

# REPLACEMENT RESERVE REPORT

## STEEPLECHASE CSA

WHITEHALL BOROUGH, PENNSYLVANIA

October 30, 2021



**Description.** Steeplechase CSA is a community association located in Pittsburgh, Pennsylvania. Constructed in 1986, the community consists of 47 townhouse buildings containing 355 units. The survey examined the common elements of the property, including:

- Asphalt drive, parking, and curbs
- Concrete parking, mailbox pads, curb and gutter
- Stormwater management and outlet area
- Site lighting and entrance monument

### EXECUTIVE SUMMARY

This Reserve Study has been prepared for the Steeplechase CSA 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 proposed to be \$370,000. The reported Current Annual Funding for Reserves is \$38,000. The Recommended Annual Reserve Funding level for 2022 is \$35,137.

The Association has demonstrated prudent judgement in raising their Annual Reserve Funding Level since the previous Reserve Study was conducted in 2016/2017. As stated above, the Association is currently funding at a rate which is slightly higher than the 2022 Recommended Annual Reserve Funding level.

However, our economy is currently experiencing higher than anticipated inflation in the construction industry, especially over the last 18 to 24 months as gauged by the PPI. It is our recommendation, therefore, that the Steeplechase CSA continue to fund their Reserves at the Current Funding Level of \$38,000. The inflation projections on Page A.5 show that at the 4.00% inflation rate, the Recommended Annual Reserve Funding Level will nearly reach \$38,000 by FY 2025.

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

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

**Purpose.** The purpose of this Replacement Reserve Study is to provide Steeplechase CSA (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 October 30, 2021 to determine a remaining useful life and replacement cost for the commonly owned elements of this facility.
- This study contains additional recommendations to address inflation for the Cash Flow Method only. For this recommendation, Miller+Dodson uses the Producers Price Index (PPI), which gauges inflation in manufacturing and construction. Please see page A5 for further details.

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

**Acknowledgment.** Miller+Dodson Associates would like to acknowledge the assistance and input of Mr. Thomas Striegel and BOD members who provided very helpful insight into the current operations of the property.

**Analyst's Credentials.** Mr. Mark Haase holds a Bachelor's Degree in Economics from the State University of New York at Fredonia and an Associate's degree in Civil Engineering from Northern Virginia Community College. Mr. Haase has experience in all phases of construction, project design, initiation, administration, and inspection of facilities. As a project manager, he has managed all phases of commercial construction. He is currently a Reserve Specialist for Miller+Dodson Associates.

Respectfully Submitted,

**millerdodson**  
CAPITAL RESERVE CONSULTANTS

*Mark Haase*

Mark Haase, RS

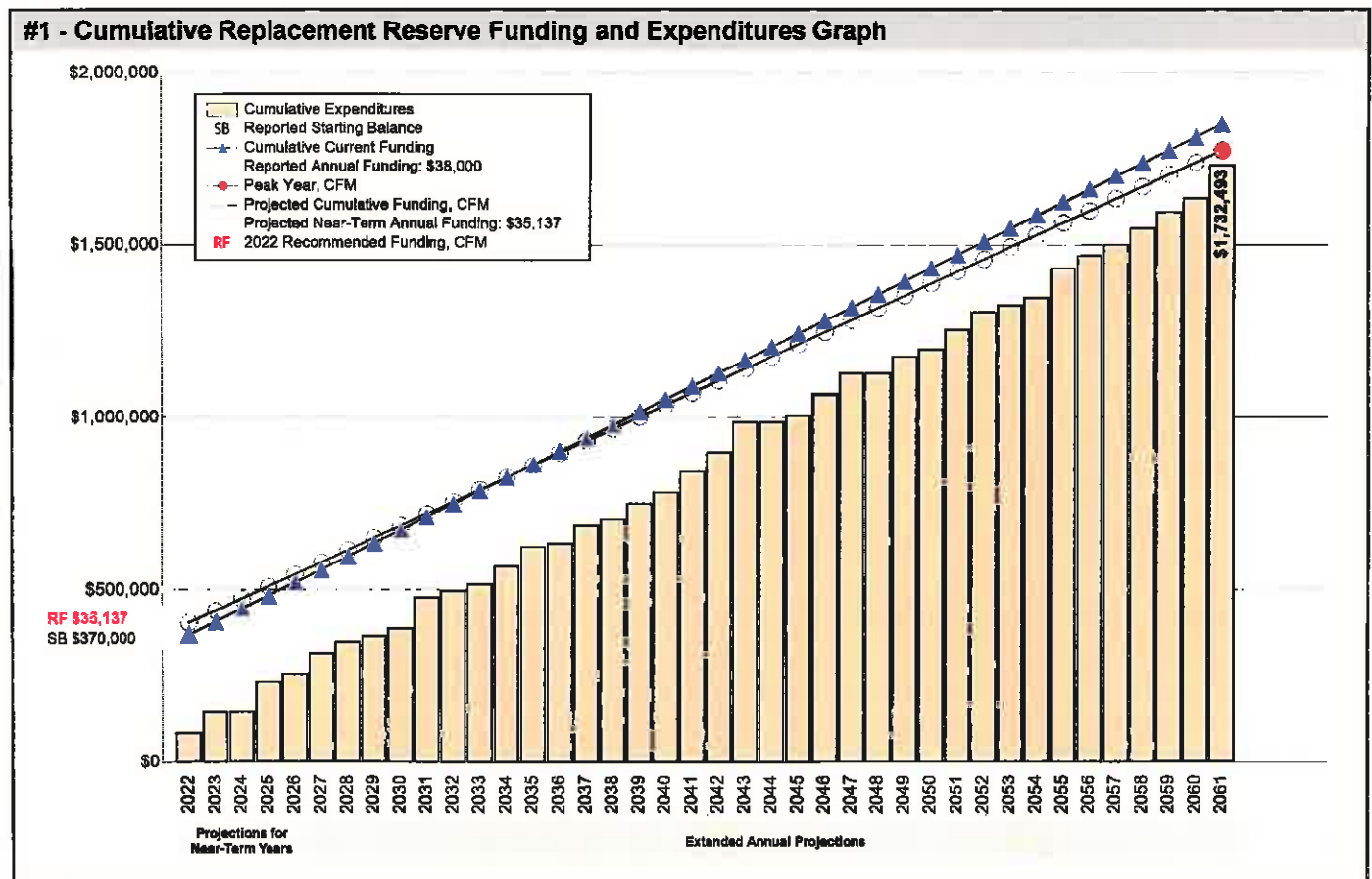
## SECTION A - FINANCIAL ANALYSIS

The Steeplechase CSA Replacement Reserve Analysis uses the Cash Flow Method (CFM) to calculate Replacement Reserve funding for the periodic replacement of the 41 Projected Replacements identified in the Replacement Reserve Inventory.

**\$35,137** RECOMMENDED REPLACEMENT RESERVE FUNDING FOR THE STUDY YEAR, 2022  
\$8.25 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.

Steeplechase CSA reports a Starting Balance of \$370,000 and Annual Funding totaling \$38,000. The reported Current Annual Funding of \$38,000 adequately funds projected replacements for the near-term years. See Page A.3 for a more detailed evaluation.



**REPLACEMENT RESERVE ANALYSIS - GENERAL INFORMATION**

The Steeplechase CSA 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

**\$370,000 | STARTING BALANCE**

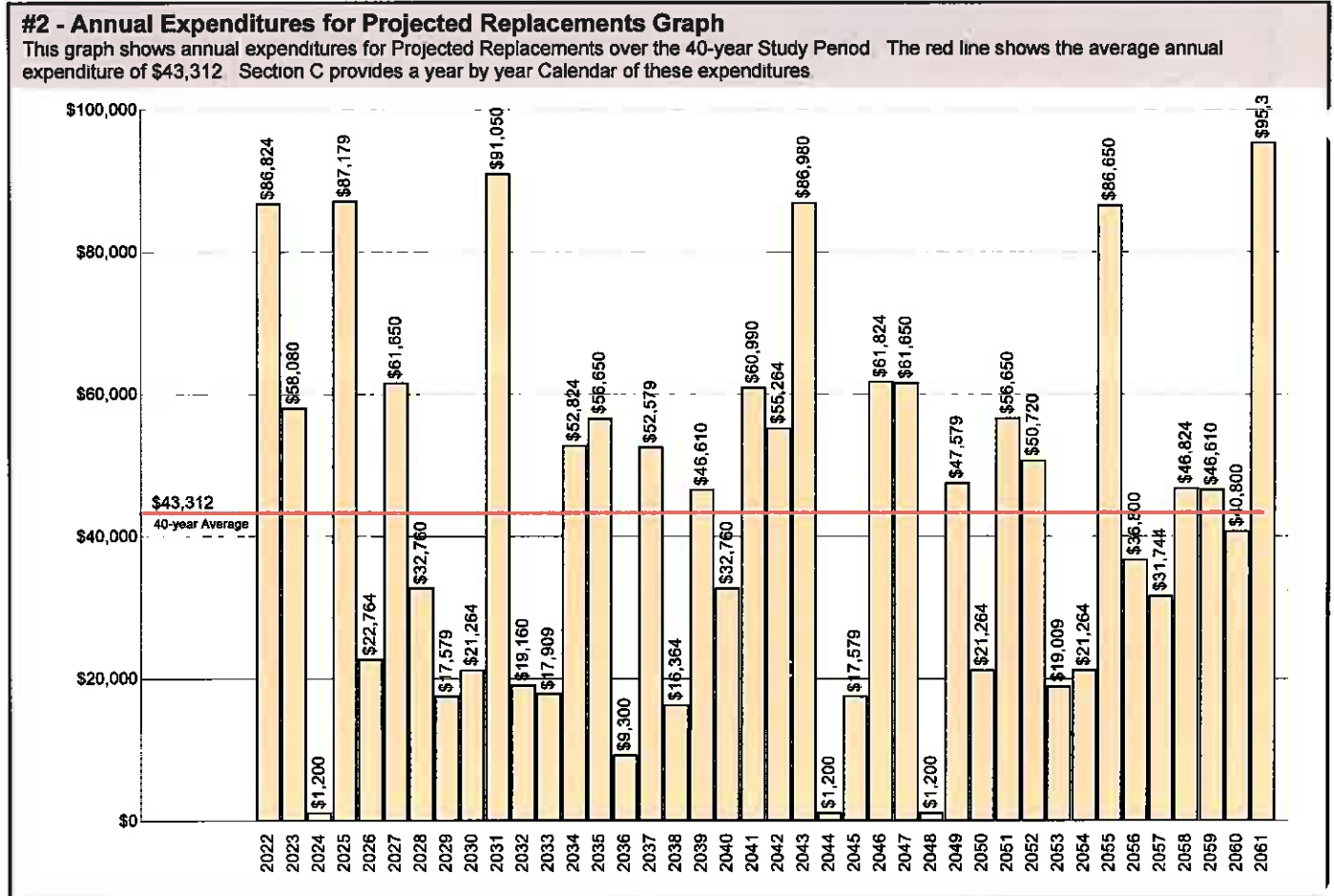
The Association reports Replacement Reserves on Deposit totaling \$370,000 at the start of the Study Year.

**Level Two | LEVEL OF SERVICE**

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

**\$1,732,493 | REPLACEMENT RESERVE INVENTORY - PROJECTED REPLACEMENTS**

The Steeplechase CSA Replacement Reserve Inventory identifies 41 items that will require periodic replacement, which are to be funded from Replacement Reserves. We estimate the cost of these replacements will be \$1,732,493 over the 40-year Study Period. The Projected Replacements are divided into 1 major categories starting on Page B.3. Pages B.1-B.2 provide detailed information on the Replacement Reserve Inventory.



**UPDATING OF THE FUNDING PLAN**

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

**UPDATING OF THE REPLACEMENT RESERVE STUDY**

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

**ANNUAL EXPENDITURES AND CURRENT FUNDING**

The annual expenditures that comprise the \$1,732,493 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	\$370,000									
Projected Replacements	(\$86,824)	(\$58,080)	(\$1,200)	(\$87,179)	(\$22,764)	(\$61,850)	(\$32,760)	(\$17,579)	(\$21,264)	(\$91,050)
Annual Deposit	\$38,000	\$38,000	\$38,000	\$38,000	\$38,000	\$38,000	\$38,000	\$38,000	\$38,000	\$38,000
End of Year Balance	\$321,177	\$301,097	\$337,897	\$288,718	\$303,854	\$280,304	\$285,544	\$305,965	\$322,701	\$288,652
Cumulative Expenditures	(\$86,824)	(\$144,903)	(\$146,103)	(\$233,282)	(\$256,046)	(\$317,896)	(\$350,488)	(\$388,035)	(\$389,299)	(\$480,349)
Cumulative Receipts	\$408,000	\$446,000	\$484,000	\$522,000	\$560,000	\$598,000	\$636,000	\$674,000	\$712,000	\$750,000
Year	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
Projected Replacements	(\$19,160)	(\$17,909)	(\$52,824)	(\$56,850)	(\$9,300)	(\$52,579)	(\$16,364)	(\$46,610)	(\$32,760)	(\$60,990)
Annual Deposit	\$38,000	\$38,000	\$38,000	\$38,000	\$38,000	\$38,000	\$38,000	\$38,000	\$38,000	\$38,000
End of Year Balance	\$288,492	\$308,582	\$293,758	\$275,109	\$303,809	\$289,230	\$310,885	\$302,256	\$307,496	\$284,506
Cumulative Expenditures	(\$499,509)	(\$517,418)	(\$570,242)	(\$626,891)	(\$636,191)	(\$688,771)	(\$705,135)	(\$751,745)	(\$784,505)	(\$845,494)
Cumulative Receipts	\$788,000	\$826,000	\$864,000	\$902,000	\$940,000	\$978,000	\$1,016,000	\$1,054,000	\$1,092,000	\$1,130,000
Year	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051
Projected Replacements	(\$55,264)	(\$88,880)	(\$1,200)	(\$17,579)	(\$61,824)	(\$61,850)	(\$1,200)	(\$47,579)	(\$21,264)	(\$56,650)
Annual Deposit	\$38,000	\$38,000	\$38,000	\$38,000	\$38,000	\$38,000	\$38,000	\$38,000	\$38,000	\$38,000
End of Year Balance	\$287,243	\$218,283	\$255,063	\$275,484	\$251,680	\$228,010	\$264,810	\$255,231	\$271,987	\$253,318
Cumulative Expenditures	(\$900,758)	(\$987,737)	(\$988,937)	(\$1,006,516)	(\$1,068,340)	(\$1,129,890)	(\$1,131,190)	(\$1,178,789)	(\$1,200,033)	(\$1,256,683)
Cumulative Receipts	\$1,188,000	\$1,206,000	\$1,244,000	\$1,282,000	\$1,320,000	\$1,358,000	\$1,396,000	\$1,434,000	\$1,472,000	\$1,510,000
Year	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061
Projected Replacements	(\$50,720)	(\$19,009)	(\$21,264)	(\$86,850)	(\$36,800)	(\$31,744)	(\$46,824)	(\$46,610)	(\$40,800)	(\$95,390)
Annual Deposit	\$38,000	\$38,000	\$38,000	\$38,000	\$38,000	\$38,000	\$38,000	\$38,000	\$38,000	\$38,000
End of Year Balance	\$240,588	\$258,588	\$276,324	\$227,675	\$228,875	\$235,131	\$226,307	\$217,697	\$214,897	\$157,507
Cumulative Expenditures	(\$1,307,403)	(\$1,326,412)	(\$1,347,676)	(\$1,434,325)	(\$1,471,125)	(\$1,502,870)	(\$1,549,694)	(\$1,596,304)	(\$1,637,104)	(\$1,732,493)
Cumulative Receipts	\$1,548,000	\$1,586,000	\$1,624,000	\$1,662,000	\$1,700,000	\$1,738,000	\$1,776,000	\$1,814,000	\$1,852,000	\$1,890,000

**EVALUATION OF CURRENT FUNDING**

The evaluation of Current Funding (Starting Balance of \$370,000 & annual funding of \$38,000) is done in today's dollars with no adjustments for inflation or interest earned on Replacement Reserves. The evaluation assumes Replacement Reserves will only be used for the 41 Projected Replacements identified in the Replacement Reserve Inventory and that the Association will continue Annual Funding of \$38,000 throughout the 40-year Study Period.

Annual Funding of \$38,000 is approximately 108 percent of the \$35,137 recommended Annual Funding calculated by the Cash Flow Method for 2022, the Study Year.

See the Executive Summary for the Current Funding Statement.

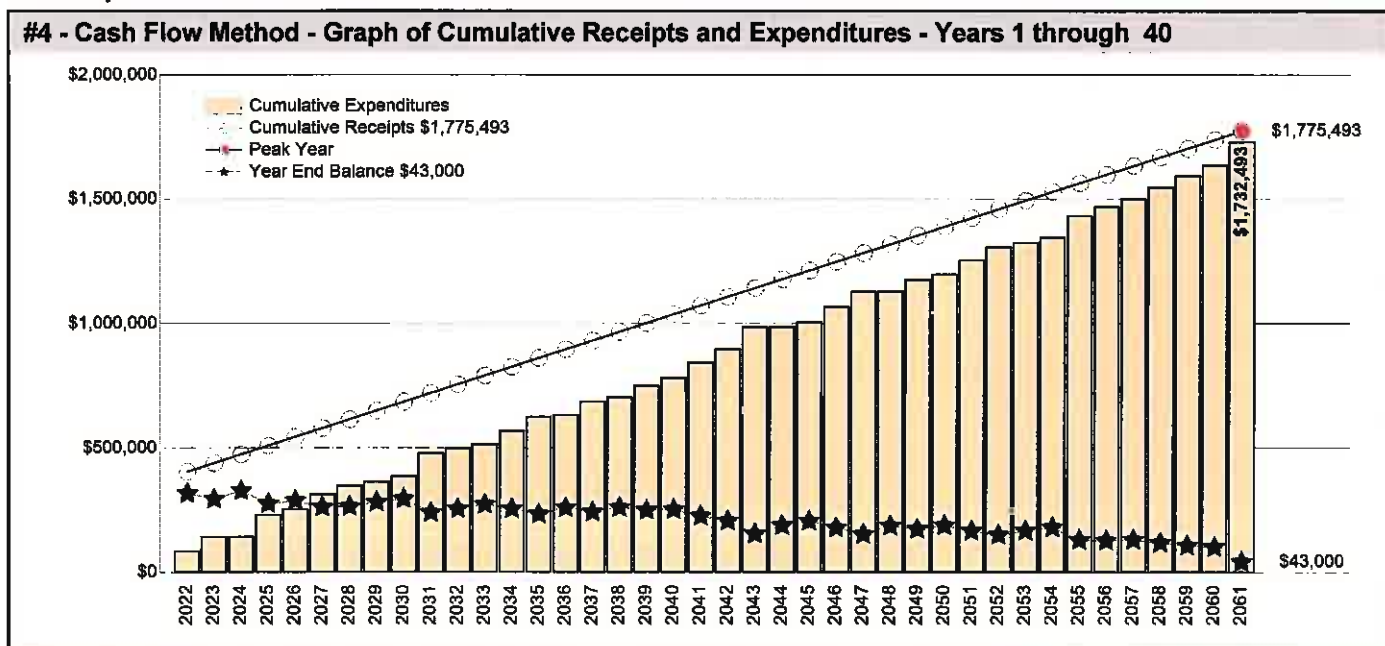
# CASH FLOW METHOD FUNDING

**\$35,137** RECOMMENDED REPLACEMENT RESERVE FUNDING FOR 2022

\$8.25 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 2061 with Replacement Reserves on Deposit dropping to the Minimum Balance after the completion of \$1,732,493 of replacements from 2022 to 2061. Recommended funding is anticipated to decline in 2062. Peak Years are identified in Chart 4 and Table 5.
- Threshold (Minimum Balance).** The calculations assume a Minimum Balance of \$43,000 will always be held in reserve, which is calculated by rounding the 12-month 40-year average annual expenditure of \$43,312 as shown on Graph #2.
- Cash Flow Method Study Period.** Cash Flow Method calculates funding for \$1,732,493 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	\$370,000									
Projected Replacements	(\$86,824)	(\$56,080)	(\$1,200)	(\$87,179)	(\$22,784)	(\$61,850)	(\$32,760)	(\$17,579)	(\$21,264)	(\$91,050)
Annual Deposit	\$35,137	\$35,137	\$35,137	\$35,137	\$35,137	\$35,137	\$35,137	\$35,137	\$35,137	\$35,137
End of Year Balance	\$318,314	\$295,372	\$329,309	\$277,257	\$289,640	\$263,128	\$265,506	\$283,064	\$286,937	\$241,025
Cumulative Expenditures	(\$86,824)	(\$144,903)	(\$146,103)	(\$233,282)	(\$256,046)	(\$317,696)	(\$350,456)	(\$368,035)	(\$389,299)	(\$480,349)
Cumulative Receipts	\$405,137	\$440,275	\$475,412	\$510,549	\$545,687	\$580,824	\$615,961	\$651,099	\$686,236	\$721,373
Year	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
Projected Replacements	(\$19,160)	(\$17,909)	(\$52,824)	(\$56,650)	(\$9,300)	(\$2,579)	(\$16,364)	(\$46,610)	(\$32,760)	(\$60,890)
Annual Deposit	\$35,137	\$35,137	\$35,137	\$35,137	\$35,137	\$35,137	\$35,137	\$35,137	\$35,137	\$35,137
End of Year Balance	\$257,002	\$274,230	\$256,543	\$235,031	\$260,869	\$243,427	\$282,200	\$250,727	\$253,106	\$227,253
Cumulative Expenditures	(\$499,569)	(\$517,418)	(\$570,242)	(\$626,891)	(\$636,191)	(\$688,771)	(\$725,135)	(\$751,745)	(\$784,505)	(\$845,494)
Cumulative Receipts	\$756,511	\$791,648	\$826,785	\$861,923	\$897,060	\$932,197	\$967,335	\$1,002,472	\$1,037,609	\$1,072,747
Year	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051
Projected Replacements	(\$55,264)	(\$86,980)	(\$1,200)	(\$17,579)	(\$61,824)	(\$61,850)	(\$1,200)	(\$47,579)	(\$21,264)	(\$56,850)
Annual Deposit	\$35,137	\$35,137	\$35,137	\$35,137	\$35,137	\$35,137	\$35,137	\$35,137	\$35,137	\$35,137
End of Year Balance	\$207,126	\$155,284	\$189,221	\$206,780	\$180,093	\$153,581	\$187,518	\$175,076	\$186,949	\$167,437
Cumulative Expenditures	(\$900,758)	(\$987,737)	(\$988,937)	(\$1,006,516)	(\$1,068,340)	(\$1,129,990)	(\$1,131,190)	(\$1,178,769)	(\$1,200,033)	(\$1,256,683)
Cumulative Receipts	\$1,107,884	\$1,143,021	\$1,178,158	\$1,213,296	\$1,248,433	\$1,283,570	\$1,318,708	\$1,353,845	\$1,388,982	\$1,424,120
Year	2052	2053	2054	2055	2056	2057	2058	2059	2060	1st Peak - 2061
Projected Replacements	(\$50,720)	(\$19,009)	(\$21,264)	(\$86,850)	(\$36,800)	(\$31,744)	(\$46,624)	(\$46,610)	(\$40,800)	(\$95,380)
Annual Deposit	\$35,137	\$35,137	\$35,137	\$35,137	\$35,137	\$35,137	\$35,137	\$35,137	\$35,137	\$35,137
End of Year Balance	\$151,855	\$167,983	\$181,866	\$130,344	\$128,881	\$132,074	\$120,388	\$109,915	\$103,252	\$43,000
Cumulative Expenditures	(\$1,307,403)	(\$1,326,412)	(\$1,347,676)	(\$1,434,325)	(\$1,471,125)	(\$1,502,870)	(\$1,549,694)	(\$1,596,304)	(\$1,637,104)	(\$1,732,493)
Cumulative Receipts	\$1,459,257	\$1,494,394	\$1,529,532	\$1,564,669	\$1,599,806	\$1,634,944	\$1,670,081	\$1,705,218	\$1,740,356	\$1,775,493

## 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.

### **\$35,137** 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.

### **\$35,945** 2023 - INFLATION ADJUSTED FUNDING

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

- Replacement Reserves on Deposit totaling \$318,314 on January 1, 2023.
- All 2022 Projected Replacements listed on Page C.2 accomplished at a cost to Replacement Reserves less than \$86,824.
- Construction Cost Inflation of 4.00 percent in 2022.

The \$35,945 inflation adjusted funding in 2023 is a 2.30 percent increase over the non-inflation adjusted funding of \$35,137.

### **\$36,772** 2024 - INFLATION ADJUSTED FUNDING

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

- Replacement Reserves on Deposit totaling \$345,315 on January 1, 2024.
- All 2023 Projected Replacements listed on Page C.2 accomplished at a cost to Replacement Reserves less than \$58,094.
- Construction Cost Inflation of 4.00 percent in 2023.

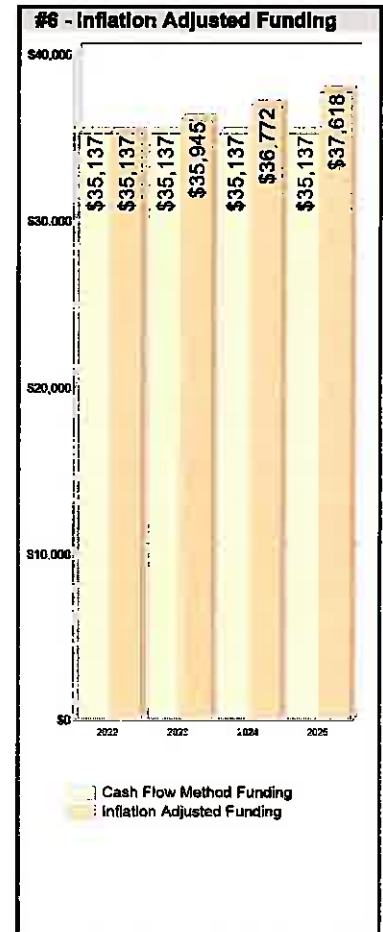
The \$36,772 inflation adjusted funding in 2024 is a 4.65 percent increase over the non-inflation adjusted funding of \$35,137.

### **\$37,618** 2025 - INFLATION ADJUSTED FUNDING

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

- Replacement Reserves on Deposit totaling \$404,302 on January 1, 2025.
- No Expenditures from Replacement Reserves in 2024.
- Construction Cost Inflation of 4.00 percent in 2024.

The \$37,618 inflation adjusted funding in 2025 is a 7.05 percent increase over the non-inflation adjusted funding of \$35,137.



### 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 \$3,442 on an average balance of \$344,157, \$3,318 on an average balance of \$331,814 in 2023, and \$3,748 on \$374,808 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 \$35,137 to \$31,696 (a 9.79 percent reduction), \$35,945 to \$32,627 in 2023 (a 9.23 percent reduction), and \$36,772 to \$33,024 in 2024 (a 10.19 percent reduction).



## SECTION B - REPLACEMENT RESERVE INVENTORY

Steeplechase CSA - Replacement Reserve Inventory identifies 41 Projected Replacements.

- **PROJECTED REPLACEMENTS.** 41 of the items are Projected Replacements and the periodic replacements of these items are scheduled for funding from Replacement Reserves. The Projected Replacements have an estimated one-time replacement cost of \$564,760. Cumulative Replacements totaling \$1,732,493 are scheduled in the Replacement Reserve Inventory over the 40-year Study Period.

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

- **EXCLUDED ITEMS.** 1 of the items included in the Replacement Reserve Inventory are 'Excluded Items'. Multiple categories of items are typically excluded from funding by Replacement Reserves, including but not limited to:

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

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

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

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

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

- **CATEGORIES.** The 41 items included in the Steeplechase CSA Replacement Reserve Inventory are divided into 1 major categories. Each category is printed on a separate page, beginning on page B.3.
- **LEVEL OF SERVICE.** This Replacement Reserve Inventory has been developed in compliance with the standards established for a Level 2 Update, as defined by the National Reserve Study Standards, established in 1998 by Community Associations Institute, which states:

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

## REPLACEMENT RESERVE INVENTORY - GENERAL INFORMATION (CONT'D)

- **INVENTORY DATA.** Each of the 41 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 41 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	Governor driveway asphalt (20%)	sf	9,322	\$5.00	20	1	\$46,610
2	Governor driveway asphalt (20%)	sf	9,322	\$5.00	20	5	\$46,610
3	Governor driveway asphalt (20%)	sf	9,322	\$5.00	20	9	\$46,610
4	Governor driveway asphalt (20%)	sf	9,322	\$5.00	20	13	\$46,610
5	Governor driveway asphalt (20%)	sf	9,322	\$5.00	20	17	\$46,610
6	Paddock Road asphalt	sf	13,357	\$3.25	20	19	\$43,410
Replacement Costs - Page Subtotal							\$276,460

**COMMENTS**

- Governor Driveway completed in phases that replace approximately 2 drives per year on reoccurring cycles.

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 (\$)
7	Parking area asphalt (20%)	sf	2,070	\$4.85	20	none	\$10,040
8	Parking area asphalt (20%)	sf	2,070	\$4.85	20	1	\$10,040
9	Parking area asphalt (20%)	sf	2,070	\$4.85	20	5	\$10,040
10	Parking area asphalt (20%)	sf	2,070	\$4.85	20	9	\$10,040
11	Parking area asphalt (20%)	sf	2,070	\$4.85	20	13	\$10,040
12	Parking area concrete (20%)	sf	390	\$14.00	40	none	\$5,460
13	Parking area concrete (20%)	sf	390	\$14.00	40	10	\$5,460
14	Parking area concrete (20%)	sf	390	\$14.00	40	20	\$5,460
15	Parking area concrete (20%)	sf	390	\$14.00	40	30	\$5,460
16	Parking area concrete (20%)	sf	390	\$14.00	40	40	\$5,460
17	Asphalt pavement patching (5%)	sf	3,516	\$4.00	4	none	\$14,064
18	Seal coat asphalt pavement	sf	70,317	\$0.25	4	3	\$17,579
19	Asphalt curb (20%)	sf	600	\$10.00	20	none	\$6,000
20	Asphalt curb (20%)	sf	600	\$10.00	20	none	\$6,000
21	Asphalt curb (20%)	sf	600	\$10.00	20	4	\$6,000
22	Asphalt curb (20%)	sf	600	\$10.00	20	8	\$6,000
23	Asphalt curb (20%)	sf	600	\$10.00	20	12	\$6,000
<b>Replacement Costs - Page Subtotal</b>							<b>\$139,141</b>

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 (\$)
24	Concrete mailbox pads (6%), formed w/ retaining	sf	52	\$30.00	6	none	\$1,560
25	Concrete curb, Henning (100%)	ft	235	\$39.00	40	35	\$9,165
	Asphalt mailbox pad repairs						EXCLUDED
26	Pedestal mailbox's	ea	18	\$2,200.00	35	3	\$39,600
27	Site lighting fixture, head	ea	2	\$550.00	15	1	\$1,100
28	Site lighting fixture, pole	ea	2	\$2,200.00	30	9	\$4,400
29	Segmental retaining wall, reset (10%)	sf	6	\$55.00	10	1	\$330
30	Segmental retaining wall, replace	sf	60	\$65.00	80	64	\$3,900
31	Stormwater management (allowance)	ls	1	\$7,500.00	10	none	\$7,500
32	Retention area (allowance)	ls	1	\$5,000.00	5	none	\$5,000
33	Landscaping	ls	1	\$30,000.00	3	none	\$30,000
34	Miscellaneous signage	ls	1	\$1,200.00	2	none	\$1,200
Replacement Costs - Page Subtotal							\$103,755

**COMMENTS**

- Asphalt mailbox pad repairs - are being replaced with concrete. Asphalt is being phased out.

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 (\$)
35	Entrance monument, tuckpointing	ls	1	\$1,200.00	20	14	\$1,200
36	Entrance monument, sign	ea	2	\$2,200.00	20	14	\$4,400
37	Entrance monument, structure	ls	1	\$25,000.00	40	34	\$25,000
38	Entrance monument, lighting	ls	1	\$1,000.00	20	14	\$1,000
39	Entrance monument, electric service	ls	1	\$2,500.00	40	34	\$2,500
40	Entrance monument, irrigation	ls	1	\$1,500.00	10	4	\$1,500
41	Entrance monument, flagpoles	ea	1	\$7,500.00	40	24	\$7,500
Replacement Costs - Page Subtotal							\$43,100

COMMENTS

VALUATION EXCLUSIONS								
Excluded Items								
ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NEL	REL	REPLACEMENT COST (\$)	
	Miscellaneous signage						EXCLUDED	
	Bench						EXCLUDED	
	Library						EXCLUDED	

**VALUATION EXCLUSIONS**  
 Comments

- Valuation Exclusions. For ease of administration of the Replacement Reserves and to reflect accurately how Replacement Reserves are administered, items with a dollar value less than \$1000 have not been scheduled for funding from Replacement Reserve. Examples of items excluded by Replacement Reserves by this standard are listed above.
- The list above exemplifies exclusions by the cited standard(s) and is not intended to be comprehensive.

LONG-LIFE EXCLUSIONS								
Excluded Items								
ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	REPLACEMENT COST (\$)	UNIT COST (\$)	NEL	REL	REPLACEMENT COST (\$)
	Miscellaneous culverts							EXCLUDED
	Common element electrical services							EXCLUDED
	Electrical wiring							EXCLUDED
	Water piping at common facilities							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	
	Gas 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 windows						EXCLUDED	
	Unit doors						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	REPLACEMENT COST (\$)	UNIT REL	REL	REPLACEMENT COST (\$)	
	Primary electric feeds							EXCLUDED
	Electric transformers							EXCLUDED
	Cable TV systems and structures							EXCLUDED
	Telephone cables and structures							EXCLUDED
	Site lighting							EXCLUDED
	Gas mains and meters							EXCLUDED
	Water mains and meters							EXCLUDED
	Sanitary sewers							EXCLUDED

**UTILITY EXCLUSIONS**  
 Comments

- Utility Exclusions. Many improvements owned by utility companies are on property owned by the Association. We have assumed that repair, maintenance, and replacements of these components will be done at the expense of the appropriate utility company. Examples of items excluded from funding Replacement Reserves by this standard are listed above.
- The list above exemplifies exclusions by the cited standard(s) and is not intended to be comprehensive.

**MAINTENANCE AND REPAIR EXCLUSIONS**

Excluded Items

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NEL	REL	REPLACEMENT COST (\$)
	Cleaning of asphalt pavement						EXCLUDED
	Landscaping and site grading						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.

## SECTION C - CALENDAR OF PROJECTED ANNUAL REPLACEMENTS

**GENERAL STATEMENT.** The 41 Projected Replacements in the Steeplechase CSA 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.
- **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**

2022 - Study Year			2023 - YEAR 1		
Item		\$	Item		\$
7	Parking area asphalt (20%)	\$10,040	1	Governor driveway asphalt (20%)	\$46,610
12	Parking area concrete (20%)	\$5,460	8	Parking area asphalt (20%)	\$10,040
17	Asphalt pavement patching (5%)	\$14,064	27	Site lighting fixture, head	\$1,100
19	Asphalt curb (20%)	\$6,000	29	Segmental retaining wall, reset (10%)	\$330
20	Asphalt curb (20%)	\$6,000			
24	Concrete mailbox pads (6%), formed w/ retaining walls	\$1,560			
31	Stormwater management (allowance)	\$7,500			
32	Retention area (allowance)	\$5,000			
33	Landscaping	\$30,000			
34	Miscellaneous signage	\$1,200			
<b>Total Scheduled Replacements</b>		<b>\$86,824</b>	<b>Total Scheduled Replacements</b>		<b>\$58,080</b>
2024 - YEAR 2			2025 - YEAR 3		
Item		\$	Item		\$
34	Miscellaneous signage	\$1,200	18	Seal coat asphalt pavement	\$17,579
			26	Pedestal mailbox's	\$39,600
			33	Landscaping	\$30,000
<b>Total Scheduled Replacements</b>		<b>\$1,200</b>	<b>Total Scheduled Replacements</b>		<b>\$87,179</b>
2026 - YEAR 4			2027 - YEAR 5		
Item		\$	Item		\$
17	Asphalt pavement patching (5%)	\$14,064	2	Governor driveway asphalt (20%)	\$46,610
21	Asphalt curb (20%)	\$6,000	9	Parking area asphalt (20%)	\$10,040
34	Miscellaneous signage	\$1,200	32	Retention area (allowance)	\$5,000
40	Entrance monument, irrigation	\$1,500			
<b>Total Scheduled Replacements</b>		<b>\$22,764</b>	<b>Total Scheduled Replacements</b>		<b>\$61,650</b>
2028 - YEAR 6			2029 - YEAR 7		
Item		\$	Item		\$
24	Concrete mailbox pads (6%), formed w/ retaining walls	\$1,560	18	Seal coat asphalt pavement	\$17,579
33	Landscaping	\$30,000			
34	Miscellaneous signage	\$1,200			
<b>Total Scheduled Replacements</b>		<b>\$32,760</b>	<b>Total Scheduled Replacements</b>		<b>\$17,579</b>

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**PROJECTED REPLACEMENTS**

Item	2030 - YEAR 8	\$	Item	2031 - YEAR 9	\$
17	Asphalt pavement patching (5%)	\$14,064	3	Governor driveway asphalt (20%)	\$46,610
22	Asphalt curb (20%)	\$6,000	10	Parking area asphalt (20%)	\$10,040
34	Miscellaneous signage	\$1,200	28	Site lighting fixture, pole	\$4,400
			33	Landscaping	\$30,000
<b>Total Scheduled Replacements</b>		<b>\$21,264</b>	<b>Total Scheduled Replacements</b>		<b>\$91,050</b>

Item	2032 - YEAR 10	\$	Item	2033 - YEAR 11	\$
13	Parking area concrete (20%)	\$5,460	18	Seal coat asphalt pavement	\$17,579
31	Stormwater management (allowance)	\$7,500	29	Segmental retaining wall, reset (10%)	\$330
32	Retention area (allowance)	\$5,000			
34	Miscellaneous signage	\$1,200			
<b>Total Scheduled Replacements</b>		<b>\$19,160</b>	<b>Total Scheduled Replacements</b>		<b>\$17,909</b>

Item	2034 - YEAR 12	\$	Item	2035 - YEAR 13	\$
17	Asphalt pavement patching (5%)	\$14,064	4	Governor driveway asphalt (20%)	\$46,610
23	Asphalt curb (20%)	\$6,000	11	Parking area asphalt (20%)	\$10,040
24	Concrete mailbox pads (6%), formed w/ retaining walls	\$1,560			
33	Landscaping	\$30,000			
34	Miscellaneous signage	\$1,200			
<b>Total Scheduled Replacements</b>		<b>\$52,824</b>	<b>Total Scheduled Replacements</b>		<b>\$56,650</b>

Item	2036 - YEAR 14	\$	Item	2037 - YEAR 15	\$
34	Miscellaneous signage	\$1,200	18	Seal coat asphalt pavement	\$17,579
35	Entrance monument, tuckpointing	\$1,200	32	Retention area (allowance)	\$5,000
36	Entrance monument, sign	\$4,400	33	Landscaping	\$30,000
38	Entrance monument, lighting	\$1,000			
40	Entrance monument, irrigation	\$1,500			
<b>Total Scheduled Replacements</b>		<b>\$9,300</b>	<b>Total Scheduled Replacements</b>		<b>\$52,579</b>

**PROJECTED REPLACEMENTS**

2038 - YEAR 16			2039 - YEAR 17		
Item		\$	Item		\$
17	Asphalt pavement patching (5%)	\$14,064	5	Governor driveway asphalt (20%)	\$46,610
27	Site lighting fixture, head	\$1,100			
34	Miscellaneous signage	\$1,200			
<b>Total Scheduled Replacements</b>		<b>\$16,364</b>	<b>Total Scheduled Replacements</b>		<b>\$46,610</b>
2040 - YEAR 18			2041 - YEAR 19		
Item		\$	Item		\$
24	Concrete mailbox pads (6%), formed w/ retaining walls	\$1,560	6	Paddock Road asphalt	\$43,410
33	Landscaping	\$30,000	18	Seal coat asphalt pavement	\$17,579
34	Miscellaneous signage	\$1,200			
<b>Total Scheduled Replacements</b>		<b>\$32,760</b>	<b>Total Scheduled Replacements</b>		<b>\$60,990</b>
2042 - YEAR 20			2043 - YEAR 21		
Item		\$	Item		\$
7	Parking area asphalt (20%)	\$10,040	1	Governor driveway asphalt (20%)	\$46,610
14	Parking area concrete (20%)	\$5,460	8	Parking area asphalt (20%)	\$10,040
17	Asphalt pavement patching (5%)	\$14,064	29	Segmental retaining wall, reset (10%)	\$330
19	Asphalt curb (20%)	\$6,000	33	Landscaping	\$30,000
20	Asphalt curb (20%)	\$6,000			
31	Stormwater management (allowance)	\$7,500			
32	Retention area (allowance)	\$5,000			
34	Miscellaneous signage	\$1,200			
<b>Total Scheduled Replacements</b>		<b>\$55,264</b>	<b>Total Scheduled Replacements</b>		<b>\$86,980</b>
2044 - YEAR 22			2045 - YEAR 23		
Item		\$	Item		\$
34	Miscellaneous signage	\$1,200	18	Seal coat asphalt pavement	\$17,579
<b>Total Scheduled Replacements</b>		<b>\$1,200</b>	<b>Total Scheduled Replacements</b>		<b>\$17,579</b>

**PROJECTED REPLACEMENTS**

2046 - YEAR 24			2047 - YEAR 25		
Item		\$	Item		\$
17	Asphalt pavement patching (5%)	\$14,064	2	Governor driveway asphalt (20%)	\$46,610
21	Asphalt curb (20%)	\$6,000	9	Parking area asphalt (20%)	\$10,040
24	Concrete mailbox pads (6%), formed w/ retaining walls	\$1,560	32	Retention area (allowance)	\$5,000
33	Landscaping	\$30,000			
34	Miscellaneous signage	\$1,200			
40	Entrance monument, irrigation	\$1,500			
41	Entrance monument, flagpoles	\$7,500			
<b>Total Scheduled Replacements</b>		<b>\$61,824</b>	<b>Total Scheduled Replacements</b>		<b>\$61,650</b>
2048 - YEAR 26			2049 - YEAR 27		
Item		\$	Item		\$
34	Miscellaneous signage	\$1,200	18	Seal coat asphalt pavement	\$17,579
			33	Landscaping	\$30,000
<b>Total Scheduled Replacements</b>		<b>\$1,200</b>	<b>Total Scheduled Replacements</b>		<b>\$47,579</b>
2050 - YEAR 28			2051 - YEAR 29		
Item		\$	Item		\$
17	Asphalt pavement patching (5%)	\$14,064	3	Governor driveway asphalt (20%)	\$46,610
22	Asphalt curb (20%)	\$6,000	10	Parking area asphalt (20%)	\$10,040
34	Miscellaneous signage	\$1,200			
<b>Total Scheduled Replacements</b>		<b>\$21,264</b>	<b>Total Scheduled Replacements</b>		<b>\$56,650</b>
2052 - YEAR 30			2053 - YEAR 31		
Item		\$	Item		\$
15	Parking area concrete (20%)	\$5,460	18	Seal coat asphalt pavement	\$17,579
24	Concrete mailbox pads (6%), formed w/ retaining walls	\$1,560	27	Site lighting fixture, head	\$1,100
31	Stormwater management (allowance)	\$7,500	29	Segmental retaining wall, reset (10%)	\$330
32	Retention area (allowance)	\$5,000			
33	Landscaping	\$30,000			
34	Miscellaneous signage	\$1,200			
<b>Total Scheduled Replacements</b>		<b>\$50,720</b>	<b>Total Scheduled Replacements</b>		<b>\$19,009</b>



**PROJECTED REPLACEMENTS**

Item	2054 - YEAR 32	\$	Item	2055 - YEAR 33	\$
17	Asphalt pavement patching (5%)	\$14,064	4	Governor driveway asphalt (20%)	\$46,610
23	Asphalt curb (20%)	\$6,000	11	Parking area asphalt (20%)	\$10,040
34	Miscellaneous signage	\$1,200	33	Landscaping	\$30,000
<b>Total Scheduled Replacements</b>		<b>\$21,264</b>	<b>Total Scheduled Replacements</b>		<b>\$86,650</b>
Item	2056 - YEAR 34	\$	Item	2057 - YEAR 35	\$
34	Miscellaneous signage	\$1,200	18	Seal coat asphalt pavement	\$17,579
35	Entrance monument, tuckpointing	\$1,200	25	Concrete curb, Henning (100%)	\$9,165
36	Entrance monument, sign	\$4,400	32	Retention area (allowance)	\$5,000
37	Entrance monument, structure	\$25,000			
38	Entrance monument, lighting	\$1,000			
39	Entrance monument, electric service	\$2,500			
40	Entrance monument, irrigation	\$1,500			
<b>Total Scheduled Replacements</b>		<b>\$36,800</b>	<b>Total Scheduled Replacements</b>		<b>\$31,744</b>
Item	2058 - YEAR 36	\$	Item	2059 - YEAR 37	\$
17	Asphalt pavement patching (5%)	\$14,064	5	Governor driveway asphalt (20%)	\$46,610
24	Concrete mailbox pads (6%), formed w/ retaining walls	\$1,560			
33	Landscaping	\$30,000			
34	Miscellaneous signage	\$1,200			
<b>Total Scheduled Replacements</b>		<b>\$46,824</b>	<b>Total Scheduled Replacements</b>		<b>\$46,610</b>
Item	2060 - YEAR 38	\$	Item	2061 - YEAR 39	\$
26	Pedestal mailbox's	\$39,600	6	Paddock Road asphalt	\$43,410
34	Miscellaneous signage	\$1,200	18	Seal coat asphalt pavement	\$17,579
			28	Site lighting fixture, pole	\$4,400
			33	Landscaping	\$30,000
<b>Total Scheduled Replacements</b>		<b>\$40,800</b>	<b>Total Scheduled Replacements</b>		<b>\$95,390</b>

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## SECTION D - CONDITION ASSESSMENT

**General Comments.** Miller+Dodson Associates conducted a Reserve Study at Steeplechase CSA in October 2021. Steeplechase CSA is in generally good condition for a community association constructed in 1986. A review of the Replacement Reserve Inventory will show that we are anticipating most of the components achieving their normal economic lives.

The following comments pertain to the larger, more significant components in the Replacement Reserve Inventory and to those items that are unique or deserving of attention because of their condition or the manner in which they have been treated in the Replacement Reserve Analysis or Inventory.

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

### General Condition Statements.

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

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

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

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

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

### SITE ITEMS

**Governor Driveways.** The Association maintains 9 Governor Driveways and 5 pipe stems off Henning Drive. The pavements are replaced in phases of 2 drives per year. We noted multiple defects that should be repaired. An asphalt patching allowance is included in this study.





Pavement is installed on native soil and topography. This can provide challenges with maintaining the pavements. The pavement will show early wear and deterioration in sloped areas and loosely compacted subgrade. These areas are subject to only minor passenger vehicle traffic. The areas have good drainage.



**Paddock Road Asphalt Pavement Drive and Parking.** The Association is responsible for the maintenance of Paddock Drive. Other roadways are maintained by the City, County, or other municipality. In general, the Association's asphalt pavements are in good condition. Paddock Road was recently paved.



Typical defects of pavements that require replacement include the following:

- **Open Cracks.** There are multiple locations where open cracks are allowing water to penetrate to the asphalt base and the bearing soils beneath. Over time, water will erode the base and accelerate the deterioration of the asphalt pavement. If cracks extend to the base and bearing materials, remove the damaged areas, and replace defective materials. As a part of normal maintenance, clean and fill all other cracks.
- **Alligatoring.** There are multiple locations where the asphalt has developed a pattern of cracking known as alligatoring. The primary cause of alligatoring is an unstable base. Once these cracks extend through the asphalt, they will allow water to penetrate to the base, accelerating the rate of deterioration, and eventually leading to potholes. The only solution is to remove the defective asphalt, compact the base, and install new base materials and asphalt.
- **Improper Grading.** The asphalt pavement is not properly graded, resulting in the ponding of water. Proper grading of the asphalt pavement will require replacing portions of the asphalt. It may also require resetting improperly sloped curb and gutter segments that are not conveying water to the stormwater management system. If ponding is left unattended it can result in unsafe travel areas, by creating conditions for hydroplaning and pockets of ice to form.
- **Potholes.** Potholes have formed as the result of full-depth pavement failure, including base materials. The repair will require removal of the asphalt and base materials, installation and compaction of new base materials, and asphalt resurfacing.
- **Depressions.** There are areas where the asphalt surface is depressed due to deformation in the surface or underlying layers. These depressions may continue to grow with exposure to traffic. Water ponding is evident in several of these areas. Repair of these areas will require the removal of the asphalt and base material and reinstallation, by compacting the new base material and resurfacing with asphalt.
- **Wheel Rutting.** Depressions along the wheel lines extend along portions of the roadway. Repair of these areas will require full-depth and full-width pavement replacement. Wheel rutting, if left unattended can adversely affect vehicle steering.
- **Shoving.** Occurring at locations of sharp braking or turning. The primary cause of this defect is from large truck traffic. If addressed early, surface milling and overlay using a stiffer topcoat of asphalt pavement shoving can be mitigated.
- **Tree Root Damage.** This is known as Heaving, there are locations where tree roots caused heaving in the pavement surface. The repair of these areas requires the removal of the asphalt and the tree roots, then replenish and re-compact the base material and resurface the asphalt. Root trimming can also be an effective way to control this defect.
- **Edge Cracking.** Sections of the asphalt pavement have developed cracks along the pavement edges due to improper confinement. Installation of curbs or installation of a compacted gravel shoulder at the time of an overlay project can address this defect.
- **Reflective Cracking.** The asphalt pavement has a significant number of reflective cracks. Reflective cracks occur when placing a new asphalt overlay over and existing cracked pavement. With time and movement, existing cracks will migrate through the new asphalt. Installing a bridging membrane or fabric at the time of overlay can control reflective cracking.

A more detailed summary of pavement distress can be found at <http://www.asphaltinstitute.org/engineering/maintenance-and-rehabilitation/pavement-distress-summary/>.

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 an effort to maintain the condition of the pavement throughout the community and ensure the longest life of the asphalt, we recommend the Association adopt 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.

**Seal Coating.** For seal coating, several different products are available. The older, more traditional seal coating product is paint. 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.

The Association is reviewing various new products to determine a solution. Water based products which are new on the market are providing a reliable and sustainable option for sealing.

**Asphalt Curbs.** The Association maintains various sections of asphalt curbs throughout the community. The asphalt curbs are an effective method to control drainage. The asphalt curbs are in good condition.



**Parking Areas.** The Association maintains multiple parking areas adjacent to the roadways. The parking areas are constructed of asphalt pavement or concrete. The parking areas are in good condition.

Asphalt parking areas. Include asphalt curb.



**Concrete parking areas.** The Association is reporting that the concrete construction is poor quality with reinforcing mesh showing through the concrete surface.



**Mailboxes.** The Association maintains mailbox stations at various locations throughout the community. The mailboxes are in good condition.



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

**Concrete Mailbox Pads.** The mailboxes include a concrete pad. In some locations the pad includes a curb or retaining wall to carve out a suitable area to mount the boxes and provide a stoop to access the mailboxes. Asphalt mailbox pads have been phased out.



The mailboxes are replaced in phases and as needed. The mailbox locations are in generally good condition.

**Site Lighting.** The Association is responsible for the operation of the post lamps and signage area lighting. The lighting is in good condition. General streetlights and post lamps are managed by the electric utility.



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.

Additionally, new technology such as LED and LIFI, among others, is considered. The Association should consider factors such as environmental sustainability, longevity, and cost when they look at the replacement of their lighting.

**Stormwater Management.** Stormwater 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 shared line between municipality and community responsibility is often obscure and subject to the judgment of the county authority.



The Association recently completed a stormwater mitigation project on a pipe stem. This included drainage, an asphalt curb, and regrading. Additional projects may be planned based on the effectiveness of these measures.



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 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 the 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 the 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.

A 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 costs from communities of similar size and complexity. Inspection and evaluation of underground lines and structures are beyond the scope of work for this study.

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

**Retention Area.** The Association maintains a retention area for drainage from the community. The retention is high and sloped and will not likely require any maintenance.







**Entry Monument and Signage.** The Association maintains an entry monument on Henning Road. The monument is made of stone masonry. The monument is new and in good condition. The message board is back-lit acrylic or other synthetic material and is expected to have a useful life of 15 to 20 years.



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

In addition to monuments, the Association is responsible for community signage including parking, traffic, and other major roadway signs. Small miscellaneous signs are not considered in this study and should be replaced using other funds.

The area features lighting and irrigation. The lighting and irrigation are in good condition.

The monument area includes a flagpole for American Flag and Pennsylvania flag display.

**Foundation Plantings (Landscaping).** The community features rooted woody plants that are designed to support soil integrity, provide shade, add to the aesthetic appeal of the community, and at times conceal utilities. We noted that some of the most problematic trees are located adjacent to building structures. These are the responsibility of the unit owner.

Proper selection of foundation plants will allow nature to do its thing and fill the space without negative effects of overgrowing. The concept of the foundation plantings is to remain for 20 – 30 years. Periodic assessment of the function of plantings in the community should be conducted with a landscape specialist or arborist. In some areas, the municipality has oversight on trees and regulates what can be removed entirely.



Listed below are a few of the conditions that will require removal and replacement of trees:

- Nuisance roots that lift sidewalk and pavement sections
- Large trees that grow too close to roofs and gutters
- Tree canopy hanging over parking spots
- Trunk and roots too close to building foundations
- Trunk and canopy that is taller than the building structures
- Dying and diseased trees
- Bushes and shrubs that are overgrown and cannot be trimmed back

This study includes an allowance to perform replacement of individual trees or shrubs. The understanding that trees would be cut down, removed, stump ground, and a new tree planted in its place. The allowance is not intended for planting annuals, seasonal flowers, mulch, or landscaping services.

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

End of Condition Assessment

## **1. COMMON INTEREST DEVELOPMENTS - AN OVERVIEW**

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

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

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

## **2. REPLACEMENT RESERVE STUDY**

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

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

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

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

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

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

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

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

### 3. METHODS OF ANALYSIS

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

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

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

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

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

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

### 4. REPLACEMENT RESERVE STUDY DATA

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

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

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

## 5. DEFINITIONS

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

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

**Cash Flow Analysis.** See Cash Flow Method, above.

**Component Analysis.** See Component Method, above.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

<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?



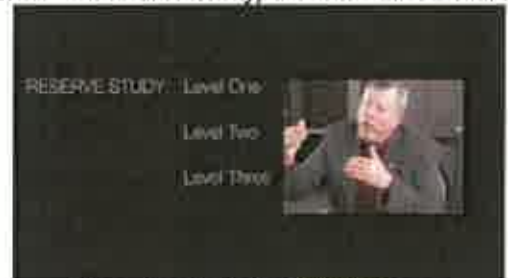
<https://youtu.be/40SodajTW1g>

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



<https://youtu.be/pYSMZ013VlQ>

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?



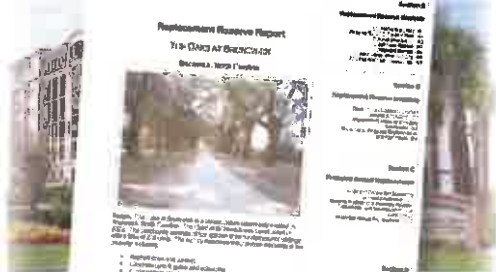
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Community dues, how can a Reserve Study help?  
Will a study keep my property competitive?



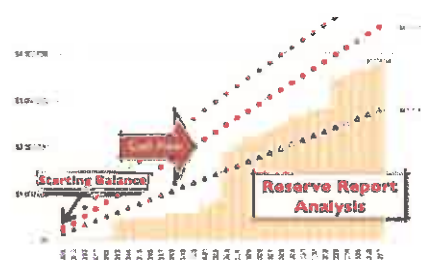
<https://youtu.be/diZfM1lyJYU>

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



<https://youtu.be/gCeVJhF9ag>

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



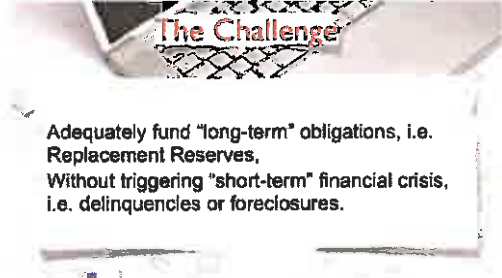
<https://youtu.be/SePdwVDvHWI>

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



<https://youtu.be/w8CDLwRiv68>

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



<https://youtu.be/hlxV9X1tlcA>