LEVEL 2 REPLACEMENT RESERVE REPORT FY 2020
PELHAM'S CROSSING HOMEOWNERS ASSOCIATION

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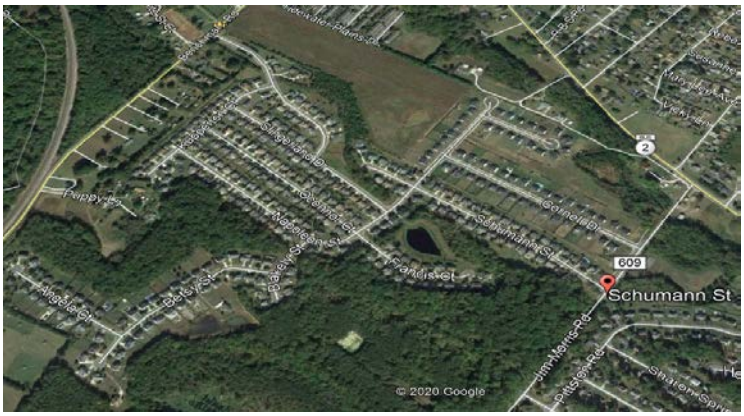
REPLACEMENT RESERVE REPORT

PELHAM'S CROSSING HOMEOWNERS ASSOCIATION

FREDERICKSBURG, VIRGINIA
March 17, 2020



Description. Pelham's Crossing Homeowners Association is a Homeowner's Association located in Fredericksburg, Virginia. Constructed in 2001, the community consists of 257 single-family homes. The survey examined the common elements of the property, including:

- Entry Monuments
- Fencing and Railing
- Storm Water Management and Ponds

Level of Service. This study has been performed as a Level 2 Update with Site Visit/On-Site Review as defined by the Community Associations Institute's, National Reserve Study Standards. As such, the component inventory is based on the study that was performed by Miller - Dodson in 2015. This inventory was adjusted to reflect changes provided by the Community Manager and/or the Board of Directors, or adjustments made based on the site visit and visual assessment performed by the Analyst. The analysis, including fund status and funding plan, is developed from the adjusted inventory.

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

Purpose. The purpose of this Replacement Reserve Study is to provide Pelham's Crossing Homeowners Association (hereinafter called the Association) with an inventory of the common community facilities and infrastructure components that require periodic replacement. The Study includes a general view of the condition of these items and an effective financial plan to fund projected periodic replacements.

- **Inventory of Items Owned by the Association.** Section B lists the Projected Replacements of the commonly owned items that require periodic replacement using funding from Replacement Reserves. The Replacement Reserve Inventory also provides information about excluded items, which are items whose replacements are not scheduled for funding from Replacement Reserves.

- **Condition of Items Owned by the Association.** Section B includes our estimates of the normal economic life and the remaining economic life for the projected replacements. Section C provides a year-by-year listing of the projected replacements. Section D provides additional detail for items that are unique or deserving of attention because of their condition or the manner in which they have been treated in this study.

- **Financial Plan.** The Association has a fiduciary responsibility to protect the appearance, value, and safety of the property and it is therefore essential the Association have a financial plan that provides funding for the projected replacements. In conformance with American Institute of Certified Public Accountant guidelines, Section A, Replacement Reserve Analysis evaluates the current funding of Replacement Reserves as reported by the Association and recommends annual funding of Replacement Reserves by the Cash Flow Method. Section A, Replacement Reserve Analysis includes graphic and tabular presentations of the 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 March 17, 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 not used in the development of this study. We recommend the Association assemble and maintain a library of site and building plans of the entire facility. Record drawings should be scanned into an electronic format for safe storage and ease of distribution. Upon request for a nominal fee, Miller+Dodson can provide scanning services.

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 $200,259. The reported current annual funding for reserves is $12,000.

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 Ms. Katie Taylor, Association Manager who provided very helpful insight into the current operations of the property.

Analyst's Credentials. Bill Conner holds a Bachelor of Science Degree in Economics from James Madison University. He has over forty years of experience in inspection services, residential construction, commercial construction, and architectural woodwork. Bill has personally inspected and evaluated over 3,000 properties and managed the inspection of many more throughout the eastern United States. Currently, Bill resides near Richmond, Virginia and is a reserve analyst for Miller+Dodson Associates.

Respectfully Submitted,

millerdodson
CAPITAL RESERVE CONSULTANTS

Bill Conner

William (Bill) J. Conner, Jr.

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EXECUTIVE SUMMARY

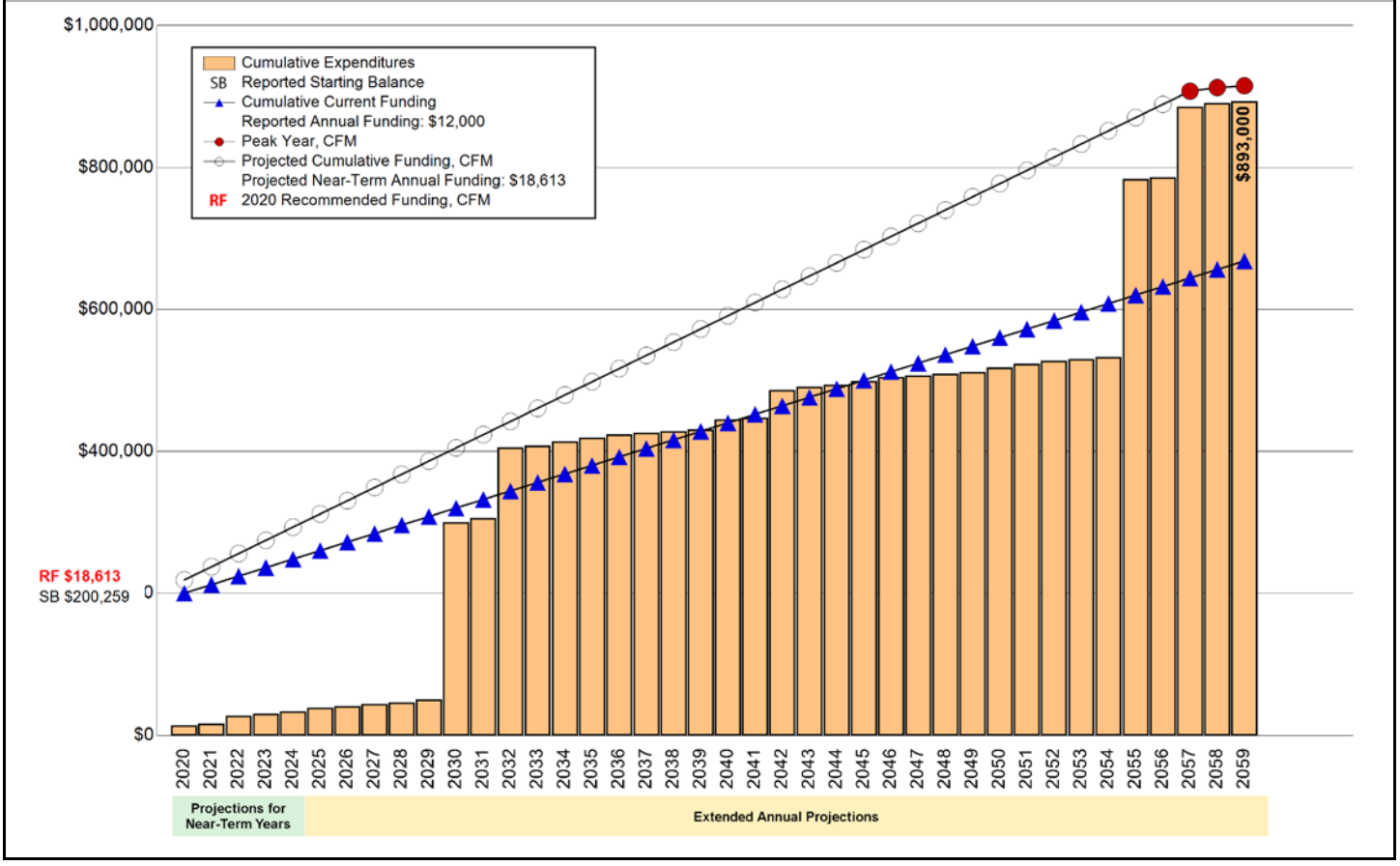
The Pelham's Crossing Homeowners Association Replacement Reserve Analysis uses the Cash Flow Method (CFM) to calculate Replacement Reserve funding for the periodic replacement of the 21 Projected Replacements identified in the Replacement Reserve Inventory.

$18,613 **RECOMMENDED REPLACEMENT RESERVE FUNDING FOR THE STUDY YEAR, 2020**
$6.04 Per unit (average), minimum monthly funding of Replacement Reserves

We recommend the Association adopt a Replacement Reserve Funding Plan based on the annual funding recommendation above. Inflation adjusted funding for subsequent years is shown on Page A.5.

Pelham's Crossing Homeowners Association reports a Starting Balance of $200,259 and Annual Funding totaling $12,000. The reported Current Annual Funding of $12,000 is inadequate to fund projected replacements starting in 2032. See Page A.3 for a more detailed evaluation.

#1 - Cumulative Replacement Reserve Funding and Expenditures Graph



The Current Funding Objective as calculated by the Component Method (Fully Funded) is $235,825 making the reserve account 84.9% funded. See the Appendix for more information on this method.

REPLACEMENT RESERVE ANALYSIS - GENERAL INFORMATION

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

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

$200,259 **STARTING BALANCE**

The Association reports Replacement Reserves on Deposit totaling $200,259 at the start of the Study Year.

Level Two **LEVEL OF SERVICE**

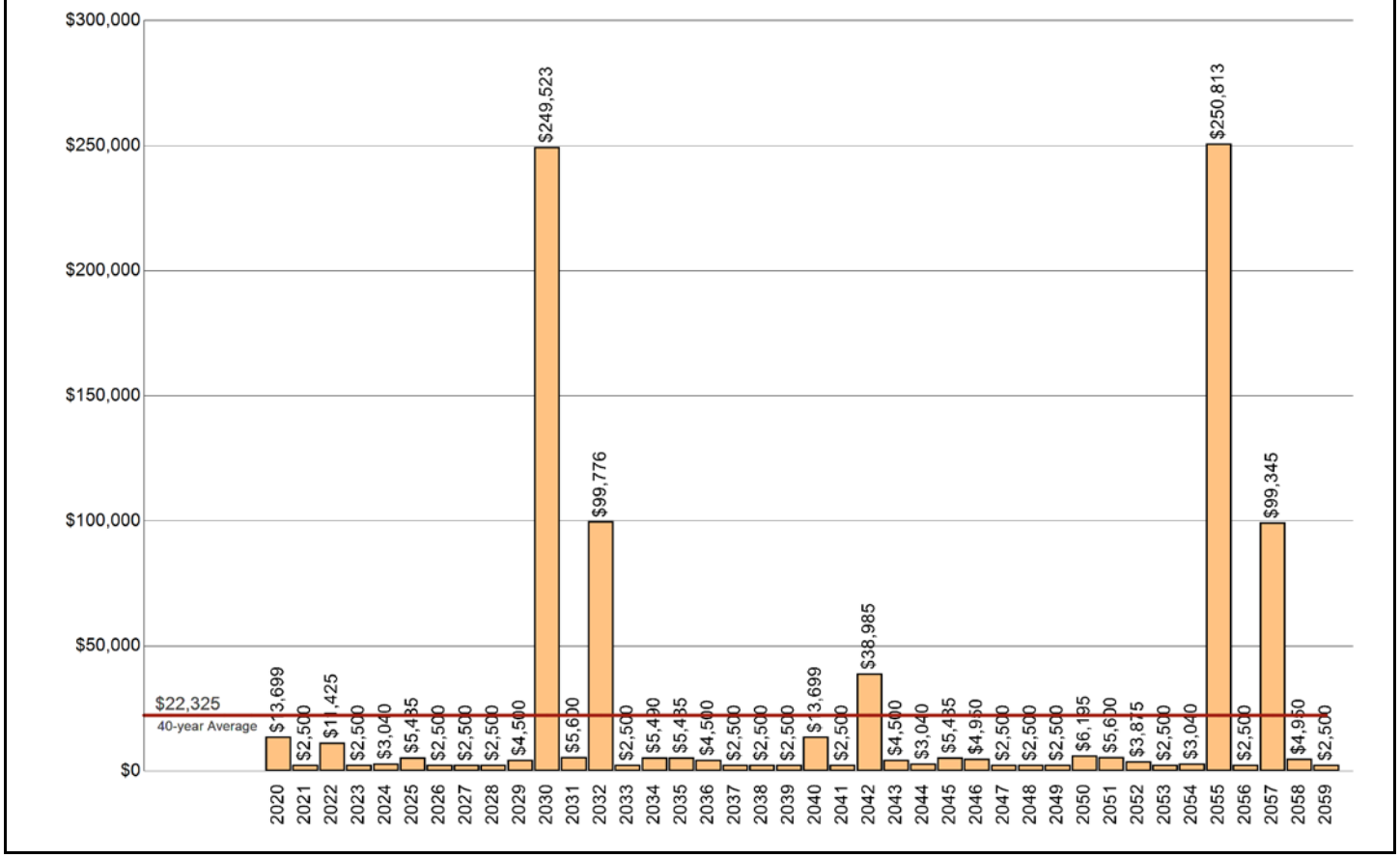
The Replacement Reserve Inventory has been developed in compliance with the National Reserve Study Standards for a Level Two Study, as defined by the Community Associations Institute (CAI).

$893,000 **REPLACEMENT RESERVE INVENTORY - PROJECTED REPLACEMENTS**

The Pelham's Crossing Homeowners Association Replacement Reserve Inventory identifies 21 items that will require periodic replacement, which are to be funded from Replacement Reserves. We estimate the cost of these replacements will be $893,000 over the 40-year Study Period. The Projected Replacements are divided into 1 major category starting on Page B.3. Pages B.1-B.2 provide detailed information on the Replacement Reserve Inventory.

#2 - Annual Expenditures for Projected Replacements Graph

This graph shows annual expenditures for Projected Replacements over the 40-year Study Period. The red line shows the average annual expenditure of $22,325. 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 A.4 and A.5. The Projected Replacements listed on Page C.2 should be compared with any replacements accomplished and funded from Replacement Reserves. Discrepancies should be evaluated and if necessary, the Reserve Study should be updated, or a new study commissioned. We recommend annual increases in replacement reserve funding to account for the impact of inflation. Inflation Adjusted Funding is discussed on Page A.5.

UPDATING OF THE REPLACEMENT RESERVE STUDY

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

ANNUAL EXPENDITURES AND CURRENT FUNDING

The annual expenditures that comprise the $893,000 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	$200,259									
Projected Replacements	($13,699)	($2,500)	($11,425)	($2,500)	($3,040)	($5,485)	($2,500)	($2,500)	($2,500)	($4,500)
Annual Deposit	$12,000	$12,000	$12,000	$12,000	$12,000	$12,000	$12,000	$12,000	$12,000	$12,000
End of Year Balance	$198,560	$208,060	$208,635	$218,135	$227,095	$233,610	$243,110	$252,610	$262,110	$269,610
Cumulative Expenditures	($13,699)	($16,199)	($27,624)	($30,124)	($33,164)	($38,649)	($41,149)	($43,649)	($46,149)	($50,649)
Cumulative Receipts	$200,259	$212,259	$224,259	$236,259	$248,259	$260,259	$272,259	$284,259	$296,259	$308,259
Year	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**
Projected Replacements	($249,523)	($5,600)	($99,776)	($2,500)	($5,490)	($5,485)	($4,500)	($2,500)	($2,500)	($2,500)
Annual Deposit	$12,000	$12,000	$12,000	$12,000	$12,000	$12,000	$12,000	$12,000	$12,000	$12,000
End of Year Balance	$32,087	$38,487	($49,289)	($39,789)	($33,279)	($26,764)	($19,264)	($9,764)	($264)	$9,236
Cumulative Expenditures	($300,172)	($305,772)	($405,548)	($408,048)	($413,538)	($419,023)	($423,523)	($426,023)	($428,523)	($431,023)
Cumulative Receipts	$320,259	$332,259	$344,259	$356,259	$368,259	$380,259	$392,259	$404,259	$416,259	$428,259
Year	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**
Projected Replacements	($13,699)	($2,500)	($38,985)	($4,500)	($3,040)	($5,485)	($4,950)	($2,500)	($2,500)	($2,500)
Annual Deposit	$12,000	$12,000	$12,000	$12,000	$12,000	$12,000	$12,000	$12,000	$12,000	$12,000
End of Year Balance	$7,537	$17,037	($9,948)	($2,448)	$6,512	$13,027	$20,077	$29,577	$39,077	$48,577
Cumulative Expenditures	($444,722)	($447,222)	($486,207)	($490,707)	($493,747)	($499,232)	($504,182)	($506,682)	($509,182)	($511,682)
Cumulative Receipts	$440,259	$452,259	$464,259	$476,259	$488,259	$500,259	$512,259	$524,259	$536,259	$548,259
Year	**2050**	**2051**	**2052**	**2053**	**2054**	**2055**	**2056**	**2057**	**2058**	**2059**
Projected Replacements	($6,195)	($5,600)	($3,875)	($2,500)	($3,040)	($250,813)	($2,500)	($99,345)	($4,950)	($2,500)
Annual Deposit	$12,000	$12,000	$12,000	$12,000	$12,000	$12,000	$12,000	$12,000	$12,000	$12,000
End of Year Balance	$54,382	$60,782	$68,907	$78,407	$87,367	($151,446)	($141,946)	($229,291)	($222,241)	($212,741)
Cumulative Expenditures	($517,877)	($523,477)	($527,352)	($529,852)	($532,892)	($783,705)	($786,205)	($885,550)	($890,500)	($893,000)
Cumulative Receipts	$560,259	$572,259	$584,259	$596,259	$608,259	$620,259	$632,259	$644,259	$656,259	$668,259

EVALUATION OF CURRENT FUNDING

The evaluation of Current Funding (Starting Balance of $200,259 & annual funding of $12,000), is done in today's dollars with no adjustments for inflation or interest earned on Replacement Reserves. The evaluation assumes Replacement Reserves will only be used for the 21 Projected Replacements identified in the Replacement Reserve Inventory and that the Association will continue Annual Funding of $12,000 throughout the 40-year Study Period.

Annual Funding of $12,000 is approximately 64 percent of the $18,613 recommended Annual Funding calculated by the Cash Flow Method for 2020, the Study Year.

Evaluation of the 21 Projected Replacements calculates an average annual expenditure over the next 40 years of $22,325. Annual funding of $12,000 is 54 percent of the average annual expenditure. Our calculations identify funding shortfalls in 14 years of the Study Period with the initial shortfall in 2032. The largest shortfall, $-229,291, occurs in 2057. All shortfalls can be seen and evaluated in Table 3 above.

See the Executive Summary for the Current Funding Statement.

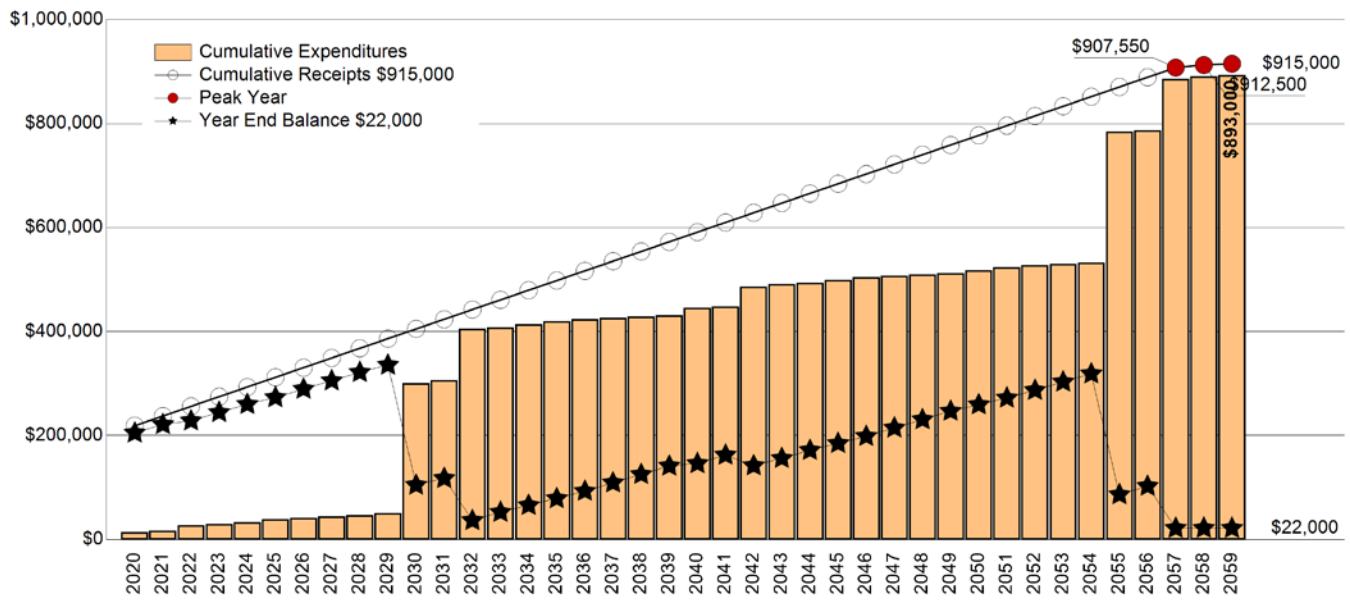
CASH FLOW METHOD FUNDING

$18,613 **RECOMMENDED REPLACEMENT RESERVE FUNDING FOR 2020**
$6.04 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 2057 with Replacement Reserves on Deposit dropping to the Minimum Balance after the completion of $885,550 of replacements from 2020 to 2057. Recommended funding is anticipated to decline in 2058. Peak Years are identified in Chart 4 and Table 5.
- Minimum Balance. The calculations assume a Minimum Balance of $22,000 in Replacement Reserves. This is approximately 12 months of average expenditures based on the $22,325, 40-year average annual expenditure.
- Cash Flow Method Study Period. Cash Flow Method calculates funding for $893,000 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	$200,259									
Projected Replacements	($13,699)	($2,500)	($11,425)	($2,500)	($3,040)	($5,485)	($2,500)	($2,500)	($2,500)	($4,500)
Annual Deposit	$18,613	$18,613	$18,613	$18,613	$18,613	$18,613	$18,613	$18,613	$18,613	$18,613
End of Year Balance	$205,173	$221,286	$228,474	$244,587	$260,160	$273,288	$289,400	$305,513	$321,626	$335,739
Cumulative Expenditures	($13,699)	($16,199)	($27,624)	($30,124)	($33,164)	($38,649)	($41,149)	($43,649)	($46,149)	($50,649)
Cumulative Receipts	$218,872	$237,485	$256,098	$274,711	$293,324	$311,937	$330,549	$349,162	$367,775	$386,388
Year	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**
Projected Replacements	($249,523)	($5,600)	($99,776)	($2,500)	($5,490)	($5,485)	($4,500)	($2,500)	($2,500)	($2,500)
Annual Deposit	$18,613	$18,613	$18,613	$18,613	$18,613	$18,613	$18,613	$18,613	$18,613	$18,613
End of Year Balance	$104,829	$117,842	$36,679	$52,792	$65,915	$79,043	$93,156	$109,269	$125,381	$141,494
Cumulative Expenditures	($300,172)	($305,772)	($405,548)	($408,048)	($413,538)	($419,023)	($423,523)	($426,023)	($428,523)	($431,023)
Cumulative Receipts	$405,001	$423,614	$442,227	$460,840	$479,453	$498,066	$516,679	$535,292	$553,904	$572,517
Year	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**
Projected Replacements	($13,699)	($2,500)	($38,985)	($4,500)	($3,040)	($5,485)	($4,950)	($2,500)	($2,500)	($2,500)
Annual Deposit	$18,613	$18,613	$18,613	$18,613	$18,613	$18,613	$18,613	$18,613	$18,613	$18,613
End of Year Balance	$146,408	$162,521	$142,149	$156,262	$171,835	$184,963	$198,626	$214,739	$230,852	$246,965
Cumulative Expenditures	($444,722)	($447,222)	($486,207)	($490,707)	($493,747)	($499,232)	($504,182)	($506,682)	($509,182)	($511,682)
Cumulative Receipts	$591,130	$609,743	$628,356	$646,969	$665,582	$684,195	$702,808	$721,421	$740,034	$758,647
Year	**2050**	**2051**	**2052**	**2053**	**2054**	**2055**	**2056**	**1st Peak - 2057**	**2nd Peak - 2058**	**3rd Peak - 2059**
Projected Replacements	($6,195)	($5,600)	($3,875)	($2,500)	($3,040)	($250,813)	($2,500)	($99,345)	($4,950)	($2,500)
Annual Deposit	$18,613	$18,613	$18,613	$18,613	$18,613	$18,613	$18,613	$18,613	$4,950	$2,500
End of Year Balance	$259,383	$272,395	$287,133	$303,246	$318,819	$86,619	$102,732	$22,000	$22,000	$22,000
Cumulative Expenditures	($517,877)	($523,477)	($527,352)	($529,852)	($532,892)	($783,705)	($786,205)	($885,550)	($890,500)	($893,000)
Cumulative Receipts	$777,260	$795,872	$814,485	$833,098	$851,711	$870,324	$888,937	$907,550	$912,500	$915,000

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.

$18,613 **2020 - CASH FLOW METHOD RECOMMENDED FUNDING**

The 2020 Study Year calculations have been made using current replacement costs (see Page B.2), modified by the Analyst for any project specific conditions.

$19,041 **2021 - INFLATION ADJUSTED FUNDING**

A new analysis calculates the 2021 funding based on three assumptions:

- Replacement Reserves on Deposit totaling $205,173 on January 1, 2021.
- All 2020 Projected Replacements listed on Page C.2 accomplished at a cost to Replacement Reserves less than $13,699.
- Construction Cost Inflation of 2.30 percent in 2020.

The $19,041 inflation adjusted funding in 2021 is a 2.30 percent increase over the non-inflation adjusted funding of $18,613.

$19,479 **2022 - INFLATION ADJUSTED FUNDING**

A new analysis calculates the 2022 funding based on three assumptions:

- Replacement Reserves on Deposit totaling $224,318 on January 1, 2022.
- No Expenditures from Replacement Reserves in 2021.
- Construction Cost Inflation of 2.30 percent in 2021.

The $19,479 inflation adjusted funding in 2022 is a 4.65 percent increase over the non-inflation adjusted funding of $18,613.

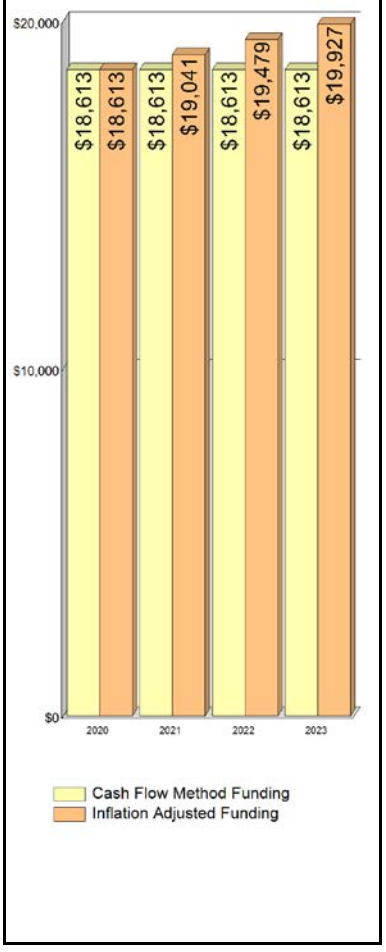
$19,927 **2023 - INFLATION ADJUSTED FUNDING**

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

- Replacement Reserves on Deposit totaling $232,113 on January 1, 2023.
- All 2022 Projected Replacements listed on Page C.2 accomplished at a cost to Replacement Reserves less than $11,907.
- Construction Cost Inflation of 2.30 percent in 2022.

The $19,927 inflation adjusted funding in 2023 is a 7.05 percent increase over the non-inflation adjusted funding of $18,613.

#6 - Inflation Adjusted Funding



Year Five and Beyond

The inflation adjusted funding calculations outlined above are not intended to be a substitute for periodic evaluation of common elements by an experienced Reserve Analyst. Industry Standards, lender requirements, and many state and local statutes require a Replacement Reserve Study 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 2.30 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 $2,027 on an average balance of $202,716, $2,147 on an average balance of $214,746 in 2021, and $2,282 on $228,216 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 $18,613 to $16,586 (a 10.89 percent reduction), $19,041 to $16,894 in 2021 (a 11.27 percent reduction), and $19,479 to $17,197 in 2022 (a 11.71 percent reduction).

REPLACEMENT RESERVE STUDY - SUPPLEMENTAL COMMENTS

- 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 21 Projected Replacements specifically listed in the Replacement Reserve Inventory. The inclusion/exclusion of items from the Replacement Reserve Inventory is discussed on Page B.1.

REPLACEMENT RESERVE INVENTORY
GENERAL INFORMATION

Pelham's Crossing Homeowners Association - Replacement Reserve Inventory identifies 21 Projected Replacements.

- PROJECTED REPLACEMENTS. 21 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 $402,488. Replacements totaling $893,000 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. None of the items included in the Replacement Reserve Inventory are 'Excluded Items'. Multiple categories of items are typically excluded from funding by Replacement Reserves, including but not limited to:

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

  Value. Items with a replacement cost of less than $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 B.2.

  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.

- CATEGORIES. The 21 items included in the Pelham's Crossing Homeowners Association Replacement Reserve Inventory are divided into 1 major categories. Each category is printed on a separate page, beginning on page B.3.

- LEVEL OF SERVICE. This Replacement Reserve Inventory has been developed in compliance with the standards established for a Level 2 Update, as defined by the National Reserve Study Standards, established in 1998 by Community Associations Institute, which states:

  This study has been performed as a Level 2 Update with Site Visit/On-Site Review as defined by the Community Associations Institute's, National Reserve Study Standards. As such, the component inventory is based on the study that was performed by Miller - Dodson in 2015. This inventory was adjusted to reflect changes provided by the Community Manager and/or the Board of Directors, or adjustments made based on the site visit and visual assessment performed by the Analyst. The analysis, including fund status and funding plan, is developed from the adjusted inventory.

REPLACEMENT RESERVE INVENTORY - GENERAL INFORMATION (CONT'D)

- INVENTORY DATA. Each of the 21 Projected Replacements listed in the Replacement Reserve Inventory includes the following data:

  Item Number. The Item Number is assigned sequentially and is intended for identification purposes only.

  Item Description. We have identified each item included in the Inventory. Additional information may be included in the Comments section at the bottom of each page of the Inventory.

  Units. We have used standard abbreviations to identify the number of units including SF-square feet, LF-lineal feet, SY-square yard, LS-lump sum, EA-each, and PR-pair. Non-standard abbreviations are noted in the Comments section at the bottom of the page.

  Number of Units. The methods used to develop the quantities are discussed in "Level of Service" above.

  Unit Replacement Cost. We use four sources to develop the unit cost data shown in the Inventory; actual replacement cost data provided by the client, information provided by local contractors and suppliers, industry standard estimating manuals, and a cost database we have developed based upon our detailed interviews with contractors and service providers who are specialists in their respective lines of work.

  Normal Economic Life (Years). The number of years that a new and properly installed item should be expected to remain in service.

  Remaining Economic Life (Years). The estimated number of years before an item will need to be replaced. In "normal" conditions, this could be calculated by subtracting the age of the item from the Normal Economic Life of the item, but only rarely do physical assets age "normally". Some items may have longer or shorter lives depending on many factors such as environment, initial quality of the item, maintenance, etc.

  Total Replacement Cost. This is calculated by multiplying the Unit Replacement Cost by the Number of Units.

- 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 ITEMS
PROJECTED REPLACEMENTS

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

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST ($)	NEL	REL	REPLACEMENT COST ($)
1	Cahill St. repoint masonry entr. feature	sf	40	$13.50	10	4	$540
2	Cahill St foamboard sign (HDU)	ls	1	$3,100.00	20	2	$3,100
3	Cahill St inset signage	ls	1	$1,375.00	10	2	$1,375
4	Cahill St feature, metal cap	sf	32	$33.00	30	12	$1,056
5	Schumann St repoint entrance feature	sf	70	$13.50	10	none	$945
6	Schumann St foamboard sign (HDU)	ls	1	$3,100.00	20	11	$3,100
7	Schumann St inset signage	ls	1	$1,485.00	10	5	$1,485
8	Cannon monument stamped concrete	sf	745	$20.00	40	22	$14,900
9	Cannon wrought iron fence, picket	lf	65	$86.00	40	22	$5,590
10	Cannon monument restoration, wood	ls	1	$2,000.00	7	2	$2,000
11	Cannon monument historic sign	ea	2	$750.00	10	5	$1,500
12	Cannon monument historic sign	ea	1	$750.00	10	none	$750
13	Floodlights, entrance features	ea	7	$350.00	12	2	$2,450
14	Split rail wood fence	ft	600	$15.84	20	none	$9,504
15	Culvert headwall metal railing	ft	192	$60.00	40	22	$11,520
16	Chain link fence, bioretention pond	ft	765	$16.20	25	10	$12,393
17	Dredge stormwater pond - Betsy St..	cy	1,027	$75.00	25	12	$77,025
18	Chain link fence 4' - Betsy St.	ft	1,100	$16.20	25	12	$17,820
19	Dredge stormwater pond - Francis Ct.	cy	2,636	$75.00	25	10	$197,700
20	Chain link fence 4' - Francis Ct.	ft	2,175	$16.20	25	10	$35,235
				Replacement Costs - Page Subtotal			$399,988

COMMENTS

- Item #1: Cahill St. repoint masonry entr. feature - 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. Per our previous report we understand the Cahill Street monument was repointed in 2014 and the Schumann Street entrance monument was repointed in 2011.
- Item #10: Cannon monument restoration, wood - The cannon monument was reported to have been restored in 2010 and again in 2014 at a cost of approximately $2,000.00 per occurrence. We have continued funding for these periodic restorations.
- Item #14: Split rail wood fence - 03 / 2020. The split rail wood fence previously located at the Cahill Street entrance has been removed and will be replaced in 2020. The cost estimate used here was selected from a range provided by the Association management from actual contractor estimates.

SITE ITEMS - (cont.)

PROJECTED REPLACEMENTS

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

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST ($)	NEL	REL	REPLACEMENT COST ($)
21	Structural maintenance, wet ponds	ls	1	$2,500.00	1	none	$2,500
				Replacement Costs - Page Subtotal			$2,500

COMMENTS

VALUATION EXCLUSIONS

Excluded Items

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST ($)	NEL	REL	REPLACEMENT COST ($)
	Solar lighting at cannon monument						EXCLUDED

VALUATION EXCLUSIONS

Comments

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

LONG-LIFE EXCLUSIONS
Excluded Items

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST ($)	NEL	REL	REPLACEMENT COST ($)
	Masonry entry monuments						EXCLUDED
	Miscellaneous culverts						EXCLUDED

LONG-LIFE EXCLUSIONS
Comments

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

UNIT IMPROVEMENTS EXCLUSIONS

Excluded Items

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST ($)	NEL	REL	REPLACEMENT COST ($)
	All aspects of individual homes						EXCLUDED

UNIT IMPROVEMENTS EXCLUSIONS

Comments

- Unit improvement Exclusions. We understand that the elements of the project that relate to a single unit are the responsibility of that unit owner. Examples of items excluded from funding by Replacement Reserves by this standard are listed above.
- The list above exemplifies exclusions by the cited standard(s) and is not intended to be comprehensive.

UTILITY EXCLUSIONS
Excluded Items

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST ($)	NEL	REL	REPLACEMENT COST ($)
	Primary electric feeds						EXCLUDED
	Electric transformers						EXCLUDED
	Cable TV systems and structures						EXCLUDED
	Telephone cables and structures						EXCLUDED
	Site lighting						EXCLUDED
	Gas mains and meters						EXCLUDED
	Water mains and meters						EXCLUDED
	Sanitary sewers						EXCLUDED

UTILITY EXCLUSIONS
Comments

- Utility Exclusions. Many improvements owned by utility companies are on property owned by the Association. We have assumed that repair, maintenance, and replacements of these components will be done at the expense of the appropriate utility company. Examples of items excluded from funding Replacement Reserves by this standard are listed above.

- The list above exemplifies exclusions by the cited standard(s) and is not intended to be comprehensive.

MAINTENANCE AND REPAIR EXCLUSIONS

Excluded Items

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST ($)	NEL	REL	REPLACEMENT COST ($)
	Landscaping and site grading						EXCLUDED
	All painting						EXCLUDED
	Repair services						EXCLUDED
	Partial replacements						EXCLUDED
	Capital improvements						EXCLUDED

MAINTENANCE AND REPAIR EXCLUSIONS

Comments

- Maintenance activities, one-time-only repairs, and capital improvements. These activities are NOT appropriately funded from Replacement Reserves. The inclusion of such component in the Replacement Reserve Inventory could jeopardize the special tax status of ALL Replacement Reserves, exposing the Association to significant tax liabilities. We recommend that the Board of Directors discuss these exclusions and Revenue Ruling 75-370 with a Certified Public Accountant.

- Examples of items excluded from funding by Replacement Reserves are listed above. The list above exemplifies exclusions by the cited standard(s) and is not intended to be comprehensive.

GOVERNMENT EXCLUSIONS

Excluded Items

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST ($)	NEL	REL	REPLACEMENT COST ($)
	Government, roadways & parking						EXCLUDED
	Government, sidewalks & curbs						EXCLUDED
	Government, lighting						EXCLUDED
	Government, stormwater mgmt.						EXCLUDED

GOVERNMENT EXCLUSIONS

Comments

- Government Exclusions. We have assumed that some of the improvements installed on property owned by the Association will be maintained by the state, county, or local government, or other association or other responsible entity. Examples of items excluded from funding by Replacement Reserves by this standard are listed above.
- Excluded rights-of-way, including adjacent properties and adjacent roadways.
- The list above exemplifies exclusions by the cited standard(s) and is not intended to be comprehensive.

IRRIGATION SYSTEM EXCLUSIONS

Excluded Items

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST ($)	NEL	REL	REPLACEMENT COST ($)
	Subsurface irrigation pipe						EXCLUDED
	Subsurface irrigation valve						EXCLUDED
	Subsurface irrigation control wiring						EXCLUDED
	Irrigation control system						EXCLUDED
	Irrigation system electrical service						EXCLUDED
	Irrigation system enclosures						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 online and again each fall when they are winterized. Repair(s) and or replacement(s) should be made in conjunction with these semiannual inspections.

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PROJECTED ANNUAL REPLACEMENTS
GENERAL INFORMATION

CALENDAR OF ANNUAL REPLACEMENTS. The 21 Projected Replacements in the Pelham's Crossing Homeowners Association Replacement Reserve Inventory whose replacement is scheduled to be funded from Replacement Reserves are broken down on a year-by-year basis, beginning on Page C.2.

REPLACEMENT RESERVE ANALYSIS AND INVENTORY POLICIES, PROCEDURES, AND ADMINISTRATION

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

PROJECTED REPLACEMENTS - YEARS 1 TO 10

Item	2020 - YEAR 1	$
5	Schumann St repoint entrance feature	$945
12	Cannon monument historic sign	$750
14	Split rail wood fence	$9,504
21	Structural maintenance, wet ponds	$2,500
	Total Scheduled Replacements	$13,699

Item	2021 - YEAR 2	$
21	Structural maintenance, wet ponds	$2,500
	Total Scheduled Replacements	$2,500

Item	2022 - YEAR 3	$
2	Cahill St foamboard sign (HDU)	$3,100
3	Cahill St inset signage	$1,375
10	Cannon monument restoration, wood	$2,000
13	Floodlights, entrance features	$2,450
21	Structural maintenance, wet ponds	$2,500
	Total Scheduled Replacements	$11,425

Item	2023 - YEAR 4	$
21	Structural maintenance, wet ponds	$2,500
	Total Scheduled Replacements	$2,500

Item	2024 - YEAR 5	$
1	Cahill St. repoint masonry entr. feature	$540
21	Structural maintenance, wet ponds	$2,500
	Total Scheduled Replacements	$3,040

Item	2025 - YEAR 6	$
7	Schumann St inset signage	$1,485
11	Cannon monument historic sign	$1,500
21	Structural maintenance, wet ponds	$2,500
	Total Scheduled Replacements	$5,485

Item	2026 - YEAR 7	$
21	Structural maintenance, wet ponds	$2,500
	Total Scheduled Replacements	$2,500

Item	2027 - YEAR 8	$
21	Structural maintenance, wet ponds	$2,500
	Total Scheduled Replacements	$2,500

Item	2028 - YEAR 9	$
21	Structural maintenance, wet ponds	$2,500
	Total Scheduled Replacements	$2,500

Item	2029 - YEAR 10	$
10	Cannon monument restoration, wood	$2,000
21	Structural maintenance, wet ponds	$2,500
	Total Scheduled Replacements	$4,500

PROJECTED REPLACEMENTS - YEARS 11 TO 20

Item	2030 - YEAR 11	$
5	Schumann St repoint entrance feature	$945
12	Cannon monument historic sign	$750
16	Chain link fence, bioretention pond	$12,393
19	Dredge stormwater pond - Francis Ct.	$197,700
20	Chain link fence 4' - Francis Ct.	$35,235
21	Structural maintenance, wet ponds	$2,500
Total Scheduled Replacements		$249,523

Item	2031 - YEAR 12	$
6	Schumann St foamboard sign (HDU)	$3,100
21	Structural maintenance, wet ponds	$2,500
Total Scheduled Replacements		$5,600

Item	2032 - YEAR 13	$
3	Cahill St inset signage	$1,375
4	Cahill St feature, metal cap	$1,056
17	Dredge stormwater pond - Betsy St..	$77,025
18	Chain link fence 4' - Betsy St.	$17,820
21	Structural maintenance, wet ponds	$2,500
Total Scheduled Replacements		$99,776

Item	2033 - YEAR 14	$
21	Structural maintenance, wet ponds	$2,500
Total Scheduled Replacements		$2,500

Item	2034 - YEAR 15	$
1	Cahill St. repoint masonry entr. feature	$540
13	Floodlights, entrance features	$2,450
21	Structural maintenance, wet ponds	$2,500
Total Scheduled Replacements		$5,490

Item	2035 - YEAR 16	$
7	Schumann St inset signage	$1,485
11	Cannon monument historic sign	$1,500
21	Structural maintenance, wet ponds	$2,500
Total Scheduled Replacements		$5,485

Item	2036 - YEAR 17	$
10	Cannon monument restoration, wood	$2,000
21	Structural maintenance, wet ponds	$2,500
Total Scheduled Replacements		$4,500

Item	2037 - YEAR 18	$
21	Structural maintenance, wet ponds	$2,500
Total Scheduled Replacements		$2,500

Item	2038 - YEAR 19	$
21	Structural maintenance, wet ponds	$2,500
Total Scheduled Replacements		$2,500

Item	2039 - YEAR 20	$
21	Structural maintenance, wet ponds	$2,500
Total Scheduled Replacements		$2,500

PROJECTED REPLACEMENTS - YEARS 21 TO 30

Item	2040 - YEAR 21	$
5	Schumann St repoint entrance feature	$945
12	Cannon monument historic sign	$750
14	Split rail wood fence	$9,504
21	Structural maintenance, wet ponds	$2,500
	Total Scheduled Replacements	$13,699

Item	2041 - YEAR 22	$
21	Structural maintenance, wet ponds	$2,500
	Total Scheduled Replacements	$2,500

Item	2042 - YEAR 23	$
2	Cahill St foamboard sign (HDU)	$3,100
3	Cahill St inset signage	$1,375
8	Cannon monument stamped concrete	$14,900
9	Cannon wrought iron fence, picket	$5,590
15	Culvert headwall metal railing	$11,520
21	Structural maintenance, wet ponds	$2,500
	Total Scheduled Replacements	$38,985

Item	2043 - YEAR 24	$
10	Cannon monument restoration, wood	$2,000
21	Structural maintenance, wet ponds	$2,500
	Total Scheduled Replacements	$4,500

Item	2044 - YEAR 25	$
1	Cahill St. repoint masonry entr. feature	$540
21	Structural maintenance, wet ponds	$2,500
	Total Scheduled Replacements	$3,040

Item	2045 - YEAR 26	$
7	Schumann St inset signage	$1,485
11	Cannon monument historic sign	$1,500
21	Structural maintenance, wet ponds	$2,500
	Total Scheduled Replacements	$5,485

Item	2046 - YEAR 27	$
13	Floodlights, entrance features	$2,450
21	Structural maintenance, wet ponds	$2,500
	Total Scheduled Replacements	$4,950

Item	2047 - YEAR 28	$
21	Structural maintenance, wet ponds	$2,500
	Total Scheduled Replacements	$2,500

Item	2048 - YEAR 29	$
21	Structural maintenance, wet ponds	$2,500
	Total Scheduled Replacements	$2,500

Item	2049 - YEAR 30	$
21	Structural maintenance, wet ponds	$2,500
	Total Scheduled Replacements	$2,500

PROJECTED REPLACEMENTS - YEARS 31 TO 40

Item	2050 - YEAR 31	$
5	Schumann St repoint entrance feature	$945
10	Cannon monument restoration, wood	$2,000
12	Cannon monument historic sign	$750
21	Structural maintenance, wet ponds	$2,500
	Total Scheduled Replacements	$6,195

Item	2051 - YEAR 32	$
6	Schumann St foamboard sign (HDU)	$3,100
21	Structural maintenance, wet ponds	$2,500
	Total Scheduled Replacements	$5,600

Item	2052 - YEAR 33	$
3	Cahill St inset signage	$1,375
21	Structural maintenance, wet ponds	$2,500
	Total Scheduled Replacements	$3,875

Item	2053 - YEAR 34	$
21	Structural maintenance, wet ponds	$2,500
	Total Scheduled Replacements	$2,500

Item	2054 - YEAR 35	$
1	Cahill St. repoint masonry entr. feature	$540
21	Structural maintenance, wet ponds	$2,500
	Total Scheduled Replacements	$3,040

Item	2055 - YEAR 36	$
7	Schumann St inset signage	$1,485
11	Cannon monument historic sign	$1,500
16	Chain link fence, bioretention pond	$12,393
19	Dredge stormwater pond - Francis Ct.	$197,700
20	Chain link fence 4' - Francis Ct.	$35,235
21	Structural maintenance, wet ponds	$2,500
	Total Scheduled Replacements	$250,813

Item	2056 - YEAR 37	$
21	Structural maintenance, wet ponds	$2,500
	Total Scheduled Replacements	$2,500

Item	2057 - YEAR 38	$
10	Cannon monument restoration, wood	$2,000
17	Dredge stormwater pond - Betsy St..	$77,025
18	Chain link fence 4' - Betsy St.	$17,820
21	Structural maintenance, wet ponds	$2,500
	Total Scheduled Replacements	$99,345

Item	2058 - YEAR 39	$
13	Floodlights, entrance features	$2,450
21	Structural maintenance, wet ponds	$2,500
	Total Scheduled Replacements	$4,950

Item	2059 - YEAR 40	$
21	Structural maintenance, wet ponds	$2,500
	Total Scheduled Replacements	$2,500

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CONDITION ASSESSMENT

General Comments. Miller+Dodson Associates conducted a Reserve Study at Pelham's Crossing Homeowners Association in March 2020. Pelham's Crossing Homeowners Association is in generally good condition for a homeowner's association constructed in 2001. 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 ITEMS

Entry Monuments.

The entry monument signage at both the Cahill St. and Schumann Street entrances are in good condition at this time. We did note some loose, cracked mortar and stones in the masonry aspects of the monuments. These require repairs to prevent water infiltration which will further deteriorate the monuments. We have allowed for periodic repointing and securing loose stones as needed. The vertical cracking noted on the rear of the Schumann Street entrance monument is structurally related and should be sealed and monitored for possible continued movement. We anticipate no major structural repairs at this time.

The two entry monuments include ground-mounted up-lighting to illuminate the signs. The lights were not on at the time of our visit but appear to be in good condition.


PELHAMS CROSSING


PELHAM'S CROSSING

John Pelham Memorial.

A monument to John Pelham is located on the north side of the Schumann Street entrance to the community. All aspects of the monument appear to be in very good condition at this time with the exception of one of the historical markers. One marker top is faded and cracked while the other two are in good condition. The marker support posts are all in good condition.

Stamped Concrete Walkway and Pad.

The stamped concrete is in very good condition. The use of control joints and properly prepared base materials have resulted in a high quality, long-lasting surface.

Wood Cannon.

The wood cannon enclosed in the metal fencing is a civil war cannon replica. We understand the cannon is actually all wood fabrication. It is being well maintained and we have included funding to continue that process.

Iron Fencing.

The cannon is enclosed by an iron picket fence with decorative finials. The fence is in very good condition and should have an extended lifespan if painting and maintenance continues on a regular basis.

Historical Markers.

Three historical markers on metal stands surround the cannon at the John Pelham Memorial. We found two of the markers to be in very good condition, but one shows considerable cracking and fading. The top of this marker should be replaced. All the stands for the markers were in good condition.

Metal Railing.

The community maintains 192 feet of metal railing located on top of the concrete culverts in six locations. These railings are currently in good condition and should have a life span of forty years or more if properly maintained by cleaning and painting.

Fencing.

Chain link fencing is located around the perimeter of three BMP areas. The fencing is in good condition in most areas. We did note some small damaged areas from mechanical equipment and/or vegetation. The fence at the Cahill St. dry retention area has been painted black and is peeling in some locations. This will require regular painting. We noted recent vegetation removal at the rear side of this fence. All vegetation on fences should be removed.

Storm Water Ponds. The community is served by 3 stormwater ponds. There is a dry bio-retention pond at the intersection of Cahill St. and Slingerland Dr. and wet ponds located along Betsy St. and Francis St.

The bio-retention pond may accumulate water during heavy rain events but appears to drain rapidly. It was dry at the time of our visit which followed a rainy period. This area will require seasonal maintenance typically provided by a landscape contractor. Dredging is not required.

The wet ponds will accumulate silt and over time and lose the ability to store stormwater at design levels, which could result in overflows and minor local flooding. Additionally, water quality can be negatively affected by increased siltation and debris accumulation. Accordingly, ponds require periodic dredging. We understand the local municipality inspects the ponds on a regular basis and makes recommendations. The community should follow those recommendations which commonly include erosion control to prevent the build-up of silt and other accumulation. We have included funding for periodic partial dredging of the wet ponds.

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

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

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

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

Based on our understanding, we recommend the following:

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

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

Please note that the periodic removal of overgrown vegetation from the ponds is considered a maintenance activity and has not been reserved for or included in this study. We have included a line item for "structural maintenance" which includes replacement of the trash racks, concrete repairs, and replacements, rip-rap replenishment, and measures to control erosion. The $2,000.00 annual allowance is based on a history of expenditures in this community.

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

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

Routine:

- Visual Inspection
- Vegetation Management
- Debris/Litter Control Outlet
- Maintaining Undisturbed Areas Around Infiltration Trenches/Basins (routine)

Non-Routine:

- Bank Stabilization
- Sediment Removal
- Structure Maintenance / Replacement
- Maintenance of Mechanical Components (dependent on age of structure; non-routine)

Minimum Inspection Checklist for Ponds:

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

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.

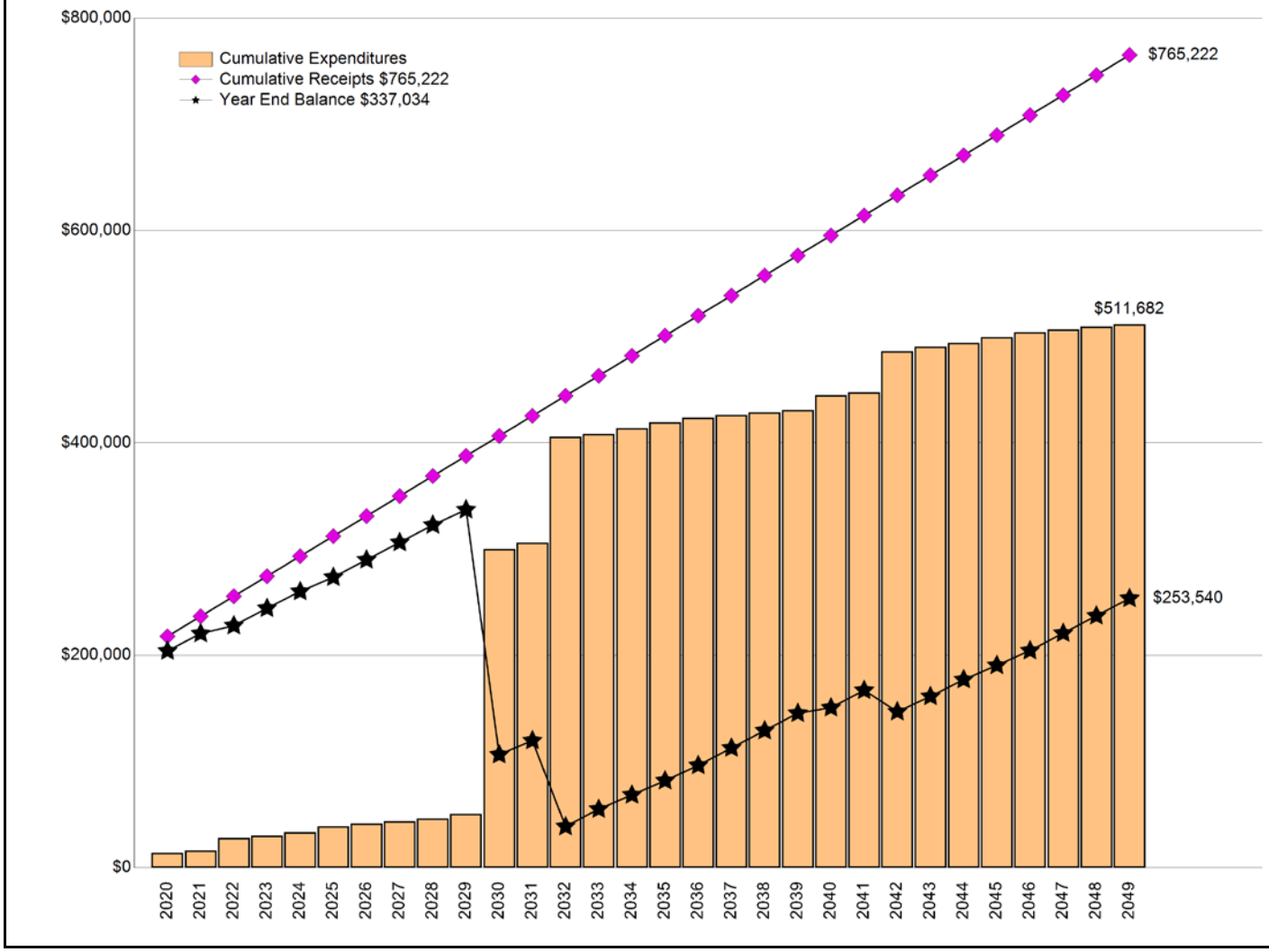
End of Condition Assessment

COMPONENT METHOD

$17,531 **COMPONENT METHOD RECOMMENDED ANNUAL FUNDING OF REPLACEMENT RESERVES IN THE STUDY YEAR, 2020.**
$5.68 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 21 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 CM.2.

Component Method - Cumulative Receipts and Expenditures Graph



COMPONENT METHOD (CONT.)

- 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 21 Projected Replacements. The total, $235,825, is the Current Funding Objective.

  For an example, consider a 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 ($200,259) by the Current Funding Objective ($235,825). At Pelham's Crossing Homeowners Association, the Funding Percentage is 84.9%

- Allocation of the Beginning Balance. The Beginning Balance is divided among the 18 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 84.9 percent funded, there is $679 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 $17,531, the Component Method Recommended Annual Funding of Replacement Reserves in the Study Year (2020).

  In our fence example, the $679 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 $160. Next year, the deposit remains $160, 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	$200,259									
Recommended Annual Funding	$17,531	$18,877	$18,877	$18,877	$18,877	$18,877	$18,877	$18,877	$18,877	$18,877
Expenditures	$13,699	$2,500	$11,425	$2,500	$3,040	$5,485	$2,500	$2,500	$2,500	$4,500
Year End Balance	$204,091	$220,468	$227,920	$244,297	$260,134	$273,526	$289,903	$306,280	$322,657	$337,034
Cumulative Expenditures	$13,699	$16,199	$27,624	$30,124	$33,164	$38,649	$41,149	$43,649	$46,149	$50,649
Cumulative Receipts	$217,790	$236,667	$255,544	$274,421	$293,298	$312,175	$331,052	$349,929	$368,806	$387,683
Year	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**
Recommended Annual Funding	$18,877	$18,877	$18,877	$18,877	$18,877	$18,877	$18,877	$18,877	$18,877	$18,877
Expenditures	$249,523	$5,600	$99,776	$2,500	$5,490	$5,485	$4,500	$2,500	$2,500	$2,500
Year End Balance	$106,388	$119,664	$38,765	$55,142	$68,529	$81,921	$96,298	$112,675	$129,052	$145,429
Cumulative Expenditures	$300,172	$305,772	$405,548	$408,048	$413,538	$419,023	$423,523	$426,023	$428,523	$431,023
Cumulative Receipts	$406,560	$425,436	$444,313	$463,190	$482,067	$500,944	$519,821	$538,698	$557,575	$576,452
Year	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**
Recommended Annual Funding	$18,877	$18,877	$18,877	$18,877	$18,877	$18,877	$18,877	$18,877	$18,877	$18,877
Expenditures	$13,699	$2,500	$38,985	$4,500	$3,040	$5,485	$4,950	$2,500	$2,500	$2,500
Year End Balance	$150,607	$166,984	$146,876	$161,253	$177,090	$190,482	$204,409	$220,786	$237,163	$253,540
Cumulative Expenditures	$444,722	$447,222	$486,207	$490,707	$493,747	$499,232	$504,182	$506,682	$509,182	$511,682
Cumulative Receipts	$595,329	$614,206	$633,083	$651,960	$670,837	$689,714	$708,591	$727,468	$746,345	$765,222

2020 - COMPONENT METHOD CATEGORY FUNDING REPORT

Each of the 21 Projected Replacements included in the Pelham's Crossing Homeowners Association Replacement Reserve Inventory has been assigned to one of the 1 category 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 $200,259 as of the first day of the Study Year, January 1, 2020.
- Total reserve funding (including the Beginning Balance) of $217,790 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 $13,699.

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
	1 to 40 years	0 to 22 years	$402,488	$186,859	$17,531	$13,699	$192,029

2021 - COMPONENT METHOD CATEGORY FUNDING REPORT

Each of the 21 Projected Replacements included in the Pelham's Crossing Homeowners Association Replacement Reserve Inventory has been assigned to one of the 1 category 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 $204,091 on January 1, 2021.
- Total reserve funding (including the Beginning Balance) of $236,667 from 2020 to 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 $2,500.

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
	1 to 40 years	0 to 21 years	$402,488	$192,029	$18,877	$2,500	$208,406

2022 - COMPONENT METHOD CATEGORY FUNDING REPORT

Each of the 21 Projected Replacements included in the Pelham's Crossing Homeowners Association Replacement Reserve Inventory has been assigned to one of the 1 category 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 $220,468 on January 1, 2022.
- Total reserve funding (including the Beginning Balance) of $255,544 from 2021 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 in 2022 being accomplished in 2022 at a cost of $11,425.

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
	1 to 40 years	-1 to 20 years	$402,488	$208,406	$18,877	$8,925	$219,351

TABLE CM4 below details the allocation of the $200,259 Beginning Balance, as reported by the Association and the $55,285 of Replacement Reserve Funding calculated by the Component Method from 2020 to 2022, to the 21 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 CF.1. The accuracy of the allocations is dependent upon many factors including the following critical financial data:

- Replacement Reserves on Deposit totaling $200,259 on January 1, 2020.
- Replacement Reserves on Deposit totaling $204,091 on January 1, 2021.
- Replacement Reserves on Deposit totaling $220,468 on January 1, 2022.
- Total Replacement Reserve funding (including the Beginning Balance) of $255,544 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 $27,624.

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 ITEMS -											
1	Cahill St. repoint masonry entr.	540	229	54		283	54		337	54		391
2	Cahill St foamboard sign (HDU)	3,100	2,237	155		2,392	155		2,547	155	(3,100)	
3	Cahill St inset signage	1,375	817	138		955	138		1,092	138	(1,375)	
4	Cahill St feature, metal cap	1,056	508	35		543	35		578	35		614
5	Schumann St repoint entrance	945	802	35	(945)		95		95	95		189
6	Schumann St foamboard sign	3,100	1,053	155		1,208	155		1,363	155		1,518
7	Schumann St inset signage	1,485	504	149		653	149		801	149		950
8	Cannon monument stamped	14,900	5,376	373		5,749	373		6,121	373		6,494
9	Cannon wrought iron fence, picket	5,590	2,017	140		2,157	140		2,297	140		2,436
10	Cannon monument restoration,	2,000	970	286		1,256	286		1,542	286	(2,000)	
11	Cannon monument historic sign	1,500	509	150		659	150		809	150		959
12	Cannon monument historic sign	750	637	150	(750)	37	75		112	75		187
13	Floodlights, entrance features	2,450	1,560	204		1,764	204		1,968	204	(2,450)	
14	Split rail wood fence	9,504	8,069	204	(9,504)		475		475	475		950
15	Culvert headwall metal railing	11,520	4,157	288		4,445	288		4,733	288		5,021
16	Chain link fence, bioretention pond	12,393	5,892	496		6,388	496		6,884	496		7,379
17	Dredge stormwater pond - Betsy	77,025	31,389	3,081		34,470	3,081		37,551	3,081		40,632
18	Chain link fence 4' - Betsy St.	17,820	7,262	713		7,975	713		8,688	713		9,400
19	Dredge stormwater pond - Francis	197,700	93,994	7,908		101,902	7,908		109,810	7,908		117,718
20	Chain link fence 4' - Francis Ct.	35,235	16,752	1,409		18,162	1,409		19,571	1,409		20,980
21	Structural maintenance, wet ponds	2,500	2,123	1,409	(2,500)	1,032	2,500	(2,500)	1,032	2,500		3,532

1. COMMON INTEREST DEVELOPMENTS - AN OVERVIEW

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

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

The shift of responsibility for billions of dollars of community facilities and infrastructure from the local government and private sector to Community Associations has generated new and unanticipated problems. Although Community Associations have succeeded in solving many short-term problems, many Associations have failed to properly plan for the tremendous expenses of replacing community facilities and infrastructure components. When inadequate replacement reserve funding results in less than timely replacements of failing components, 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 Normal Economic Life (NEL). Used in the Normal Replacement Schedules. This represents the industry average number of years that a new item should be expected to last until it has to be replaced. This figure is sometimes modified by climate, region, or original construction conditions.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

ea	each	**ls**	lump sum	**sy**	square yard
ft or lf	linear foot	**pr**	pair	**cy**	cubic yard
sf	square foot				

What is a Reserve Study?
Who are we?

https://youtu.be/m4BcOE6q3Aw

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

https://youtu.be/40SodajTW1g

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

https://youtu.be/pYSMZO13VjQ

When should a Reserve Study be updated?
What are the different types of Reserve Studies?

https://youtu.be/Qx8WHB9Cgnc

What's in a Reserve Study and what's out?
Improvement/Component, what's the difference?

https://youtu.be/ZfBoAEhtf3E

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

https://youtu.be/1J2h7FIU3qw

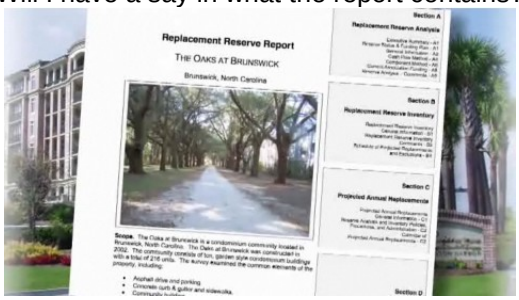
What is my role as a community Board Member?
Will a Reserve Study meet my needs?

https://youtu.be/aARD1B1Oa3o

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

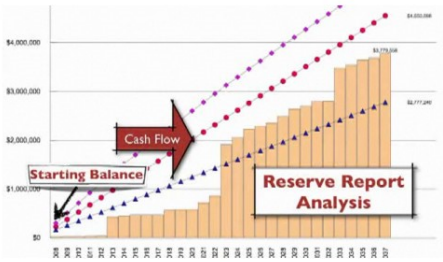
https://youtu.be/diZfM1IyJYU

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



https://youtu.be/qCeVJhFf9ag

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

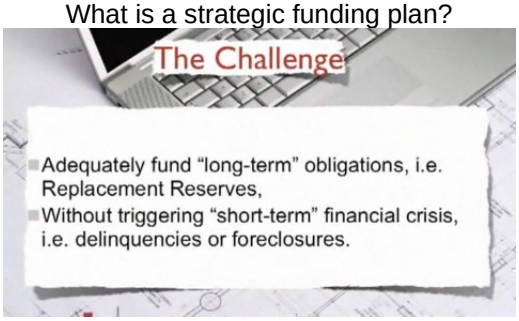


https://youtu.be/SePdwVDvHWI

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

https://youtu.be/W8CDLwRIv68

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



https://youtu.be/hIxV9X1tIcA