLACEMENTS**

Item	2054 - YEAR 32	\$	Item	2055 - YEAR 33	\$
1	Asphalt Pavement, rejuvenate	\$216,800	7	Concrete work (3%)	\$35,700
6	Full depth pavement (1% allowance)	\$30,250	12	Wooden bridge, railing	\$2,300
48	RW Railing, aluminum (20%)	\$101,250	13	Wooden bridge, PTL decking	\$3,943
64	Storage Lot, pavement	\$9,800	58	French drain (reconstruction)	\$15,000
196	Bocce Ball Court, surface	\$10,000	59	Water & Sanitary lines & Mains (allowance)	\$80,000
			121	Medical life pack	\$3,600
			130	Electric piano	\$4,500
			134	Computers	\$19,500
			138	Access control, entry doors & maglock (allow)	\$17,000
			180	Pool heaters	\$11,200
			189	Refabric (exterior furniture)	\$3,300
Total Scheduled Replacements		\$368,100	Total Scheduled Replacements		\$196,043

**PROJECTED REPLACEMENTS**

Item	2056 - YEAR 34	\$	Item	2057 - YEAR 35	\$
70	CH Shutters, vinyl	\$2,400	24	Entry fountain pump, replace & repipe	\$18,000
72	CH Window film	\$15,070	26	Landscape lighting, ground, bollard, post	\$15,000
87	Cafe, refurbish & refurbish	\$45,000	54	Pond bubbles	\$12,000
193	Tennis Court, color coat	\$10,000	55	Air compressor	\$2,400
209	AC Compressor, 5 ton	\$24,000	56	Pond transfer pump	\$5,000
			84	Refurbish library	\$8,250
			85	Refurbish library	\$13,750
			108	Leg extension	\$2,420
			109	Seated leg curl	\$2,420
			110	Seated leg press	\$3,550
			111	Deltoid raise	\$2,420
			112	Vertical bench press	\$2,420
			113	Lat pull down	\$2,100
			114	Lat row	\$2,340
			115	Biceps arm curl	\$2,200
			116	Tricep extension	\$2,200
			117	Abdominal 250	\$2,340
			118	Straight line smith press	\$2,390
			119	Flat to incline with wheel	\$2,400
			135	Security system computer	\$4,500
			136	Security cameras (allowance)	\$5,000
			143	Flat Panel TV, 36"	\$1,980
			144	Amp and miscellaneous (allowance)	\$1,800
			156	Plow	\$2,200
			157	Turf Tiger mower	\$12,000
			159	Water tank/trailer, 300 gal	\$3,000
			160	Sprayer & pump, 100 gal	\$2,400
			178	Pump, small	\$6,400
			188	Umbrellas	\$8,050
			192	Tennis Court, nets	\$1,400
			199	Driving Cage, turf & net	\$4,000
			204	Irrigation pipe, valve, head (allowance)	\$6,500
			210	AC Compressor, 3 ton	\$6,000
Total Scheduled Replacements		\$96,470	Total Scheduled Replacements		\$168,830

**PROJECTED REPLACEMENTS**

Item	2058 - YEAR 36	\$	Item	2059 - YEAR 37	\$
8	Asphalt path, seal coat	\$11,376	79	Carpet, vinyl & wood flooring	\$105,600
9	Asphalt path, repair and overlay (1/3)	\$51,350	82	Refurnish lobby	\$40,000
10	Asphalt path, root trim (allowance)	\$8,000	83	Refurbish lobby	\$70,000
14	Steel bridge, structure	\$33,600	129	Ballroom portable stage	\$6,500
15	Steel bridge, IPE decking	\$6,720	196	Bocce Ball Court, surface	\$10,000
16	Reset pavers (20%)	\$6,650	197	Bocce Ball Court, borders	\$10,000
29	Irrigation controller	\$30,000	198	Bocce Ball Court, trellis	\$11,040
30	Foundation planting (allowance)	\$53,000	203	Asphalt pavement, mill & overlay, parking	\$140,352
58	French drain (reconstruction)	\$15,000			
61	Maintenance Shed, siding & trim	\$5,700			
66	Storage Lot, gate	\$7,500			
67	CH Shingle roof	\$116,640			
103	Treadmill	\$27,300			
104	Elliptical trainer	\$15,120			
105	Recumbent bike	\$7,560			
106	Upright bike	\$5,160			
107	Rower	\$2,200			
120	Miscellaneous fitness equipment (30%)	\$1,370			
121	Medical life pack	\$3,600			
132	Office, refurnish & refurbish	\$12,000			
133	Front desk, refurbish	\$8,000			
134	Computers	\$19,500			
141	Flat Panel TV, 80"	\$9,600			
142	Flat Panel TV, 48"	\$1,500			
146	AC Compressor, split	\$24,000			
147	AC Compressor, 5 ton	\$32,000			
148	AC Compressor, 3 ton	\$30,000			
151	Dectron dehumidifier & pump	\$80,000			
162	Main Pool, whitecoat	\$27,300			
163	Main Pool, waterline tile	\$4,500			
164	Main Pool, coping	\$15,000			
189	Refabric (exterior furniture)	\$3,300			
213	Filter	\$1,800			
Total Scheduled Replacements		\$676,346	Total Scheduled Replacements		\$393,492

**PROJECTED REPLACEMENTS**

2060 - YEAR 38			2061 - YEAR 39		
Item		\$	Item		\$
1	Asphalt Pavement, rejuvenate	\$216,800	7	Concrete work (3%)	\$35,700
6	Full depth pavement (1% allowance)	\$30,250	58	French drain (reconstruction)	\$15,000
40	Gate video security (allowance)	\$6,500	121	Medical life pack	\$3,600
49	RW Railing, aluminum (20%)	\$101,250	128	Ballroom sound & video system	\$40,000
137	Security entry pad system, 6 points	\$16,000	134	Computers	\$19,500
155	Maintenance vehicle, kubota	\$20,000	166	Indoor Pool, quartz diamond bright	\$28,600
158	Tractor, John Deere	\$20,216	167	Indoor Pool, waterline tile	\$2,250
206	Pickup truck	\$16,000	168	Indoor Pool, coping	\$7,500
218	Storage Lot, building roof	\$4,800	170	Indoor Spa, quartz diamond bright	\$3,250
219	Storage Lot, overhead doors	\$5,400	171	Indoor Spa, waterline tile	\$750
			172	Indoor Spa, coping	\$2,500
			180	Pool heaters	\$11,200
			189	Refabric (exterior furniture)	\$3,300
			190	Tennis Court, resurface/overlay	\$36,000
			193	Tennis Court, color coat	\$10,000
			200	Putting Green, rebuild	\$26,000
			201	Miscellaneous benches & tables (20%)	\$2,000
			202	Outdoor grill	\$9,600
Total Scheduled Replacements		\$437,216	Total Scheduled Replacements		\$256,750

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## CONDITION ASSESSMENT

**General Comments.** Miller - Dodson Associates conducted a Reserve Study at Sample Homeowner's Association in January 2022. A Sample Homeowner's Association is in generally good condition for a community constructed in 2022. 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.

### 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 COMPONENTS

**Entry Monument and Signage.** The Association maintains two entry monuments with fountains. The monuments are made of stone masonry and are in good condition. The Association has plans to change the text and logo.



We recommend repointing and replacement of defective areas of the masonry as needed. 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>.

Street, parking, and traffic signs are not considered in this study and should be replaced using other funds.

**Asphalt Pavement.** The Association is responsible for the roadways, parking areas, and paths within the community. In general, the Association's asphalt pavements are in good condition, with minor cracking. Most cracks have been repaired.



The Association maintains an inventory of asphalt pavement along the following streets and areas:

Four Seasons Dr. (in)	83,266	sf	Chapman Mill Tr.	13,620	sf
Four Seasons Dr. (out)	83,266	sf	Four Seasons Dr. (loop)	442,332	sf
Historic Virginia Ct.	25,231	sf	Blowing Leaf Ln.	23,322	sf
Downey Flake Mews	16,338	sf	Russet Maple Ct.	37,030	sf
Melting Snow Pl.	23,529	sf	Lunar Eclipse Dr.	19,619	sf
Sparkling Brook Loop	57,510	sf	Solstice Ln.	16,606	sf
Great Harvest Ct.	55,959	sf	Celebration Way	14,513	sf
Rising Fawn Tr.	16,080	sf	Festival Spirit Way	12,282	sf
Dancing Leaf Pl.	53,590	sf	Champion Oak Dr.	21,781	sf
Timid Creek Ct.	17,756	sf	China Grove	13,984	sf
Apple Cider Ct.	11,247	sf	Equinox Ln.	23,000	sf
Gray Ghost Ct.	17,595	sf	Detrick Trail	14,904	sf
Hunley Mill Pl.	9,660	sf	Mulberry Point Ct.	26,013	sf
Secret Grove Ct.	24,196	sf	Fresh Meadow Trail	16,836	sf

The paths are in fair condition, with minor cracking, trip hazards, and failed sections.



Asphalt paths are typically constructed on native soil. As a result, defects can begin to develop in a few years, leading to costly repairs or early replacement. 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 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. The normal service life of asphalt pavement is typically 18 to 20 years.

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 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.

The pricing used is based on recent contracts for a two-inch overlay, which reflects the current local market for this work. The pricing also takes into account that large runs of pavement will be completed at a time.

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>.

**Concrete Work.** The concrete work includes the community curbs, sidewalks, leadwalks, stairs, and other flatwork. We have modeled for curb replacement when the asphalt pavement is overlaid. The overall condition of the concrete work is good.



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.

The relevant links on our web site may provide useful information related to concrete terminology, maintenance, and repair. Please see <http://mdareserves.com/resources/links/site-components>.

**Unit Pavers.** Unit pavers provide provides a solid, decorative, and renewable surface surfaces that are part of the community's sidewalks, borders, and paths. The overall condition of the unit pavers is good with areas of defects consistent with the age of the installation.



To correct defects and provide the longest service life of the unit paver system, periodic re-setting is required. Re-setting provides an opportunity to replace broken unit pavers, fill in voids in the foundation material, and level the surface. We have included an allowance for periodic re-set of portions of the system.

Unit pavers have a service life of 30 years or more if the system is maintained on a periodic basis. Eventually the system will require a large-scale replacement, identical paver units may not be available and it is recommended that the unit paver system be replaced.

**Site Lighting.** The Association is responsible for the operation of the facility's street and walkway lights near the Community Center. Other lighting is maintained by the utility. The lighting system was not on at the time of our site visit. We understand that the lighting system is in operating condition.



This study assumes replacement of the light fixtures every 15 to 20 years, and pole replacement every 30 to 40 years. When the light poles are replaced, we assume that the underground wiring will also be replaced.

When a whole-scale lighting replacement project is called for, we recommend consulting with a lighting design expert. Many municipalities have design codes, guidelines, and restrictions when it comes to exterior illumination.

In addition, new technology such LED and LIFI among others should be evaluated when considering replacement.

**Retaining Walls.** The Association maintains several segmental block retaining walls. The location of many of the walls is somewhat inaccessible due to location and foliage. The retaining walls are in good condition.

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



Movement and displacement of any retaining wall is a sign of general settlement or failure. This typically is in the form of leaning and bowing, and can involve the entire wall or localized sections of the wall. Typically, these types of movements are gradual and may require the replacement of the wall. 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.

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. As a general source of information about retaining walls, we offer several links from our website at <http://mdareserves.com/resources/links/site-components>.

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 metal fencing at the retaining walls that is in generally 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.

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.

The Association maintains steel fence posts and fasteners that are embedded in concrete or masonry. Light rusting is occurring at the base of the embedded posts.

As part of normal maintenance, we recommend the following:

- Lift or remove ornamental base covers, if applicable.
- Remove 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 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.

**Fencing, Vinyl Split Rail.** The Association maintains vinyl split rail fencing that is in generally good condition. This type of fencing is typically replaced on an as needed basis when railings and posts deteriorate or become unsightly.



Protection from string machine damage during lawn maintenance can extend the useful life of the railing posts. Applying herbicides around post bases or installing protective sheathing are the typical ways of protecting from string machine damage.

For more information on fencing, visit our [website link](#) to the American Fence Association.

**Underground Utilities.** The Association is responsible for the maintenance of the underground utility lines, including the storm water management pipes, water lines at the Community Building, and sanitary lines at the Community Building. Engineering drawings were not used in the determination of these underground components. Instead, we have provided an estimate of the approximate replacement costs based on our experience with other facilities of similar size and configuration. The inspection and evaluation of underground lines and structures is beyond the scope of work for this study.

**Stormwater Management.** Storm water can be problematic in areas with high runoff water or dramatic changes in elevation. Typically, the majority of stormwater management systems are maintained by the county or municipality. This study attempts to include the portions of the system are considered common property. The share line between municipality and community responsibility is often obscure and subject to the judgment of the county authority.



Stormwater management components include: the entire network of underground piping, runoff beds, detention ponds, swales, drains, French drains, curb inlets, drop inlets, riprap, geo fabric (or geotextile fabric), silt fence, and site grading. Many installations have a service life equal to or greater to the life of the life of the community and will not require replacement.

Various authorities are involved with and have oversight of runoff water. There are historic, newly developed, and ongoing improvements in protection of the water table. Regulations on runoff water are established to reduce sediment in the watershed, eliminate contamination of the water table, and retain freshwater within the watershed. Sanctions on tributaries will expand upstream to all possible sources of collection. Communities are responsible for the volume of water produced within their boundaries until it reaches the end of the watershed.

We have included an allowance for stormwater management. This allowance is for situations where systems fail or do not meet current code and require replacement. This study includes a review of the visible stormwater management components that are considered common and observations of system failure when evident.

Thorough review of engineering plans, codes, system functioning, and applicable regulations was not performed as part of this study. Our estimate considers likely replacements and practical cost from communities of similar size and complexity. Inspection and evaluation of underground lines and structures is beyond the scope of work for this study.

Additional information is available on our website at: <http://mdareserves.com/resources/links/site-components>



**Storm Water Ponds.** The community is served by a several storm water ponds.



Ponds will accumulate silt and over time and lose the ability to store storm water at design levels, which could result in overflows and minor local flooding. In addition, water quality can be negatively affected by increased siltation and debris accumulation. Accordingly, ponds require periodic dredging.

Estimates of cost and the frequency of dredging ponds are a function of many variables, including the volume of the pond, the siltation rate, the nature of the material being removed, the method of removal, and the haul distance to a site that will accept the spoil material. Most of this information is unknown and must be assumed for the purpose of reserve study planning. The siltation rate and cost of periodic dredging are speculative, varying greatly depending on local conditions.

As a rule of thumb, dredging should be performed when approximately one-third of the volume of the pond has been filled with silt. In the absence of accurate information about the original depth of the pond and the local siltation rate, we have assumed that it will be necessary to remove one cubic yard of material over a third of the pond area periodically as noted in the inventory. We have assumed that the material being removed is free of heavy metals and hydrocarbons, and that it will be accepted as fill at a local landfill. A more accurate prediction of cost and cycles will require a hydrologic analysis and testing, which is beyond the scope of our study.

As a supplement to traditional dredging methods, hydro-raking can prolong the interval between dredging.

Because of the significant cost of this work, it is recommended that the Association undertake studies to refine the assumptions of this study.

Based on our understanding, we recommend the following:

- Periodically remove accumulated debris and vegetation growing in the ponds.
- Survey the ponds to establish the current profile of the bottom. After five years of operation, have the pond re-surveyed to establish new depths to determine the local siltation rate. This will establish the frequency required for periodic dredging.
- Periodically sample and test for contaminants.
- Consult with local contractors to determine the cost of removing and disposing of the spoil, once its nature is known.

Firms that specialize in this work can be typically found by internet searching "Lake and Pond, Construction and Maintenance" for your state or area of the country. Some states provide short lists of companies that specialize in this type of work.

Please note that the periodic removal of overgrown vegetation from the pond is considered a maintenance activity and has not been reserved for or included in this study.

Storm water structures must be maintained over time so that they may perform their two major functions - storm water storage and storm water quality improvement. A well-planned maintenance program is the best way to ensure that these structures will continue to perform their water quality and quantity functions.

The following information outlines the general maintenance considerations for storm-water management structures. Storm-water management structures will require routine and non-routine maintenance. Routine maintenance such as visual inspections, vegetation management, and the regular removal of debris and litter provides a variety of benefits such as reducing the chance of clogging outlet structures, trash racks, risers, and other facility components. It is important to note that while general maintenance tasks are suggested, actual maintenance needs are very site specific. Below is a lists component of a general maintenance program.

- | <u>Routine</u>  | <u>Non-Routine</u>                  |
|---|-------------------------------------|
| • Visual Inspection   | Bank Stabilization                  |
| • Vegetation Management   | Sediment Removal                    |
| • Debris/Litter Control Outlet  | Structure Maintenance / Replacement |
| • Maintaining Undisturbed Areas Around Infiltration Trenches/Basins (routine)       |                                     |
| • Maintenance of Mechanical Components (dependent on age of structure; non-routine) |                                     |

Ponds should be inspected once a year, addressing the items listed below.

#### MINIMUM INSPECTION CHECKLIST FOR PONDS.

- Obstructions of the inlet or outlet devices by trash and debris
- Excessive erosion or sedimentation in the basin
- Cracking or settling of the dam
- Low spots in the bottom of a dry pond
- Deterioration of pipes
- Condition of the emergency spillway
- Stability of the side-slopes
- Upstream and downstream channel conditions
- Signs of vandalism

Vegetation Management. Grass is usually used around and in storage ponds to prevent erosion and to filter sediment. The grass near the pond should not be over-fertilized, or the excessive nutrients will be washed into the pond and contribute to the growth of algae. Grass should be cut no shorter than 6-8 inches.

Please note that the periodic removal of overgrown vegetation from the pond is considered a maintenance activity and has not been reserved for or included in this study.

Sediment Removal. One of the main purposes of a storm-water management pond is to remove sediment from storm water. As water flows through the pond, sediment will accumulate and eventually will need to be removed. Storm-water management structures vary in design and shape. Therefore, there is no general rule for the frequency of sediment removal. Upstream conditions such as land use, type of land cover (vegetated vs. paved), and soil types are important factors in determining how rapidly sediment will accumulate in a pond. Sediment removal is usually the single largest cost of maintaining a storm-water management structure. Owners are responsible for maintaining the facility and should plan ahead, setting aside the necessary funds to pay for sediment removal. The best solution to sediment removal is to designate an on-site area or a site adjacent to the facility where the sediment can be disposed. This area will need to locate outside of the floodplain. If such a disposal area is not available, the sediment will need to be transported and disposed of off-site. Transportation costs and disposal fees can greatly increase the cost of sediment removal. Once the sediment is removed, the bottom of the basin and any disturbed areas will need to be stabilized and re-vegetated, or the structure will quickly clog and require sediment removal again.

We have provided funds for the minor dredging of the detention pond and clearing of the swales, creek area, 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 replace the assumptions we have had to make with more factual information as a basis for the estimates.

## BUILDING EXTERIORS

**Building Roofing.** The Community Building is roofed in asphalt shingles that are in generally good condition.



Asphalt shingle roofs can have a useful life of 20 to 50 years depending on the weight and quality of the shingle. Weathered, curled, and missing shingles are all indications that the shingles may be nearing the end of their useful life.

Access to the roof was not provided at the time of inspection. The roofing was observed from the ground level.

Annual inspections are recommended, with cleaning, repair, and mitigation of vegetation performed as needed. Access, inspection, and repair work should be performed by contractors and personnel with the appropriate access equipment who are experienced in the types of roofing used for the facility.

For additional information on roofs and roof maintenance, please see the appropriate links on our web site at <http://mdareserves.com/resources/links/building-exterior>.

**Siding and Trim.** The exterior of the Community Building are clad in stone masonry with vinyl siding and trim. The siding and trim materials are in generally good condition.

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



Stone masonry is used as the main exterior cladding of the building. As masonry weathers, the mortar joints will become damaged by water penetration. As additional water gains access to the joints, repeated freeze-thaw cycles gradually increase the damage to the mortar joints. If allowed to progress, even the masonry units such as brick, block, and stone can have their surfaces affected and masonry units can become loose.

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

Periodic repointing and local replacement of damaged masonry units will limit the damage done by moisture penetration. For this study, we assume that 10% of the masonry will require repointing every 10 years after approximately 30 years. For additional information about masonry and repointing, please view the relevant links at <http://mdareserves.com/resources/links/building-exterior>.

## BUILDING INTERIORS

**Common Interiors.** The Association maintains the lobbies, halls, meeting room, café, ballroom, billiard room, fitness center, locker rooms, and other common interior spaces that are in generally good condition.



We have assumed that the Association will want to maintain these areas in a commercially acceptable condition. Typically, replacement cycles for common interior spaces vary between 5 to 10 years depending on the aesthetic tastes of the community, usage, and construction. Material selection and the community's preferences are the major factors in setting the reserve components for items such as refurbishing and interior refurbishment. The Association will need to establish these cycles as these facilities age. Maintaining historical records and incorporating these trends and preferences into a future Reserve Study update is the best way to adjust for these cycles.

**Health and Fitness Center.** The Health and Fitness Center includes exercise equipment, associated restrooms/ showers. Listed below are the major components:



- Flooring. The rubber gym floor is in good condition with only one area where the seam is failing. We have assumed a service life of 10 years.
- Exercise Equipment. The equipment is in generally good condition.

**Locker Rooms.** The locker rooms for the swimming pool and exercise facility are located adjacent to the fitness center and pool. The overall condition of the locker rooms is good. Listed below are the major components of the locker rooms:



- Ceramic Floor Tile. The ceramic tile in the locker rooms is in good condition.
- Lockers. The locker rooms have half full height, lockers. All are in good condition. We have assumed a 30-year service life for these lockers.
- Light Fixtures. Illumination is provided by ceiling-mounted light fixtures. The fixtures are in Good working condition and do not provide adequate lighting. Fixtures of this type have a typical service life of 25 years.
- Shower and Restroom Fixtures. All shower and restroom fixtures are in good condition. We have assumed a service life of 20 years for the fixtures and that all fixtures will be replaced at the same time as part of a general renovation of the restroom.

**Corridors.** The Association maintains full-length corridors on each floor of the building. Listed below are the major corridor components that we have included in the Reserve Analysis:



- **Carpet.** The carpet in the building's corridors is in good condition. Commercial carpet of this construction in this type of application has a typical service life of 7 to 10 years.
- **Light Fixtures.** Corridor illumination is provided by wall mounted and ceiling mounted light fixtures. The fixtures are in good working condition and provide adequate lighting. Fixtures of this type have a typical service life of 25 years but may be replaced during normal renovation projects.
- **Exit Lights.** The building uses illuminated exit lights at each of the exits. The general condition of the building's exit lights is good.
- **Emergency Light Fixtures.** The building uses battery powered light fixtures for emergency lighting in the event of a power outage. The fixtures are in good condition. Fixtures of this type have a typical service life of 20 years.

## BUILDING SYSTEMS

**Split and Package HVAC Systems.** The heating ventilation and air conditioning (HVAC) of the facility are reported to be in good operating condition. Detailed inspection and testing of these systems is beyond the scope of this study.



The Association maintains a number of HVAC systems that use the refrigerant known as R22. This refrigerant will be phased out of production by the year 2020 and was generally phased out of use in new systems in 2010.

See the EPA, HCFC Phase-out Schedule on our website at <http://mdareserves.com/resources/links/building-system>. Since most of the community's AC systems rely on the old R22 refrigerant, we assume that the HVAC

replacement will include upgrading to the new refrigerant, which is likely to require the replacement of the entire system, including the compressor, coil, and line-set.

The Association maintains a number of HVAC systems that use one of the new generation refrigerants. Unlike the old R22 refrigerant, the new refrigerants are expected to be available throughout the period of this study. However, the operating pressure for new refrigerant systems is approximately twice as high as older systems. Many of the standard components have not been redesigned for these higher pressures, including the coils, which generally fail due to metal fatigue.

Even though manufacturers continue to predict 15 to 20-year life cycles for HVAC equipment that use these new refrigerants, this is not proven by historical data. We therefore recommend anticipating a normal economic life of 15 years for all HVAC equipment that uses pressurized refrigerants of these types.

In addition, the Association maintains air handlers/furnaces throughout the facility, and these components can have a useful life of 20 to 40 years. With fan, motor, and coil replacements performed as needed, the casings of these systems can last significantly longer.

As is the case with most equipment, to achieve a maximum useful economic life, proper maintenance is essential. In some cases, proper and proactive maintenance can greatly extend the useful life of these components.

**Building Piping.** There are no reported issues with the building piping. Copper water supply pipes have been used throughout the facility.

As a result of changes in water chemistry, brought on by federal clean water legislation, piping has been developing pin-hole leaks, which can lead to higher maintenance costs and a shorter than normal service life. For further information about the problem and research that is being conducted, please see the WSSC link on our web site at <http://mdareserves.com/resources/links/building-system>. In addition, in some cases, the pipe and fitting materials are of poor quality, and pin-hole leaks have been reported in as little as three years.

Water quality, in particular the Ph of the water, is critical to the longevity of these systems, and typically, the pressurized water supply lines are the most problematic followed by the central heating and cooling lines.

Because of these problems, the facility's piping will require replacement at some point in time. As a less expensive alternative to the extremely costly work of re-piping a building, systems have been developed to clean and epoxy-line the interior surfaces of these, including other types of pipes. In addition, new pipe materials are on the market.

Please note that the timeframe for repiping a facility can vary widely, and the estimation of the remaining economic life is highly speculative. Given the age of the facility, the Association should be aware of the various technologies available for pipe replacement and pipe lining, including traditional pipe replacement, replacement with CPVC and other synthetic pipes, and linings from companies such as Ace Duraflo and Curaflo. However, Miller - Dodson does not endorse any specific process or company.

For budgeting purposes, an allowance every 25 years is included in this study for repiping work. Please note that this work has a high degree of variability depending on the layout of the facility and accessibility to the piping components.

To gain a better understanding of the condition of this facility's pipes and water supply lines, we recommend having an expert evaluation of the piping performed. This evaluation should provide an estimation of remaining useful life of the piping systems, the condition of the water supply, and recommendations for replacement to maximize the remaining useful life of this facility's piping systems.

**Building Electrical Service.** The electrical systems of the building(s) are reported to be operating normally.



Other than transformers and meters and if protected from water damage or overloading, interior electrical systems within a building, including feed lines and switch gear, are considered long-life components, and unless otherwise noted, are excluded from this study.

In order to maintain this equipment properly, periodic tightening of all connections is recommended every three to five years. Insurance policies in some cases may have specific requirements regarding the tightening of electrical connections. It is also recommended that outlets, sockets, switches, and minor fixtures be replaced at a maximum of every 30 years.

Replacement of these smaller components, unless otherwise identified, is considered incidental to refurbishment or is considered a Valuation Exclusion.

**Electrical Distribution Panels.** The building has a number of electrical distribution panels located throughout the facility. These panels separate the building's electrical power feed into separate circuits while providing protective circuit breakers for each circuit. These panels date to the original construction of the building and have a rated service life of 50 years or more.



The overall condition of the distribution panels is good. As the distribution panel's age, obtaining replacement parts can be expected to become more difficult. When parts no longer are available, the Association will have to replace some of the existing panels. Replacement will have to be performed on an incremental basis, panel by panel. Therefore, we have included funding in the Reserve Analysis for distribution panel replacement on an incremental basis.

**Fire Safety Systems.** The building is fitted with a fire safety system that includes sprinklers and alarms, and these are reported to be operating normally. Testing and inspection of fire safety systems are not included in this study.





Sprinkler pipe systems have a wide variety of configurations and requirements depending on their age, condition, and jurisdictional location. Specific county and municipal codes can make a significant difference on what your facility's specific requirements may be.

Building fire alarm systems have a service life of 15 to 25 years. While the panels may continue to operate past this point, changes in fire safety technology and building fire safety codes tend to render them obsolete. In addition, manufacturers only support their systems for a limited period, typically about 15 years. After this time, it may be increasingly difficult to obtain replacement parts and service. When it becomes necessary to upgrade the fire alarm system, differences in the technologies and new code requirements are likely to require upgrades in lighting, sensors, alarms, and other system and sub components.

For wet and dry pipe systems, we have assumed that these are long life components and will not require whole scale replacement. It is imperative however for these pipes to be properly drained or for the water to be properly conditioned. Other components such as heads, gauges, and valves are assumed normal maintenance items and are therefore excluded from the study.

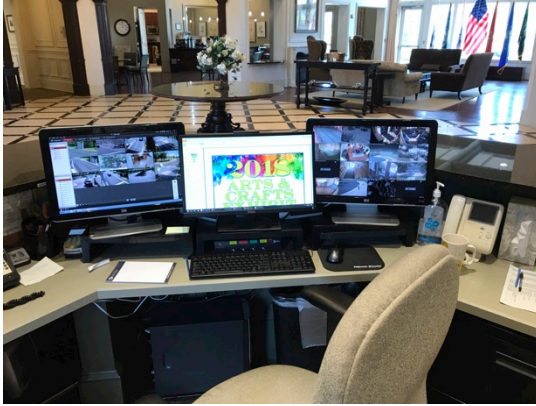
We recommend having your entire fire safety system inspected and evaluated by a professional in this field who is familiar with your area of the country. In addition, a comprehensive preventative maintenance program will ensure the maximum possible useful life from these components, and a qualified professional will be able to help in setting up and implementing such a program.

Your local CAI chapter may have a service provider list on their web site that may refer you to a local fire and life safety consultant. As an alternative, please contact our office and we will provide recommendations.

As a preliminary estimate, we have provided an allowance every 15 years for the major repair and upgrade of the fire safety systems. A detailed evaluation of the facility's fire safety system should include an estimate of reserve funding for these components and this funding estimate should be incorporated in the next reserve study update. Inspections and annual maintenance work are not accounted for or included in this study.

**Security.** The facility is secured by intrusion detection, access control, CCTV and recording (DVR). Security is an important factor in facility management. Electronic security represents a proactive approach to safeguarding the occupants and property.

The current system is very modern. The circuitry and technology are part of a hi-tech industry that will improve over time and make these systems obsolete. Even if the system still functions adequately, replacement is inevitable. At the time of replacement, a 360-degree assessment of vulnerabilities, threats, and needs should be performed to design a new system that matches operating needs of the facility.



For the system to function as designed the following should be practiced:

- Manage inventory and issuance of access cards.
- Maintain electronically actuated door hardware and associated door hardware so that all doors release when activated and fully close thereafter.
- Regularly service drive-gates and garage doors.
- Perform operational testing of cameras and recorders.
- Establish and maintain a relationship with 24-hour monitoring service.
- Establish a call list for security emergencies and test it periodically.

**Vehicle Access System.** Perimeter access control is established via electronic access control and vehicle access gates. The systems are in good condition and operating normally.



- Readers. Maintain all connections and security interfaces.
- Gates. Maintain hinges and fence sections. Keep swing or slide area clear of debris and obstructions.
- Actuators. Inspect actuators periodically to ensure proper function.
- Electrical. Maintain boxes, connections, and conduits to keep out water and moisture.

## RECREATIONAL FACILITIES

**Indoor Swimming Pool.** The community operates an indoor pool with hot tub, and outdoor pool of concrete construction. The pools are in good condition.

Listed below are the major components of the indoor pool facilities:



- Pool Shell. The shell for the swimming pool is in good condition.
- Pool Deck. The pool has a concrete deck. The overall condition of the deck is in good condition with no tripping hazards.
- Pool Deck Coating. The concrete pool deck is coated with a cementitious coating. The coating is in good condition. We have assumed a service life for the coating of ten years.
- Whitecoat. The pool whitecoat is in good condition. We have assumed a service life of eight to ten years for the pool whitecoat.
- Waterline Tile. The waterline tile is in good condition. We have assumed that the waterline tile will be replaced or restored when the pool is whitecoated.
- Coping. The pool is edged with masonry coping. The coping is in good condition.
- Pump and Filter System. The filter system is in good operating condition.
- Pool Atrium. The swimming pool is enclosed by a glass, aluminum, and fiberglass atrium.

**Outdoor Swimming Pool.** The community operates an indoor pool with hot tub, and outdoor pool of concrete construction. The pools are in good condition.

Listed below are the major components of the outdoor pool facilities:



- Pool Shell. The shell for the swimming pool is in good condition.
- Pool Deck. The pool has a concrete deck. The overall condition of the deck is in good condition with a few areas of settlement and tripping hazards.
- Whitecoat. The pool whitecoat is in good condition. We have assumed a service life of eight to ten years for the pool whitecoat.
- Waterline Tile. The waterline tile is in good condition. We have assumed that the waterline tile will be replaced or restored when the pool is whitecoated.
- Coping. The pool is edged with masonry coping. The coping is in good condition.
- Pump and Filter System. The filter system is in good operating condition.
- Pool Fence. The swimming pool is enclosed by a metal fence that is in good condition.

**Courts.** The community maintains multiple tennis courts, bocce courts, a putting green, and a driving pad. The overall condition of these facilities is good.



Listed below are the major components of the tennis court facilities:

- Asphalt Pavement (base layer). We have assumed a service life of 20 to 30 years for the asphalt base layer.
- Color Coat (surface layer). Annual cleaning is recommended to maintain the surface of the court. The base of a tennis court is subject to cracking and low spots known as “birdbaths” that can occur from

weather and earth movement. A program to address cracks as they appear will help to prolong the useful life of the color coat. We have assumed a service life of five to ten years for the color coat.

- Fencing. We have assumed that the fencing will be replaced when the asphalt pavement is replaced. Posts and fencing should be inspected, repaired, and painted as needed to prolong their economic life. Periodic inspection of the posts, gates, hinges, and latches is also recommended, and it is important that posts and footings be protected to prevent soil erosion. In addition, care should be taken so that damage from string trimmers is minimized.
- Net Posts. We have assumed that the new posts will be replaced when the asphalt pavement is replaced.
- Wind Screen. We have assumed a service life of five years for windscreens.
- Lighting System. Court lighting provides extended hours of use in all seasons. This lighting, like any exterior lighting system, should be inspected periodically for functionality. Timers should be adjusted and lamps should be changed as needed. Light pole footings should be inspected for damage and erosion. Additionally, any exposed wiring or missing junction covers should be addressed by a qualified technician.

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 elements of the property to ascertain the remaining useful life and the replacement costs of these common elements. 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, 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 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 [CALonline.org](http://CALonline.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:

<b>ea</b> each	<b>ls</b> lump sum	<b>sy</b> square yard
<b>ft or lf</b> linear foot	<b>pr</b> pair	<b>cy</b> cubic yard
<b>sf</b> 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?



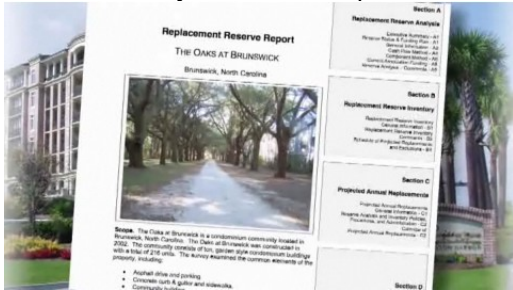
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Community dues, how can a Reserve Study help?  
Will a study keep my property competitive?



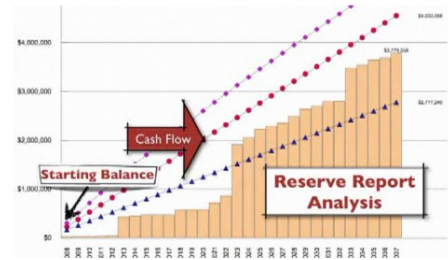
<https://youtu.be/diZfM1IyJYU>

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?



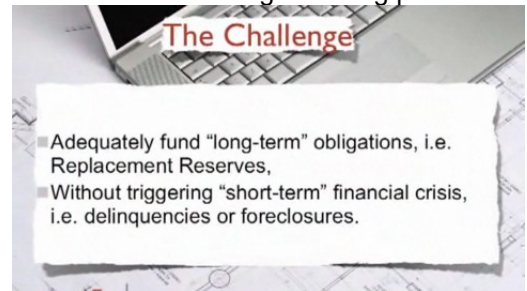
<https://youtu.be/SePdWVDvHWI>

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>