

REPLACEMENT RESERVE REPORT FY 2020 SAGE HILL GREEN



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Community Management by:

SAGE HILL GREEN

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REPLACEMENT RESERVE REPORT

SAGE HILL GREEN

COLORADO SPRINGS, COLORADO
May 9, 2020



Description. Sage Hill Green is a Homeowners Association located in Colorado Springs, Colorado. Sage Hill Green was constructed in 1998. The community consists of 31 single family homes. The survey examined the common elements of the property, including:

- Asphalt drive
- Concrete sidewalks, curb & gutter, and driveways
- Irrigation controllers
- Exterior trim (painting)

Level of Service. This study has been performed as a Level II Update, With Site Visit/On-Site Review as defined under the National Reserve Study Standards that have been adopted by the Community Associations Institute. As such, the component inventory is based on the study that was performed by Miller - Dodson Associates on October 30, 2004, and updates on September 13, 2008 and May 26, 2012. This information was adjusted to reflect changed to the inventory that were provided by the community manager, and the quantities were adjusted accordingly from field measurement and/or quantity takeoffs from to-scale drawings. The condition of all commonly-owned components was ascertained from a site visit and the visual inspection of each component by the Analyst. The life expectancy and the value of components are provided based in part on these observations. The fund status and funding plan have been derived from analysis of this data.

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Replacement Reserve Analysis

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Overview, Standard Terms, and Definitions
Video Answers to Frequently Asked Questions

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

Purpose. The purpose of this Replacement Reserve Study is to provide Sage Hill Green (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 Association's 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 May 9, 2020 to determine a remaining useful life and replacement cost for the commonly owned elements of this facility.
- This study contains additional recommendations to address inflation for the Cash Flow Method only. For this recommendation, Miller - Dodson uses the Producers Price Index (PPI), which gauges inflation in manufacturing and construction. Please see page A5 for further details.

To-Scale Drawings. Site and building plans were used in the development of this study. We recommend the Association assemble and maintain a library of site and building plans of the entire facility. Record drawings should be scanned into an electronic format for safe storage and ease of distribution. Upon request for a nominal fee, Miller - Dodson can provide scanning services.

Current Funding. This reserve study has been prepared for Fiscal Year 2020 covering the period from January 1, 2020 to December 31, 2020. The Replacement Reserves on deposit as of January 1, 2020 are reported to be \$27,736. The planned contribution for the fiscal year is \$2,696.

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

Acknowledgement. Miller - Dodson Associates would like to acknowledge the assistance and input of the Board President, Mr. Larry Anderson who provided very helpful insight into the current operations of the property.

Analyst's Credentials. Mr. Rick McKittrick holds a Bachelors Degree in Engineering from the University of Connecticut and a Masters Degree in Engineering from Boston University. Mr. McKittrick is a Registered Professional Engineer in the State of Ohio. He has managed the maintenance, repair, design, and construction of facilities and community infrastructure in the U.S. and overseas for private companies and government agencies. He is currently a Reserve Specialist for Miller - Dodson Associates.

Respectfully Submitted,

millerdodson

Capital Reserve Consultants

Rick F. McKittrick

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Reserve Specialist

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EXECUTIVE SUMMARY

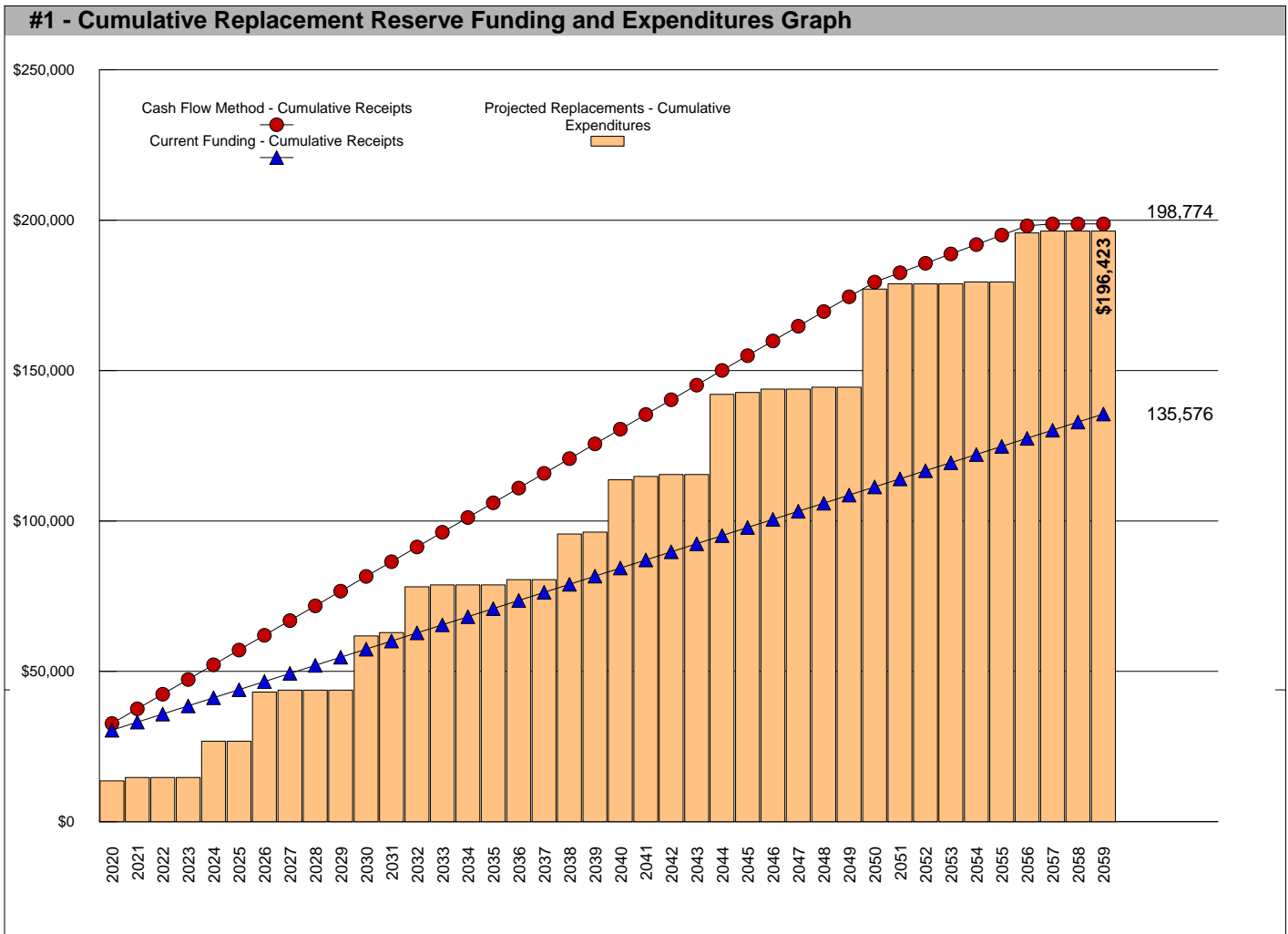
The Sage Hill Green Replacement Reserve Analysis uses the Cash Flow Method (CFM) to calculate Replacement Reserve funding for the periodic replacement of the 11 Projected Replacements identified in the Replacement Reserve Inventory.

\$4,894 **RECOMMENDED REPLACEMENT RESERVE FUNDING FOR THE STUDY YEAR, 2020**

\$13.16 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 A5.

Sage Hill Green reports a Starting Balance of \$27,736 and Annual Funding totaling \$2,696. Current funding is inadequate to fund the \$196,423 of Projected Replacements scheduled in the Replacement Reserve Inventory over the 40-year Study Period. See Page A3 for a more detailed evaluation.



The Current Funding Objective as calculated by the Component Method (Fully Funded) is \$22,864 making the reserve account 121.3% funded. See the Appendix for more information on this method.

REPLACEMENT RESERVE ANALYSIS - GENERAL INFORMATION

The Sage Hill Green Replacement Reserve Analysis calculations of recommended funding of Replacement Reserves by the Cash Flow Method 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.

2020 | 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, 2020.

40 Years | STUDY PERIOD

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

\$27,736 | STARTING BALANCE

The Association reports Replacement Reserves on Deposit totaling \$27,736 at the start of the Study Year.

Level Two | LEVEL OF SERVICE

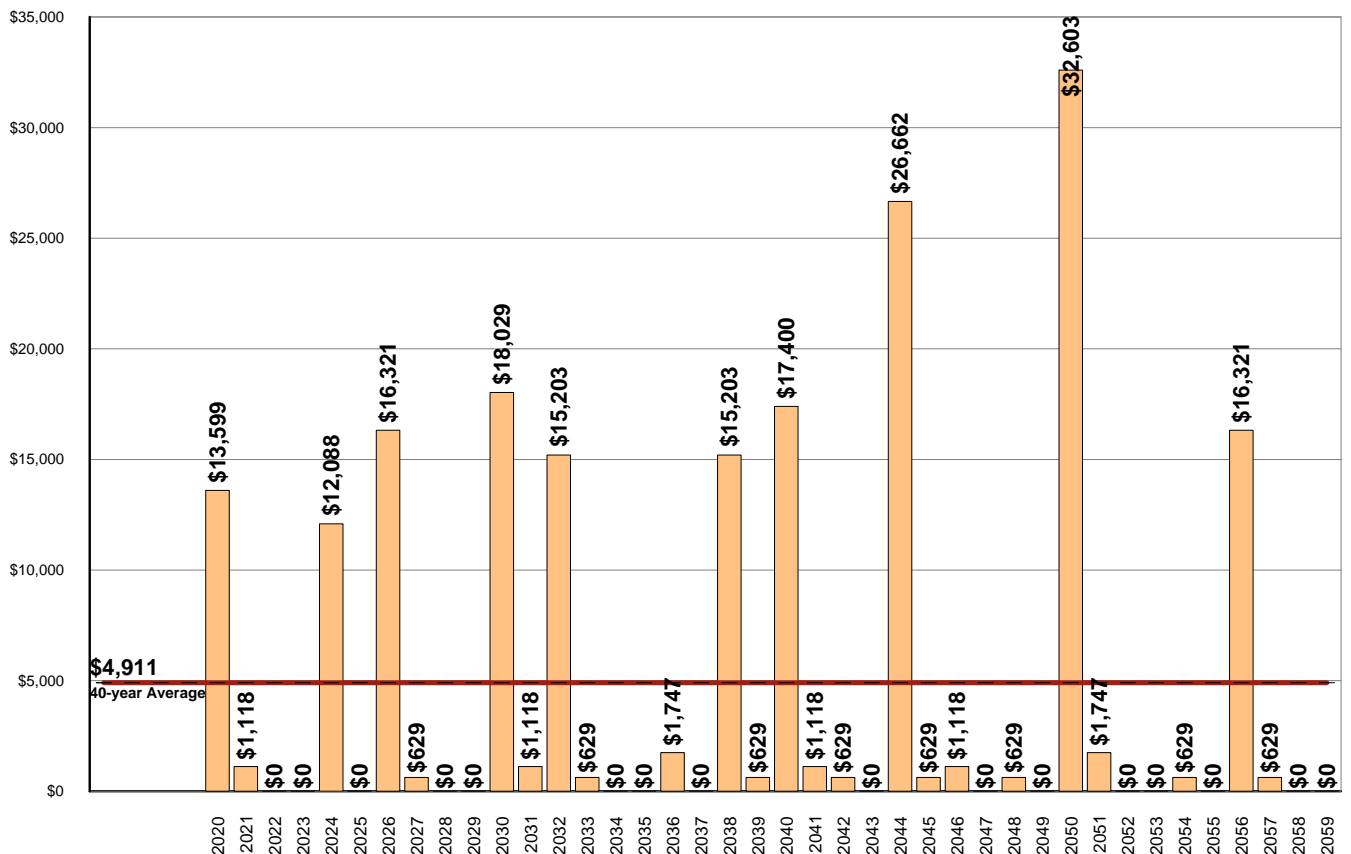
The Replacement Reserve Inventory has been developed in compliance with the National Reserve Study Standards for a Level Two Study, as defined by the Community Associations Institute (CAI).

\$196,423 | REPLACEMENT RESERVE INVENTORY - PROJECTED REPLACEMENTS

The Sage Hill Green Replacement Reserve Inventory identifies 11 items that will require periodic replacement, that are to be funded from Replacement Reserves. We estimate the cost of these replacements will be \$196,423 over the 40-year Study Period. The Projected Replacements are divided into 7 major categories starting on Page B3. Pages B1-B2 provide detailed information on the Replacement Reserve Inventory.

#2 - Annual Expenditures for Projected Replacements Graph

This graph shows annual expenditures for Projected Replacements over the 40-year Study Period. The red line shows the average annual expenditure of \$4,911. Section C provides a year by year Calendar of these expenditures.



UPDATING

UPDATING OF THE FUNDING PLAN

The Association has a responsibility to review the Funding Plan annually. The review should include a comparison and evaluation of actual reserve funding with recommended levels shown on Page A4 and A5. The Projected Replacements listed on Page C2 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 A5.

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 A5.

ANNUAL EXPENDITURES AND CURRENT FUNDING

The annual expenditures that comprise the \$196,423 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	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Starting Balance	\$27,736									
Projected Replacements	(\$13,599)	(\$1,118)			(\$12,088)		(\$16,321)	(\$629)		
Annual Deposit	\$2,696	\$2,696	\$2,696	\$2,696	\$2,696	\$2,696	\$2,696	\$2,696	\$2,696	\$2,696
End of Year Balance	\$16,833	\$18,411	\$21,107	\$23,803	\$14,411	\$17,107	\$3,482	\$5,549	\$8,245	\$10,941
Cumulative Expenditures	(\$13,599)	(\$14,717)	(\$14,717)	(\$14,717)	(\$26,805)	(\$26,805)	(\$43,126)	(\$43,755)	(\$43,755)	(\$43,755)
Cumulative Receipts	\$30,432	\$33,128	\$35,824	\$38,520	\$41,216	\$43,912	\$46,608	\$49,304	\$52,000	\$54,696
Year	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
Projected Replacements	(\$18,029)	(\$1,118)	(\$15,203)	(\$629)			(\$1,747)		(\$15,203)	(\$629)
Annual Deposit	\$2,696	\$2,696	\$2,696	\$2,696	\$2,696	\$2,696	\$2,696	\$2,696	\$2,696	\$2,696
End of Year Balance	(\$4,392)	(\$2,814)	(\$15,320)	(\$13,253)	(\$10,557)	(\$7,861)	(\$6,912)	(\$4,216)	(\$16,722)	(\$14,655)
Cumulative Expenditures	(\$61,784)	(\$62,902)	(\$78,104)	(\$78,733)	(\$78,733)	(\$78,733)	(\$80,480)	(\$80,480)	(\$95,682)	(\$96,311)
Cumulative Receipts	\$57,392	\$60,088	\$62,784	\$65,480	\$68,176	\$70,872	\$73,568	\$76,264	\$78,960	\$81,656
Year	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049
Projected Replacements	(\$17,400)	(\$1,118)	(\$629)		(\$26,662)	(\$629)	(\$1,118)		(\$629)	
Annual Deposit	\$2,696	\$2,696	\$2,696	\$2,696	\$2,696	\$2,696	\$2,696	\$2,696	\$2,696	\$2,696
End of Year Balance	(\$29,359)	(\$27,781)	(\$25,714)	(\$23,018)	(\$46,984)	(\$44,917)	(\$43,339)	(\$40,643)	(\$38,576)	(\$35,880)
Cumulative Expenditures	(\$113,711)	(\$114,829)	(\$115,458)	(\$115,458)	(\$142,120)	(\$142,749)	(\$143,867)	(\$143,867)	(\$144,496)	(\$144,496)
Cumulative Receipts	\$84,352	\$87,048	\$89,744	\$92,440	\$95,136	\$97,832	\$100,528	\$103,224	\$105,920	\$108,616
Year	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059
Projected Replacements	(\$32,603)	(\$1,747)			(\$629)		(\$16,321)	(\$629)		
Annual Deposit	\$2,696	\$2,696	\$2,696	\$2,696	\$2,696	\$2,696	\$2,696	\$2,696	\$2,696	\$2,696
End of Year Balance	(\$65,786)	(\$64,837)	(\$62,141)	(\$59,445)	(\$57,378)	(\$54,682)	(\$68,307)	(\$66,239)	(\$63,543)	(\$60,847)
Cumulative Expenditures	(\$177,098)	(\$178,845)	(\$178,845)	(\$178,845)	(\$179,474)	(\$179,474)	(\$195,795)	(\$196,423)	(\$196,423)	(\$196,423)
Cumulative Receipts	\$111,312	\$114,008	\$116,704	\$119,400	\$122,096	\$124,792	\$127,488	\$130,184	\$132,880	\$135,576

EVALUATION OF CURRENT FUNDING

The evaluation of Current Funding (Starting Balance of \$27,736 & annual funding of \$2,696), 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 11 Projected Replacements identified in the Replacement Reserve Inventory and that the Association will continue Annual Funding of \$2,696 throughout the 40-year Study Period.

Annual Funding of \$2,696 is approximately 55 percent of the \$4,894 recommended Annual Funding calculated by the Cash Flow Method for 2020, the Study Year.

Evaluation of the 11 Projected Replacements calculates an average annual expenditure over the next 40 years of \$4,911. Annual funding of \$2,696 is 55 percent of the average annual expenditure.

Our calculations identify funding shortfalls in 30 years of the Study Period with the initial shortfall in 2030. The largest shortfall, \$-68,307, occurs in 2056. All shortfalls can be seen and evaluated in Table 3 above.

In summary, Current Funding as reported by the Association and shown above, does not provide adequate funding for the \$196,423 of Projected Replacements scheduled in the Replacement Reserve Inventory over the Study Period.

CASH FLOW METHOD FUNDING

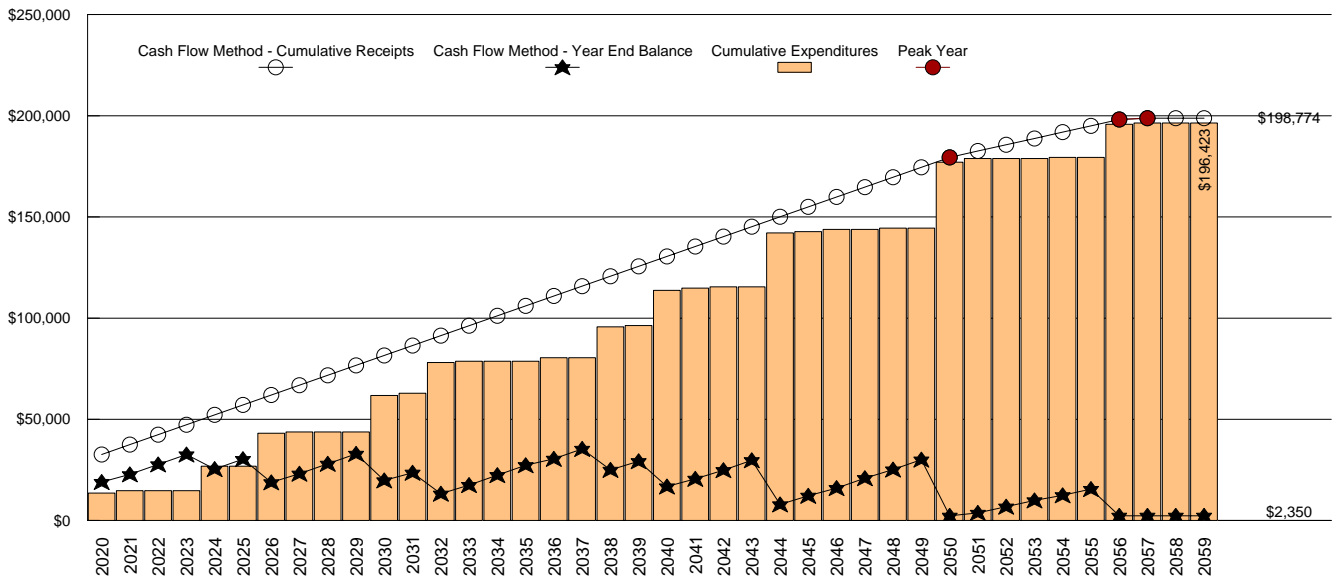
\$4,894 RECOMMENDED REPLACEMENT RESERVE FUNDING FOR 2020

\$13.16 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 2050 with Replacement Reserves on Deposit dropping to the Minimum Balance after the completion of \$177,098 of replacements from 2020 to 2050. Recommended funding declines from \$4,894 in 2050 to \$3,116 in 2051. Peak Years are identified in Chart 4 and Table 5.
- **Minimum Balance.** The calculations assume a Minimum Balance of \$2,350 in Replacement Reserves. This is approx. 6 months of average expenditures based on the \$4,911, 40-year average annual expenditure.
- **Cash Flow Method Study Period.** Cash Flow Method calculates funding for \$196,423 of expenditures over the 40-year Study Period. It does not include funding for any projects beyond 2059 and in 2059, the end of year balance will always be the Minimum Balance.

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



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

Year	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Starting Balance	\$27,736									
Projected Replacements	(\$13,599)	(\$1,118)			(\$12,088)		(\$16,321)	(\$629)		
Annual Deposit	\$4,894	\$4,894	\$4,894	\$4,894	\$4,894	\$4,894	\$4,894	\$4,894	\$4,894	\$4,894
End of Year Balance	\$19,031	\$22,807	\$27,701	\$32,595	\$37,489	\$42,383	\$47,277	\$52,171	\$57,065	\$61,959
Cumulative Expenditures	\$13,599	\$14,717	\$14,717	\$14,717	\$26,805	\$26,805	\$43,126	\$43,755	\$43,755	\$43,755
Cumulative Receipts	\$32,630	\$37,524	\$42,418	\$47,312	\$52,206	\$57,100	\$61,994	\$66,888	\$71,782	\$76,676
Year	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
Projected Replacements	(\$18,029)	(\$1,118)	(\$15,203)	(\$629)			(\$1,747)		(\$15,203)	(\$629)
Annual Deposit	\$4,894	\$4,894	\$4,894	\$4,894	\$4,894	\$4,894	\$4,894	\$4,894	\$4,894	\$4,894
End of Year Balance	\$19,786	\$23,562	\$13,253	\$17,519	\$22,412	\$27,306	\$30,454	\$35,347	\$25,039	\$29,304
Cumulative Expenditures	(\$61,784)	(\$62,902)	(\$78,104)	(\$78,733)	(\$78,733)	(\$78,733)	(\$80,480)	(\$80,480)	(\$95,682)	(\$96,311)
Cumulative Receipts	\$81,570	\$86,463	\$91,357	\$96,251	\$101,145	\$106,039	\$110,933	\$115,827	\$120,721	\$125,615
Year	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049
Projected Replacements	(\$17,400)	(\$1,118)	(\$629)		(\$26,662)	(\$629)	(\$1,118)		(\$629)	
Annual Deposit	\$4,894	\$4,894	\$4,894	\$4,894	\$4,894	\$4,894	\$4,894	\$4,894	\$4,894	\$4,894
End of Year Balance	\$16,798	\$20,574	\$24,839	\$29,733	\$7,965	\$12,230	\$16,006	\$20,900	\$25,165	\$30,059
Cumulative Expenditures	(\$113,711)	(\$114,829)	(\$115,458)	(\$115,458)	(\$142,120)	(\$142,749)	(\$143,867)	(\$143,867)	(\$144,496)	(\$144,496)
Cumulative Receipts	\$130,509	\$135,403	\$140,297	\$145,191	\$150,085	\$154,979	\$159,873	\$164,767	\$169,661	\$174,555
Year	1st Peak - 2050	2051	2052	2053	2054	2055	2nd Peak - 2056	3rd Peak - 2057	2058	2059
Projected Replacements	(\$32,603)	(\$1,747)			(\$629)		(\$16,321)	(\$629)		
Annual Deposit	\$4,894	\$3,116	\$3,116	\$3,116	\$3,116	\$3,116	\$3,116	\$629	\$2,350	\$2,350
End of Year Balance	\$2,350	\$3,720	\$6,836	\$9,952	\$12,439	\$15,555	\$2,350	\$2,350	\$2,350	\$2,350
Cumulative Expenditures	(\$177,098)	(\$178,845)	(\$178,845)	(\$178,845)	(\$179,474)	(\$179,474)	(\$195,795)	(\$196,423)	(\$196,423)	(\$196,423)
Cumulative Receipts	\$179,449	\$182,565	\$185,681	\$188,797	\$191,913	\$195,029	\$198,145	\$198,774	\$198,774	\$198,774

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.

\$4,894 2020 - CASH FLOW METHOD RECOMMENDED FUNDING

The 2020 Study Year calculations have been made using current replacement costs (see Page B2), modified by the Analyst for any project specific conditions.

\$5,143 2021 - INFLATION ADJUSTED FUNDING

A new analysis calculates 2021 funding based on three assumptions;

- Replacement Reserves on Deposit totaling \$19,031 on January 1, 2021.
- All 2020 Projected Replacements listed on Page C2 accomplished at a cost to Replacement Reserves less than \$13,599.
- Construction Cost Inflation of 4.50 percent in 2020.

The \$5,143 inflation adjusted funding in 2021 is a 5.08 percent increase over the non-inflation adjusted 2021 funding of \$4,894.

\$5,410 2022 - INFLATION ADJUSTED FUNDING

A new analysis calculates 2022 funding based on three assumptions;

- Replacement Reserves on Deposit totaling \$23,006 on January 1, 2022.
- All 2021 Projected Replacements listed on Page C2 accomplished at a cost to Replacement Reserves less than \$1,168.
- Construction Cost Inflation of 4.50 percent in 2021.

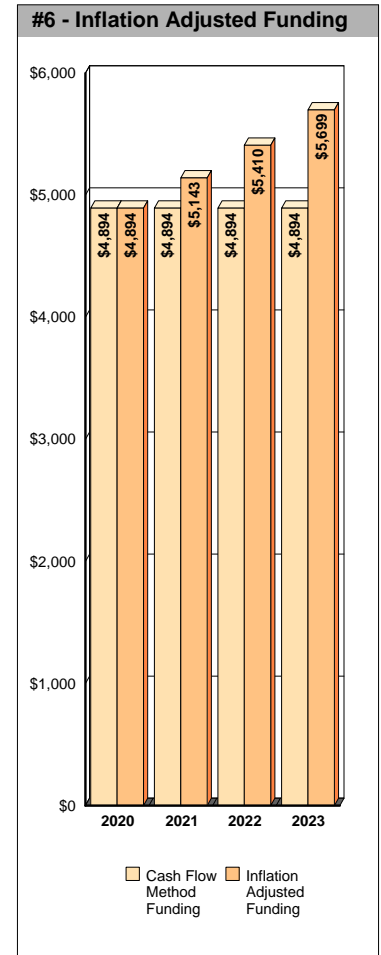
The \$5,410 inflation adjusted funding in 2022 is a 10.54 percent increase over the non-inflation adjusted 2022 funding of \$4,894.

\$5,699 2023 - INFLATION ADJUSTED FUNDING

A new analysis calculates 2023 funding based on three assumptions;

- Replacement Reserves on Deposit totaling \$28,415 on January 1, 2023.
- No Expenditures from Replacement Reserves in 2022.
- Construction Cost Inflation of 4.50 percent in 2022.

The \$5,699 inflation adjusted funding in 2023 is a 16.45 percent increase over the non-inflation adjusted funding of \$4,894.



YEAR FIVE & 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 be professionally updated every 3 to 5 years.

INFLATION ADJUSTMENT

Prior to approving a budget based upon the 2021, 2022 and 2023 inflation adjusted funding calculations above, the 4.50 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 percent), 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 2020, based on a 1.00 percent interest rate, we estimate the Association may earn \$234 on an average balance of \$23,384, \$210 on an average balance of \$21,018 in 2021, and \$257 on \$25,710 in 2022. The Association may elect to attribute 100 percent of the earned interest to Reserves, resulting in a reduction in the 2020 funding from \$4,894 to \$4,660 (a 4.78 percent reduction), \$5,143 to \$4,933 in 2021 (a 4.09 percent reduction), and \$5,410 to \$5,153 in 2022 (a 4.75 percent reduction).

REPLACEMENT RESERVE STUDY - SUPPLEMENTAL COMMENTS

- Sage Hill Green has 31 units. The type of property is a Homeowners Association.
- The Cash Flow Method calculates the minimum annual funding necessary to prevent Replacement Reserves from dropping below the Minimum Balance. Failure to fund at least the recommended levels may result in funding not being available for the Projected Replacements listed in the Replacement Reserve Inventory.
- The accuracy of the Replacement Reserve Analysis is dependent upon expenditures from Replacement Reserves being made ONLY for the 11 Projected Replacements specifically listed in the Replacement Reserve Inventory. The inclusion/exclusion of items from the Replacement Reserve Inventory is discussed on Page B1.

REPLACEMENT RESERVE INVENTORY GENERAL INFORMATION

Sage Hill Green - Replacement Reserve Inventory identifies 37 items. Two types of items are identified, Projected Replacements and Excluded Items:

- **PROJECTED REPLACEMENTS.** 11 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 \$47,008. Replacements totaling \$196,423 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.** 26 of the items are Excluded Items, and expenditures for these items are NOT scheduled for funding from Replacement Reserves. The accuracy of the calculations made in the Replacement Reserve Analysis is dependent on expenditures NOT being made for Excluded Items. The Excluded Items are listed in the Replacement Reserve Inventory to identify specific items and categories of items that are not to be funded from Replacement Reserves. There are multiple categories of items that 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 \$1,000 and/or a normal economic life of less than 3 years are typically excluded from funding from Replacement Reserves. This exclusion should reflect 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 B2.

Long-lived Items. Items that when properly maintained, can be assumed to have a life equal to the property as a whole, are typically excluded from the Replacement Reserve Inventory.

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.

The rationale for the exclusion of an item from funding by Replacement Reserves is discussed in more detail in the 'Comments' sections of the Section B - Replacement Reserve Inventory.

- **CATEGORIES.** The 37 items included in the Sage Hill Green Replacement Reserve Inventory are divided into 7 major categories. Each category is printed on a separate page, Pages B3 to B8.
- **LEVEL OF SERVICE.** This Replacement Reserve Inventory has been developed in compliance with the standards established for a Level Two - Update (with site visit and on-site review), as defined by the National Reserve Study Standards, established in 1998 by Community Associations Institute, which states:

Level II Studies are based entirely on the component inventory from a prior study. This information is adjusted to reflect changes to the inventory that are provided by the Association, and the quantities are adjusted accordingly from field measurement and/or quantity takeoffs from to-scale drawings that are made available to us. The condition of all components is ascertained from a site visit and the visual inspection of each component by the analyst. The Remaining Economic Life and replacement cost of components are provided based in part on these observations. The fund status and Funding Plan are derived from analysis of this data.

REPLACEMENT RESERVE INVENTORY - GENERAL INFORMATION (cont'd)

- **INVENTORY DATA.** Each of the 11 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 (Yrs). The number of years that a new and properly installed item should be expected to remain in service.

Remaining Economic Life (Yrs). 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.

Each of the 26 Excluded Items includes the Item Description, Units, and Number of Units. Many of the Excluded Items are listed as a 'Lump Sum' with a quantity of 1. For the Excluded Items, this indicates that all of the items identified by the 'Item Description' are excluded from funding by Replacement Reserves.

- **REVIEW OF EXPENDITURES.** This Replacement Reserve Study should be reviewed by an accounting professional representing the Association prior to implementation.
- **PARTIAL FUNDING.** Items may have been included in the Replacement Reserve Inventory at less than 100 percent of their full quantity and/or replacement cost. This is done on items that will never be replaced in their entirety, but which may require periodic replacements over an extended period of time. The assumptions that provide the basis for any partial funding are noted in the Comments section.
- **REMAINING ECONOMIC LIFE GREATER THAN 40 YEARS.** The calculations do not include funding for initial replacements beyond 40 years. These replacements are included in this Study for tracking and evaluation. They should be included for funding in future Studies, when they enter the 40-year window.

SITE IMPROVEMENTS
PROJECTED REPLACEMENTS

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST (\$)
1	Asphalt Pavement (overlay)	sf	5,590	\$2.05	20	4	\$11,460
2	Asphalt Pavement (sealcoat)	sf	5,590	\$0.20	5	1	\$1,118
3	Asphalt Pavement (crack sealing)	lf	280	\$2.25	3	4	\$629
4	Asphalt Pavement (crack sealing) - single eve	lf	280	\$2.25	99	none	\$629
5	Concrete sidewalk (6%)	sf	443	\$9.50	6	6	\$4,209
6	Concrete sidewalk (6%) - single event	sf	60	\$9.50	99	none	\$570
7	Concrete curb & gutter (6%)	ft	26	\$34.50	6	6	\$897
8	Concrete driveways (6%)	sf	878	\$11.50	6	6	\$10,097
9	Irrigation system station	ea	2	\$2,000.00	10	10	\$4,000
10	Backflow preventer	ea	1	\$1,000.00	10	10	\$1,000
11	Exteriors, trim, painting	sf	6,200	\$2.00	10	none	\$12,400
SITE IMPROVEMENTS - Replacement Costs - Subtotal							\$47,008

SITE IMPROVEMENTS
COMMENTS

- We have assumed that the Association will replace the asphalt pavement by the installation of a 1-1/2" to 2" thick overlay. The pavement will need to be milled prior to the installation of the overlay. Milling and the cost of minor repairs (5 to 10 percent of the total area) to the base materials and bearing soils beneath the pavement are included in the cost shown above.
- Note: Please see Paragraph entitled TAX CODE on page C1. Under IRS guidelines painting is considered a maintenance item and therefore not reservable. We have included it at the Association's request. We recommend that you contact your Association's tax professional to discuss your inclusion of this/these item(s) within your Reserve Study.

LONG-LIFE EXCLUSIONS

EXCLUDED ITEMS

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST (\$)
	Building foundation(s)	ls	1				EXCLUDED
	Concrete floor slabs (interior)	ls	1				EXCLUDED
	Wall, floor, & roof structure	ls	1				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 (\$)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST (\$)
	Unit exterior	ls	1				EXCLUDED
	Unit windows	ls	1				EXCLUDED
	Unit doors	ls	1				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 (\$)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST (\$)
	Primary electric feeds	ls	1				EXCLUDED
	Electric transformers	ls	1				EXCLUDED
	Cable TV systems and structures	ls	1				EXCLUDED
	Telephone cables and structures	ls	1				EXCLUDED
	Site lighting	ls	1				EXCLUDED
	Gas mains and meters	ls	1				EXCLUDED
	Water mains and meters	ls	1				EXCLUDED
	Sanitary sewers	ls	1				EXCLUDED
	Stormwater management system	ls	1				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 (\$)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST (\$)
	Cleaning of asphalt pavement	ls	1				EXCLUDED
	Crack sealing of asphalt pavement	ls	1				EXCLUDED
	Landscaping and site grading	ls	1				EXCLUDED
	Exterior painting	ls	1				EXCLUDED
	Interior painting	ls	1				EXCLUDED
	Repair services	ls	1				EXCLUDED
	Partial replacements	ls	1				EXCLUDED
	Capital improvements	ls	1				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 by this standard are listed above.
- The list above exemplifies exclusions by the cited standard(s) and is not intended to be comprehensive.

IRRIGATION SYSTEM EXCLUSIONS

EXCLUDED ITEMS

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST (\$)
	Subsurface irrigation pipe	ls	1				EXCLUDED
	Subsurface irrigation valve	ls	1				EXCLUDED
	Subsurface irrigation control wiring	ls	1				EXCLUDED

IRRIGATION SYSTEM EXCLUSIONS

COMMENTS

- Irrigation System Exclusions. We have assumed that the maintenance, repair, and periodic replacement of the components of the extensive irrigation systems at the property will not be funded from Replacement Reserves. These systems should be inspected each spring when the systems are brought on line and each fall when they are winterized. Repairs/replacements should be made in conjunction with these inspections.

PROJECTED ANNUAL REPLACEMENTS GENERAL INFORMATION

CALENDAR OF ANNUAL REPLACEMENTS. The 11 Projected Replacements in the Sage Hill Green 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 C2.

REPLACEMENT RESERVE ANALYSIS AND INVENTORY POLICIES, PROCEDURES, AND ADMINISTRATION

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

PROJECTED REPLACEMENTS - YEARS ONE TO FIFTEEN

Item	FY 2020 - STUDY YEAR	\$
4	Asphalt Pavement (crack se	\$629
6	Concrete sidewalk (6%) - sir	\$570
11	Exteriors, trim, painting	\$12,400
Total Scheduled Replacements		\$13,599

Item	FY 2021 - YEAR 2	\$
2	Asphalt Pavement (sealcoat	\$1,118
Total Scheduled Replacements		\$1,118

Item	FY 2022 - YEAR 3	\$
No Scheduled Replacements		

Item	FY 2023 - YEAR 4	\$
No Scheduled Replacements		

Item	FY 2024 - YEAR 5	\$
1	Asphalt Pavement (overlay)	\$11,460
3	Asphalt Pavement (crack se	\$629
Total Scheduled Replacements		\$12,088

Item	FY 2025 - YEAR 6	\$
No Scheduled Replacements		

Item	FY 2026 - YEAR 7	\$
2	Asphalt Pavement (sealcoat	\$1,118
5	Concrete sidewalk (6%)	\$4,209
7	Concrete curb & gutter (6%)	\$897
8	Concrete driveways (6%)	\$10,097
Total Scheduled Replacements		\$16,321

Item	FY 2027 - YEAR 8	\$
3	Asphalt Pavement (crack se	\$629
Total Scheduled Replacements		\$629

Item	FY 2028 - YEAR 9	\$
No Scheduled Replacements		

Item	FY 2029 - YEAR 10	\$
No Scheduled Replacements		

Item	FY 2030 - YEAR 11	\$
3	Asphalt Pavement (crack se	\$629
9	Irrigation system station	\$4,000
10	Backflow preventer	\$1,000
11	Exteriors, trim, painting	\$12,400
Total Scheduled Replacements		\$18,029

Item	FY 2031 - YEAR 12	\$
2	Asphalt Pavement (sealcoat	\$1,118
Total Scheduled Replacements		\$1,118

Item	FY 2032 - YEAR 13	\$
5	Concrete sidewalk (6%)	\$4,209
7	Concrete curb & gutter (6%)	\$897
8	Concrete driveways (6%)	\$10,097
Total Scheduled Replacements		\$15,203

Item	FY 2033 - YEAR 14	\$
3	Asphalt Pavement (crack se	\$629
Total Scheduled Replacements		\$629

Item	FY 2034 - YEAR 15	\$
No Scheduled Replacements		

PROJECTED REPLACEMENTS - YEARS SIXTEEN TO THIRTY

Item	FY 2035 - YEAR 16	\$
No Scheduled Replacements		

Item	FY 2036 - YEAR 17	\$
2	Asphalt Pavement (sealcoat)	\$1,118
3	Asphalt Pavement (crack se	\$629
Total Scheduled Replacements		\$1,747

Item	FY 2037 - YEAR 18	\$
No Scheduled Replacements		

Item	FY 2038 - YEAR 19	\$
5	Concrete sidewalk (6%)	\$4,209
7	Concrete curb & gutter (6%)	\$897
8	Concrete driveways (6%)	\$10,097
Total Scheduled Replacements		\$15,203

Item	FY 2039 - YEAR 20	\$
3	Asphalt Pavement (crack se	\$629
Total Scheduled Replacements		\$629

Item	FY 2040 - YEAR 21	\$
9	Irrigation system station	\$4,000
10	Backflow preventer	\$1,000
11	Exteriors, trim, painting	\$12,400
Total Scheduled Replacements		\$17,400

Item	FY 2041 - YEAR 22	\$
2	Asphalt Pavement (sealcoat)	\$1,118
Total Scheduled Replacements		\$1,118

Item	FY 2042 - YEAR 23	\$
3	Asphalt Pavement (crack se	\$629
Total Scheduled Replacements		\$629

Item	FY 2043 - YEAR 24	\$
No Scheduled Replacements		

Item	FY 2044 - YEAR 25	\$
1	Asphalt Pavement (overlay)	\$11,460
5	Concrete sidewalk (6%)	\$4,209
7	Concrete curb & gutter (6%)	\$897
8	Concrete driveways (6%)	\$10,097
Total Scheduled Replacements		\$26,662

Item	FY 2045 - YEAR 26	\$
3	Asphalt Pavement (crack se	\$629
Total Scheduled Replacements		\$629

Item	FY 2046 - YEAR 27	\$
2	Asphalt Pavement (sealcoat)	\$1,118
Total Scheduled Replacements		\$1,118

Item	FY 2047 - YEAR 28	\$
No Scheduled Replacements		

Item	FY 2048 - YEAR 29	\$
3	Asphalt Pavement (crack se	\$629
Total Scheduled Replacements		\$629

Item	FY 2049 - YEAR 30	\$
No Scheduled Replacements		

PROJECTED REPLACEMENTS - YEARS THIRTY-ONE TO FORTY-FIVE

Item	FY 2050 - YEAR 31	\$
5	Concrete sidewalk (6%)	\$4,209
7	Concrete curb & gutter (6%)	\$897
8	Concrete driveways (6%)	\$10,097
9	Irrigation system station	\$4,000
10	Backflow preventer	\$1,000
11	Exteriors, trim, painting	\$12,400
Total Scheduled Replacements		\$32,603

Item	FY 2051 - YEAR 32	\$
2	Asphalt Pavement (sealcoat)	\$1,118
3	Asphalt Pavement (crack se)	\$629
Total Scheduled Replacements		\$1,747

Item	FY 2052 - YEAR 33	\$
No Scheduled Replacements		

Item	FY 2053 - YEAR 34	\$
No Scheduled Replacements		

Item	FY 2054 - YEAR 35	\$
3	Asphalt Pavement (crack se)	\$629
Total Scheduled Replacements		\$629

Item	FY 2055 - YEAR 36	\$
No Scheduled Replacements		

Item	FY 2056 - YEAR 37	\$
2	Asphalt Pavement (sealcoat)	\$1,118
5	Concrete sidewalk (6%)	\$4,209
7	Concrete curb & gutter (6%)	\$897
8	Concrete driveways (6%)	\$10,097
Total Scheduled Replacements		\$16,321

Item	FY 2057 - YEAR 38	\$
3	Asphalt Pavement (crack se)	\$629
Total Scheduled Replacements		\$629

Item	FY 2058 - YEAR 39	\$
No Scheduled Replacements		

Item	FY 2059 - YEAR 40	\$
No Scheduled Replacements		

Item	2060 (beyond Study Period)	\$
3	Asphalt Pavement (crack se)	\$629
9	Irrigation system station	\$4,000
10	Backflow preventer	\$1,000
11	Exteriors, trim, painting	\$12,400
Total Scheduled Replacements		\$18,029

Item	2061 (beyond Study Period)	\$
2	Asphalt Pavement (sealcoat)	\$1,118
Total Scheduled Replacements		\$1,118

Item	Y 2062 (beyond Study Period)	\$
5	Concrete sidewalk (6%)	\$4,209
7	Concrete curb & gutter (6%)	\$897
8	Concrete driveways (6%)	\$10,097
Total Scheduled Replacements		\$15,203

Item	2063 (beyond Study Period)	\$
3	Asphalt Pavement (crack se)	\$629
Total Scheduled Replacements		\$629

Item	2064 (beyond Study Period)	\$
1	Asphalt Pavement (overlay)	\$11,460
Total Scheduled Replacements		\$11,460

CONDITION ASSESSMENT

General Comments. Miller - Dodson Associates conducted a Reserve Study at Sage Hill Green in May 2020. Sage Hill Green is in generally good condition for a community constructed in 1998. 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.

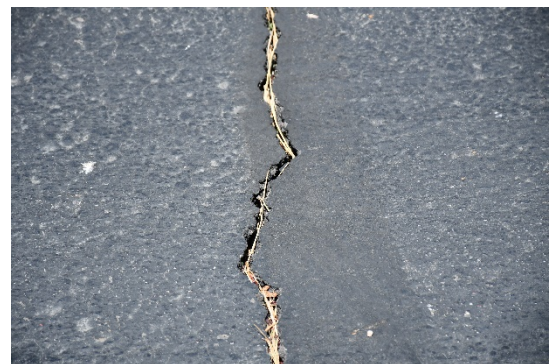
Fair. 60% to 30% of Normal Economic Life expected, moderate wear with defects found. Repair actions should be taken to extend the life of the component or to correct repairable defects and distress. Otherwise, the component is wearing normally.

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

Asphalt Pavement. The site includes asphalt pavement for vehicle access and parking. In general, the asphalt pavement is in overall good condition (for being 22 year old) with limited cracking, alligating, and deterioration. The Association maintains an inventory of 5,590 square feet of asphalt pavement. The Association performed crack seal work a year or two ago and also seal coated this asphalt recently.



The photos above are examples of a few larger cracks that are present in the asphalt. If these cracks are sealed and the seal coat is "touched-up" in a few weak spots (see next photos) it is possible to extend the life of this asphalt. The study recommends a mill & overlay in 4 years, but it is possible with continued repair work for this asphalt to last 3 to 6 years past that.



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 20 to 25 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 milling and a two-inch overlay, which reflects the current local market for this work.

For seal coating, several different products are available. The older, more traditional seal coating products are simply 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.

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, and driveways. We have modeled for curb replacement when the asphalt pavement is overlaid. The Association maintains an inventory of approximately 22,700 square feet of concrete flatwork. The overall condition of the concrete work is good with a few tripping hazards. It is recommended that Association replace the few sidewalk sections that are identified as tripping hazards due to shallow tree roots. These locations are identified in the photos below.

First photo is sidewalk section between 10131 and 10119. The second photo is sidewalk in front of 10203. The third photo is sidewalk between 10192 and 10204. The fourth photo is sidewalk between 10168 and

10180. The fifth photo is the sidewalk next to 3271. Their last photo shows curb and gutter along the asphalt roadway.



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.

A number of the homeowners have sealed the joints of the driveway in front of their home. This is very helpful because of the highly expansive soils in the area. The Association should consider joint sealing all of the driveways and even consider the sidewalk joints. Sealing these joints will limit the amount of moisture that gets under the concrete and freezes during the winter. This freezing causes the soil to swell and the concrete

to lift and crack. An Association just south purchased tubes of concrete sealant with O&M funds and used volunteer members to have a sealant party – sealing all concrete joints in their Association.



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>.

Irrigation Controller. The Association is responsible for a single backflow preventer and two irrigation controllers. The backflow preventer has lasted way past its normal useful life by stocking replacement parts. When the Association can no longer repair with these parts the backflow preventer will require replacement. The two irrigation controllers are being replaced this year with Weatherproof Hydro Point controllers which are smart controllers that can save the Association tremendously on their water usage. These controllers should have about a ten year useful life.



BUILDING EXTERIOR / EXTERIORS

Exterior Trim, Painting. The exterior of the homes are primarily stucco with wood trim. The exterior of all homes are the responsibility of each unit owner. The trim is owner responsibility, but the Association is responsible to paint this trim. The painting lasts approximately 10 to 12 years and is expecting to be accomplished this year.



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

CASH FLOW METHOD ACCOUNTING SUMMARY

This Sage Hill Green - Cash Flow Method Accounting Summary is an attachment to the Sage Hill Green - Replacement Reserve Study dated May 9, 2020 and is for use by accounting and reserve professionals experienced in Association funding and accounting principles. This Summary consists of four reports, the 2020, 2021, and 2022 Cash Flow Method Category Funding Reports (3) and a Three-Year Replacement Funding Report.

- CASH FLOW METHOD CATEGORY FUNDING REPORT, 2020, 2021, and 2022. Each of the 11 Projected Replacements listed in the Sage Hill Green Replacement Reserve Inventory has been assigned to one of 1 categories. The following information is summarized by category in each report:
 - Normal Economic Life and Remaining Economic Life of the Projected Replacements.
 - Cost of all Scheduled Replacements in each category.
 - Replacement Reserves on Deposit allocated to the category at the beginning and end of the report period.
 - Cost of Projected Replacements in the report period.
 - Recommended Replacement Reserve Funding allocated to the category during the report period as calculated by the Cash Flow Method.
- THREE-YEAR REPLACEMENT FUNDING REPORT. This report details the allocation of the \$27,736 Beginning Balance (at the start of the Study Year) and the \$14,682 of additional Replacement Reserve Funding in 2020 through 2022 (as calculated in the Replacement Reserve Analysis) to each of the 11 Projected Replacements listed in the Replacement Reserve Inventory. These allocations have been made using Chronological Allocation, a method developed by Miller Dodson Associates, Inc., and discussed below. The calculated data includes:
 - Identification and estimated cost of each Projected Replacement scheduled in years 2020 through 2022.
 - Allocation of the \$27,736 Beginning Balance to the Projected Replacements by Chronological Allocation.
 - Allocation of the \$14,682 of additional Replacement Reserve Funding recommended in the Replacement Reserve Analysis in years 2020 through 2022, by Chronological Allocation.
- CHRONOLOGICAL ALLOCATION. Chronological Allocation assigns Replacement Reserves to Projected Replacements on a "first come, first serve" basis in keeping with the basic philosophy of the Cash Flow Method. The Chronological Allocation methodology is outlined below.
 - The first step is the allocation of the \$27,736 Beginning Balance to the Projected Replacements in the Study Year. Remaining unallocated funds are next allocated to the Projected Replacements in subsequent years in chronological order until the total of Projected Replacements in the next year is greater than the unallocated funds. Projected Replacements in this year are partially funded with each replacement receiving percentage funding. The percentage of funding is calculated by dividing the unallocated funds by the total of Projected Replacements in the partially funded year.

At Sage Hill Green the Beginning Balance funds all Scheduled Replacements in the Study Year through 2025 and provides partial funding (6%) of replacements scheduled in 2026.
 - The next step is the allocation of the \$4,894 of 2020 Cash Flow Method Reserve Funding calculated in the Replacement Reserve Analysis. These funds are first allocated to fund the partially funded Projected Replacements and then to subsequent years in chronological order as outlined above.

At Sage Hill Green the Beginning Balance and the 2020 Replacement Reserve Funding, funds replacements through 2025 and partial funds (35.7%) replacements in 2026.
 - Allocations of the 2021 and 2022 Reserve Funding are done using the same methodology.
 - The Three-Year Replacement Funding Report details component by component allocations made by Chronological Allocation.

2020 - CASH FLOW METHOD CATEGORY FUNDING REPORT

Each of the 11 Projected Replacements included in the Sage Hill Green Replacement Reserve Inventory has been assigned to one of the 1 categories listed in TABLE CF1 below. This calculated data is a summary of data provided in the Three-Year Replacement Funding Report and Replacement Reserve Inventory. The accuracy of this data is dependent upon many factors including the following critical financial data:

- A Beginning Balance of \$27,736 as of the first day of the Study Year, January 1, 2020.
- Total reserve funding (including the Beginning Balance) of \$32,630 in the Study Year.
- No expenditures from Replacement Reserves other than those specifically listed in the Replacement Reserve Inventory.
- All Projected Replacements scheduled in the Replacement Reserve Inventory in 2020 being accomplished in 2020 at a cost of \$13,599.

If any of these critical factors are inaccurate, do not use the data and please contact Miller Dodson Associates to arrange for an update of the Replacement Reserve Study.

2020 - CASH FLOW METHOD CATEGORY FUNDING - TABLE CF1								
CATEGORY	NORMAL ECONOMIC LIFE	REMAINING ECONOMIC LIFE	ESTIMATED REPLACEMENT COST	2020 BEGINNING BALANCE	2020 RESERVE FUNDING	2020 PROJECTED REPLACEMENTS	2020 END OF YEAR BALANCE	
SITE IMPROVEMENTS	3 to 99 years	0 to 10 years	\$47,008	\$27,736	\$4,894	(\$13,599)	\$19,031	

2021 - CASH FLOW METHOD CATEGORY FUNDING REPORT

Each of the 11 Projected Replacements included in the Sage Hill Green Replacement Reserve Inventory has been assigned to one of the 1 categories listed in TABLE CF2 below. This calculated data is a summary of data provided in the Three-Year Replacement Funding Report and Replacement Reserve Inventory. The accuracy of this data is dependent upon many factors including the following critical financial data:

- Replacement Reserves on Deposit totaling \$19,031 on January 1, 2021.
- Total reserve funding (including the Beginning Balance) of \$37,524 from 2020 through 2021.
- No expenditures from Replacement Reserves other than those specifically listed in the Replacement Reserve Inventory.
- All Projected Replacements scheduled in the Replacement Reserve Inventory in 2021 being accomplished in 2021 at a cost of \$1,118.

If any of these critical factors are inaccurate, do not use the data and please contact Miller Dodson Associates to arrange for an update of the Replacement Reserve Study.

2021 - CASH FLOW METHOD CATEGORY FUNDING - TABLE CF2								
CATEGORY	NORMAL ECONOMIC LIFE	REMAINING ECONOMIC LIFE	ESTIMATED REPLACEMENT COST	2021 BEGINNING BALANCE	2021 RESERVE FUNDING	2021 PROJECTED REPLACEMENTS	2021 END OF YEAR BALANCE	
SITE IMPROVEMENTS	3 to 99 years	0 to 98 years	\$47,008	\$19,031	\$4,894	(\$1,118)	\$22,807	

2022 - CASH FLOW METHOD CATEGORY FUNDING REPORT

Each of the 11 Projected Replacements included in the Sage Hill Green Replacement Reserve Inventory has been assigned to one of the 1 categories listed in TABLE CF3 below. This calculated data is a summary of data provided in the Three-Year Replacement Funding Report and Replacement Reserve Inventory. The accuracy of this data is dependent upon many factors including the following critical financial data:

- Replacement Reserves on Deposit totaling \$22,807 on January 1, 2022.
- Total Replacement Reserve funding (including the Beginning Balance) of \$42,418 from 2020 to 2022.
- No expenditures from Replacement Reserves other than those specifically listed in the Replacement Reserve Inventory.

If any of these critical factors are inaccurate, do not use the data and please contact Miller Dodson Associates to arrange for an update of the Replacement Reserve Study.

2022 - CASH FLOW METHOD CATEGORY FUNDING - TABLE CF3								
CATEGORY	NORMAL ECONOMIC LIFE	REMAINING ECONOMIC LIFE	ESTIMATED REPLACEMENT COST	2022 BEGINNING BALANCE	2022 RESERVE FUNDING	2022 PROJECTED REPLACEMENTS	2022 END OF YEAR BALANCE	
SITE IMPROVEMENTS	3 to 99 years	2 to 97 years	\$47,008	\$22,807	\$4,894		\$27,701	

CASH FLOW METHOD - THREE-YEAR REPLACEMENT FUNDING REPORT

TABLE CF4 below details the allocation of the \$27,736 Beginning Balance, as reported by the Association and the \$14,682 of Replacement Reserve Funding calculated by the Cash Flow Method from 2020 to 2022, to the 11 Projected Replacements listed in the Replacement Reserve Inventory. These allocations have been made by Chronological Allocation, a method developed by Miller Dodson Associates, Inc., and outlined on Page CF1. The accuracy of the allocations is dependent upon many factors including the following critical financial data:

- Replacement Reserves on Deposit totaling \$27,736 on January 1, 2020.
- Replacement Reserves on Deposit totaling \$19,031 on January 1, 2021.
- Replacement Reserves on Deposit totaling \$22,807 on January 1, 2022.
- Total Replacement Reserve funding (including the Beginning Balance) of \$42,418 from 2020 to 2022.
- No expenditures from Replacement Reserves other than those specifically listed in the Replacement Reserve Inventory.
- All Projected Replacements scheduled in the Replacement Reserve Inventory from 2020 to 2022 being accomplished as scheduled in the Replacement Reserve Inventory at a cost of \$14,717.

If any of these critical factors are inaccurate, do not use the data and please contact Miller Dodson Associates, Inc., to arrange for an update of the Replacement Reserve Study.

CASH FLOW METHOD - THREE-YEAR REPLACEMENT FUNDING - TABLE CF4

Item #	Description of Projected Replacement	Estimated Replacement Costs	Allocation of Beginning Balance	2020 Reserve Funding	2020 Projected Replacements	2020 End of Year Balance	2021 Reserve Funding	2021 Projected Replacements	2021 End of Year Balance	2022 Reserve Funding	2022 Projected Replacements	2022 End of Year Balance
SITE IMPROVEMENTS												
1	Asphalt Pavement (overlay)	11,460	11,460			11,460			11,460			11,460
2	Asphalt Pavement (sealcoat)	1,118	1,182	335		1,517	335	(1,118)	734	335		1,070
3	Asphalt Pavement (crack sealing)	629	629			629			629			629
4	Asphalt Pavement (crack sealing) - sin	629	629		(629)							
5	Concrete sidewalk (6%)	4,209	240	1,262		1,502	1,262		2,764	1,262		4,026
6	Concrete sidewalk (6%) - single event	570	570		(570)							
7	Concrete curb & gutter (6%)	897	51	269		320	269		589	269		858
8	Concrete driveways (6%)	10,097	576	3,028		3,604	3,028		6,631	3,028		9,659
9	Irrigation system station	4,000										
10	Backflow preventer	1,000										
11	Exteriors, trim, painting	12,400	12,400		(12,400)							

COMPONENT METHOD

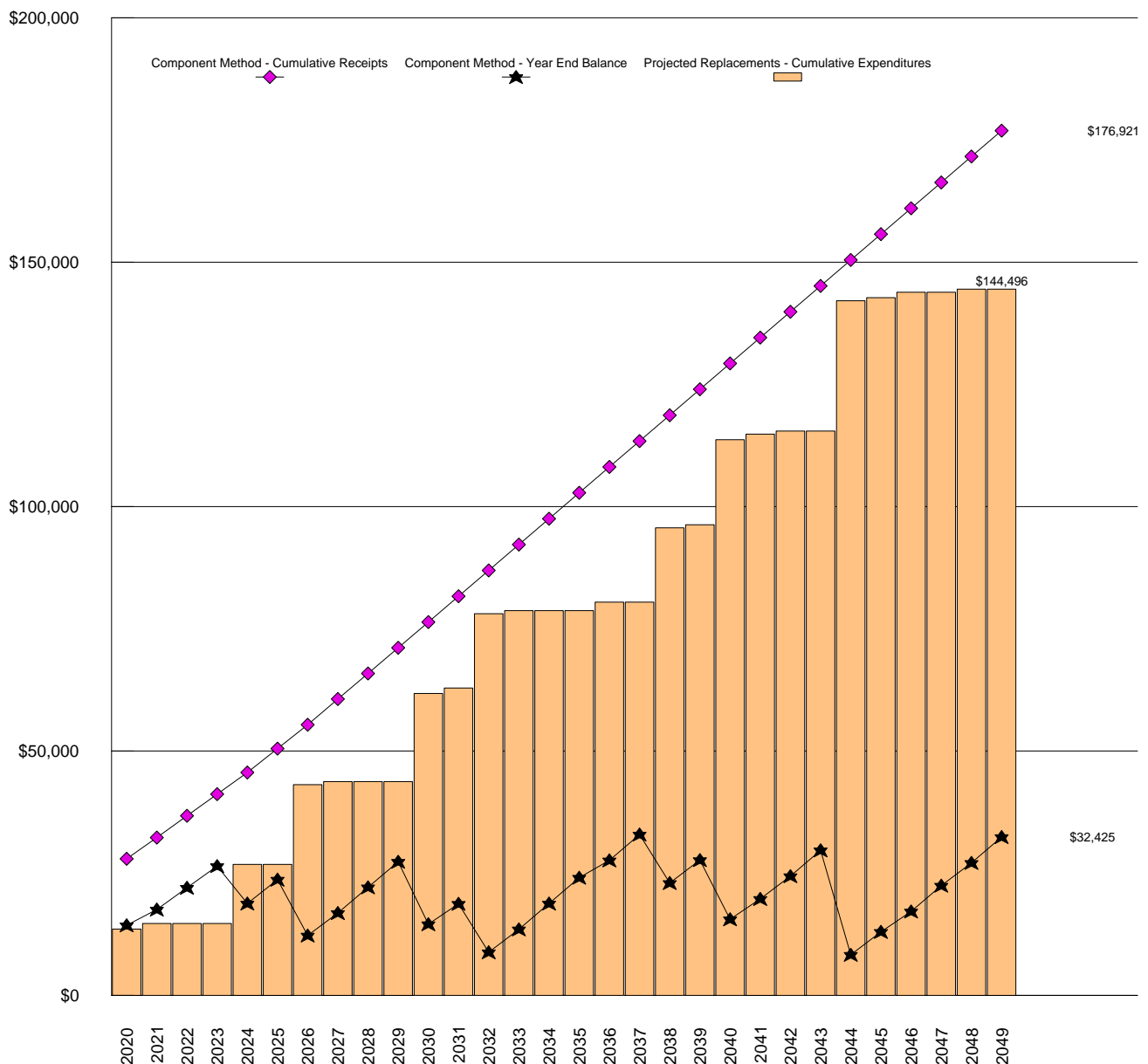


\$213 COMPONENT METHOD RECOMMENDED ANNUAL FUNDING OF REPLACEMENT RESERVES IN THE STUDY YEAR, 2020.

\$0.57 Per unit (average), recommended monthly funding of Replacement Reserves

General. The Component Method (also referred to as the Full Funded Method) is a very conservative mathematical model developed by HUD in the early 1980s. Each of the 11 Projected Replacements listed in the Replacement Reserve Inventory is treated as a separate account. The Beginning Balance is allocated to each of the individual accounts, as is all subsequent funding of Replacement Reserves. These funds are "locked" in these individual accounts and are not available to fund other Projected Replacements. The calculation of Recommended Annual Funding of Replacement Reserves is a multi-step process outlined in more detail on Page CM2.

Component Method - Cumulative Receipts and Expenditures Graph



COMPONENT METHOD (cont'd)

- **Current Funding Objective.** A Current Funding Objective is calculated for each of the Projected Replacements listed in the Replacement Reserve Inventory. Replacement Cost is divided by the Normal Economic Life to determine the nominal annual contribution. The Remaining Economic Life is then subtracted from the Normal Economic Life to calculate the number of years that the nominal annual contribution should have been made. The two values are then multiplied to determine the Current Funding Objective. This is repeated for each of the 11 Projected Replacements. The total, \$22,864, is the Current Funding Objective.

For an example, consider a very simple Replacement Reserve Inventory with one Projected Replacement, a fence with a \$1,000 Replacement Cost, a Normal Economic Life of 10 years, and a Remaining Economic Life of 2 years. A contribution to Replacement Reserves of \$100 (\$1,000 + 10 years) should have been made in each of the previous 8 years (10 years - 2 years). The result is a Current Funding Objective of \$800 (8 years x \$100 per year).

- **Funding Percentage.** The Funding Percentage is calculated by dividing the Beginning Balance (\$27,736) by the Current Funding Objective (\$22,864). At Sage Hill Green the Funding Percentage is 121.3%
- **Allocation of the Beginning Balance.** The Beginning Balance is divided among the 11 Projected Replacements in the Replacement Reserve Inventory. The Current Funding Objective for each Projected Replacement is multiplied by the Funding Percentage and these funds are then "locked" into the account of each item.

If we relate this calculation back to our fence example, it means that the Association has not accumulated \$800 in Reserves (the Funding Objective), but rather at 121.3 percent funded, there is \$970 in the account for the fence.

- **Annual Funding.** The Recommended Annual Funding of Replacement Reserves is then calculated for each Projected Replacement. The funds allocated to the account of the Projected Replacement are subtracted from the Replacement Cost. The result is then divided by the number of years until replacement, and the result is the annual funding for each of the Projected Replacements. The sum of these is \$213, the Component Method Recommended Annual Funding of Replacement Reserves in the Study Year (2020).

In our fence example, the \$970 in the account is subtracted from the \$1,000 Total Replacement Cost and divided by the 2 years that remain before replacement, resulting in an annual deposit of \$15. Next year, the deposit remains \$15, but in the third year, the fence is replaced and the annual funding adjusts to \$100.

- **Adjustment to the Component Method for interest and inflation.** The calculations in the Replacement Reserve Analysis do not account for interest earned on Replacement Reserves, inflation, or a constant annual increase in Annual Funding of Replacement Reserves. The Component Method is a very conservative method and if the Analysis is updated regularly, adequate funding will be maintained without the need for adjustments.

Component Method Data - Years 1 through 30

Year	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Beginning balance	\$27,736									
Recommended annual funding	\$213	\$4,363	\$4,435	\$4,435	\$4,435	\$4,885	\$4,885	\$5,247	\$5,247	\$5,247
Interest on reserves										
Expenditures	\$13,599	\$1,118			\$12,088		\$16,321	\$629		
Year end balance	\$14,351	\$17,596	\$22,030	\$26,465	\$18,811	\$23,696	\$12,260	\$16,877	\$22,124	\$27,371
Cumulative Expenditures	\$13,599	\$14,717	\$14,717	\$14,717	\$26,805	\$26,805	\$43,126	\$43,755	\$43,755	\$43,755
Cumulative Receipts	\$27,949	\$32,313	\$36,747	\$41,182	\$45,616	\$50,501	\$55,385	\$60,632	\$65,879	\$71,125
Year	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
Recommended annual funding	\$5,247	\$5,292	\$5,292	\$5,292	\$5,292	\$5,292	\$5,292	\$5,292	\$5,292	\$5,292
Interest on reserves										
Expenditures	\$18,029	\$1,118	\$15,203	\$629			\$1,747		\$15,203	\$629
Year end balance	\$14,588	\$18,762	\$8,852	\$13,515	\$18,807	\$24,099	\$27,644	\$32,937	\$23,026	\$27,689
Cumulative Expenditures	\$61,784	\$62,902	\$78,104	\$78,733	\$78,733	\$78,733	\$80,480	\$80,480	\$95,682	\$96,311
Cumulative Receipts	\$76,372	\$81,664	\$86,956	\$92,248	\$97,540	\$102,832	\$108,124	\$113,416	\$118,708	\$124,000
Year	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049
Recommended annual funding	\$5,292	\$5,292	\$5,292	\$5,292	\$5,292	\$5,292	\$5,292	\$5,292	\$5,292	\$5,292
Interest on reserves										
Expenditures	\$17,400	\$1,118	\$629		\$26,662	\$629	\$1,118		\$629	
Year end balance	\$15,581	\$19,755	\$24,419	\$29,711	\$8,341	\$13,004	\$17,178	\$22,470	\$27,133	\$32,425
Cumulative Expenditures	\$113,711	\$114,829	\$115,458	\$115,458	\$142,120	\$142,749	\$143,867	\$143,867	\$144,496	\$144,496
Cumulative Receipts	\$129,292	\$134,585	\$139,877	\$145,169	\$150,461	\$155,753	\$161,045	\$166,337	\$171,629	\$176,921

COMPONENT METHOD ACCOUNTING SUMMARY

This Sage Hill Green - Component Method Accounting Summary is an attachment to the Sage Hill Green - Replacement Reserve Study dated May 9, 2020 and is for use by accounting and reserve professionals experienced in Association funding and accounting principles. This Summary consists of four reports, the 2020, 2021, and 2022 Component Method Category Funding Reports (3) and a Three-Year Replacement Funding Report.

- COMPONENT METHOD CATEGORY FUNDING REPORT, 2020, 2021, and 2022. Each of the 11 Projected Replacements listed in the Sage Hill Green Replacement Reserve Inventory has been assigned to one of 1 categories. The following information is summarized by category in each report:
 - Normal Economic Life and Remaining Economic Life of the Projected Replacements.
 - Cost of all Scheduled Replacements in each category.
 - Replacement Reserves on Deposit allocated to the category at the beginning and end of the report period.
 - Cost of Projected Replacements in the report period.
 - Recommended Replacement Reserve Funding allocated to the category during the report period as calculated by the Component Method.
- THREE-YEAR REPLACEMENT FUNDING REPORT. This report details the allocation of the \$27,736 Beginning Balance (at the start of the Study Year) and the \$9,011 of additional Replacement Reserve funding from 2020 to 2022 (as calculated in the Replacement Reserve Analysis) to each of the 11 Projected Replacements listed in the Replacement Reserve Inventory. These allocations have been made using the Component Method as outlined in the Replacement Reserve Analysis. The calculated data includes:
 - Identification and estimated cost of each Projected Replacement schedule in years 2020 through 2022.
 - Allocation of the \$27,736 Beginning Balance to the Projected Replacements by the Component Method.
 - Allocation of the \$9,011 of additional Replacement Reserve Funding recommended in the Replacement Reserve Analysis in years 2020 through 2022, by the Component Method.

2020 - COMPONENT METHOD CATEGORY FUNDING REPORT

Each of the 11 Projected Replacements included in the Sage Hill Green Replacement Reserve Inventory has been assigned to one of the 1 categories listed in TABLE CM1 below. This calculated data is a summary of data provided in the Three-Year Replacement Funding Report and Replacement Reserve Inventory. The accuracy of this data is dependent upon many factors including the following critical financial data:

- A Beginning Balance of \$27,736 as of the first day of the Study Year, January 1, 2020.
- Total reserve funding (including the Beginning Balance) of \$27,949 in the Study Year.
- No expenditures from Replacement Reserves other than those specifically listed in the Replacement Reserve Inventory.
- All Projected Replacements scheduled in the Replacement Reserve Inventory in 2020 being accomplished in 2020 at a cost of \$13,599.

If any of these critical factors are inaccurate, do not use the data and please contact Miller Dodson Associates to arrange for an update of the Replacement Reserve Study.

2020 - COMPONENT METHOD CATEGORY FUNDING - TABLE CM1								
CATEGORY	NORMAL ECONOMIC LIFE	REMAINING ECONOMIC LIFE	ESTIMATED REPLACEMENT COST	2020 BEGINNING BALANCE	2020 RESERVE FUNDING	2020 PROJECTED REPLACEMENTS	2020 END OF YEAR BALANCE	
SITE IMPROVEMENTS	3 to 99 years	0 to 10 years	\$47,008	\$27,736	\$213	\$13,599	\$14,351	

2021 - COMPONENT METHOD CATEGORY FUNDING REPORT

Each of the 11 Projected Replacements included in the Sage Hill Green Replacement Reserve Inventory has been assigned to one of the 1 categories listed in TABLE CM2 below. This calculated data is a summary of data provided in the Three-Year Replacement Funding Report and Replacement Reserve Inventory. The accuracy of this data is dependent upon many factors including the following critical financial data:

- Replacement Reserves on Deposit totaling \$14,351 on January 1, 2021.
- Total reserve funding (including the Beginning Balance) of \$32,313 from 2020 through 2021.
- No expenditures from Replacement Reserves other than those specifically listed in the Replacement Reserve Inventory.
- All Projected Replacements scheduled in the Replacement Reserve Inventory in 2021 being accomplished in 2021 at a cost of \$1,118.

If any of these critical factors are inaccurate, do not use the data and please contact Miller Dodson Associates to arrange for an update of the Replacement Reserve Study.

2021 - COMPONENT METHOD CATEGORY FUNDING - TABLE CM2								
CATEGORY	NORMAL ECONOMIC LIFE	REMAINING ECONOMIC LIFE	ESTIMATED REPLACEMENT COST	2021 BEGINNING BALANCE	2021 RESERVE FUNDING	2021 PROJECTED REPLACEMENTS	2021 END OF YEAR BALANCE	
SITE IMPROVEMENTS	3 to 99 years	0 to 98 years	\$47,008	\$14,351	\$4,363	\$1,118	\$17,596	

2022 - COMPONENT METHOD CATEGORY FUNDING REPORT

Each of the 11 Projected Replacements included in the Sage Hill Green Replacement Reserve Inventory has been assigned to one of the 1 categories listed in TABLE CM3 below. This calculated data is a summary of data provided in the Three-Year Replacement Funding Report and Replacement Reserve Inventory. The accuracy of this data is dependent upon many factors including the following critical financial data:

- Replacement Reserves on Deposit totaling \$17,596 on January 1, 2022.
- Total Replacement Reserve funding (including the Beginning Balance) of \$36,747 from 2020 to 2022.
- No expenditures from Replacement Reserves other than those specifically listed in the Replacement Reserve Inventory.

If any of these critical factors are inaccurate, do not use the data and please contact Miller Dodson Associates to arrange for an update of the Replacement Reserve Study.

2022 - COMPONENT METHOD CATEGORY FUNDING - TABLE CM3								
CATEGORY	NORMAL ECONOMIC LIFE	REMAINING ECONOMIC LIFE	ESTIMATED REPLACEMENT COST	2022 BEGINNING BALANCE	2022 RESERVE FUNDING	2022 PROJECTED REPLACEMENTS	2022 END OF YEAR BALANCE	
SITE IMPROVEMENTS	3 to 99 years	2 to 97 years	\$47,008	\$17,596	\$4,435		\$22,030	

COMPONENT METHOD - THREE-YEAR REPLACEMENT FUNDING REPORT

TABLE CM4 below details the allocation of the \$27,736 Beginning Balance, as reported by the Association and the \$9,011 of Replacement Reserve Funding calculated by the Cash Flow Method from 2020 to 2022, to the 11 Projected Replacements listed in the Replacement Reserve Inventory. These allocations have been made by Chronological Allocation, a method developed by Miller Dodson Associates, Inc., and outlined on Page CF1. The accuracy of the allocations is dependent upon many factors including the following critical financial data:

- Replacement Reserves on Deposit totaling \$27,736 on January 1, 2020.
- Replacement Reserves on Deposit totaling \$14,351 on January 1, 2021.
- Replacement Reserves on Deposit totaling \$17,596 on January 1, 2022.
- Total Replacement Reserve funding (including the Beginning Balance) of \$36,747 from 2020 to 2022.
- No expenditures from Replacement Reserves other than those specifically listed in the Replacement Reserve Inventory.
- All Projected Replacements scheduled in the Replacement Reserve Inventory from 2020 to 2022 being accomplished as scheduled in the Replacement Reserve Inventory at a cost of \$14,717.

If any of these critical factors are inaccurate, do not use the data and please contact Miller Dodson Associates, Inc., to arrange for an update of the Replacement Reserve Study.

COMPONENT METHOD - THREE-YEAR REPLACEMENT FUNDING - TABLE CM4

Item #	Description of Projected Replacement	Estimated Replacement Costs	Allocation of Beginning Balance	2020 Reserve Funding	2020 Projected Replacements	2020 End of Year Balance	2021 Reserve Funding	2021 Projected Replacements	2021 End of Year Balance	2022 Reserve Funding	2022 Projected Replacements	2022 End of Year Balance
SITE IMPROVEMENTS												
1	Asphalt Pavement (overlay)	11,460	10,426	207		10,633	207		10,839	207		11,046
2	Asphalt Pavement (sealcoat)	1,118	814	152		966	152	(1,118)		224		224
3	Asphalt Pavement (crack sealing)	629		126		126	126		252	126		377
4	Asphalt Pavement (crack sealing) - sin	629	763	(134)	(629)		6		6	6		13
5	Concrete sidewalk (6%)	4,209		601		601	601		1,202	601		1,804
6	Concrete sidewalk (6%) - single event	570	691	(121)	(570)		6		6	6		12
7	Concrete curb & gutter (6%)	897		128		128	128		256	128		384
8	Concrete driveways (6%)	10,097		1,442		1,442	1,442		2,885	1,442		4,327
9	Irrigation system station	4,000		364		364	364		727	364		1,091
10	Backflow preventer	1,000		91		91	91		182	91		273
11	Exteriors, trim, painting	12,400	15,042	(2,642)	(12,400)		1,240		1,240	1,240		2,480

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. Community Associations Institute (CAI), a national trade association, estimates there were more than 200,000 Community Associations in the year 2000, and that the number of Community Associations will continue to multiply.

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, homeowners 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 Economic Life. 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 Economic Life Left. 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 Recommended Reserve Level to be Held on Account. Shown on the Summary Sheet A1, this number is used in the Cash Flow Method only. This is the prescribed level below which the reserves will not be allowed to fall in any year. This amount is determined based on the age, condition, and replacement cost of the individual components. This number is normally given as a percentage of the total Estimated Replacement Cost of all reserve components.

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

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

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

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

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

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

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

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

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

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

EA: each FT: feet LS: lump sum PR: pair SF: square feet SY: square yard

What is a Reserve Study?
Who are we?



<https://youtu.be/m4BcOE6q3Aw>

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



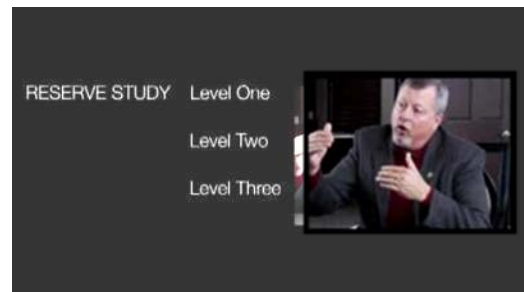
<https://youtu.be/40SodajTW1g>

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 is in a Reserve Study and what is out?
Improvement vs Component, is there a difference?



<https://youtu.be/ZfBoAEhtf3E>

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



<https://youtu.be/1J2h7FIU3qw>

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



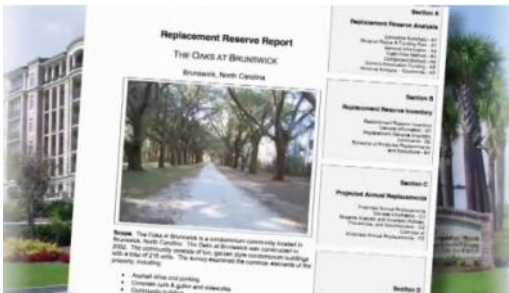
<https://youtu.be/aARD1B1Oa3o>

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



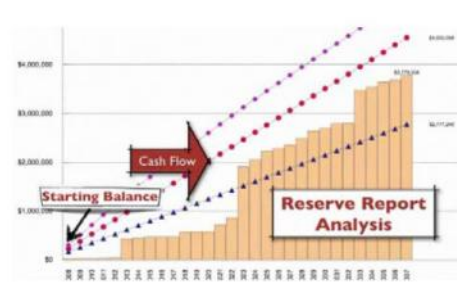
<https://youtu.be/diZfM1lyJYU>

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



<https://youtu.be/qCeVJhFf9ag>

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



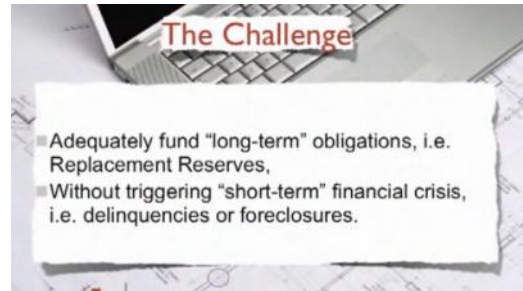
<https://youtu.be/SePdwVDvHWI>

How are interest and inflation addressed?
What should we look at when considering inflation?



<https://youtu.be/W8CDLwRlv68>

A community needs more help, where do we go?
What is a Strategic Funding Plan?



<https://youtu.be/hIxV9X1tlcA>