

LEVEL 2 REPLACEMENT RESERVE REPORT FY 2024 BETHANY PROPER TOWNHOMES



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Community Management by:

WILGUS ASSOCIATES, INC.

Lauren Griffith

32904 Coastal Highway
Bethany Beach, DE 19930
302.539.7511

lauren@wilgusassociates.com

Consultant:

millerdodson
Capital Reserve Consultants

2661 Riva Road, Suite 1042
Annapolis, MD 21401
410.268.0479
800.850.2835

MillerDodson.com

millerdodson
Capital Reserve Consultants

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REPLACEMENT RESERVE REPORT

BETHANY PROPER TOWNHOMES

BETHANY BEACH, DELAWARE

April 28, 2023



Description. Bethany Proper Townhomes is a Homeowner's Association located along Maplewood Street in Bethany Beach, Delaware. Constructed between 1983 and 1990, the community consists of 38 Townhomes buildings containing 126 units. The survey examined the common elements of the property, including:

- Entry Monument and Signage
- Townhouse Roads and Parking
- Sidewalks and Curbs and Gutters
- Site Lighting, and Trash Corrals
- Waterlines and Sanitary Lines
- Stormwater Management related to the Courts
- Main Pool, Wading Pool, and Tennis Court.
- Pool house building exteriors and interiors
- Townhouse roofs and gutters

The county is responsible for the main roadways. Individual unit owners are responsible for the unit interiors, doors, and windows.

Cedar siding and decking are maintained on a 4 1/2-year maintenance/painting cycle and are excluded from this study.

EXECUTIVE SUMMARY

This Reserve Study has been prepared for the Bethany Proper Townhomes for the Fiscal Year 2024 covering the period from January 1, 2024 to December 31, 2024. The Replacement Reserves Starting Balance as of January 1, 2024 is proposed to be \$154,539. The reported Current Annual Funding for Reserves is \$138,600. The Recommended Annual Reserve Funding level for 2024 is \$137,240.

The Association is currently funding the Reserves at a somewhat higher funding level than is calculated in this Reserve Study. However, due to the high rate of inflation in today's construction industry and its effect on Replacement costs, we recommend that the Association continue to fund at their current higher funding level. This can be adjusted in the future when inflation rates stabilize.

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

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Current Funding. The Starting Balance and Current Annual Reserve Funding figures have been supplied by the managing agent and/or Board of Directors. Confirmation or audit of these figures is beyond the scope of the study. For the purposes of this study, it is assumed that the annual contribution will be deposited at the end of each month.

Level of Service. This study has been performed as a Level 2 Update with Site Visit/On-Site Review as defined by the Community Associations Institute's, National Reserve Study Standards. As such, the component inventory is based on the study that was performed by Miller Dodson in 2018. 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 Bethany Proper Townhomes (hereinafter called the Association) with an inventory of the common community facilities and infrastructure components that require periodic replacement. The Study includes a general view of the condition of these items and an effective financial plan to fund projected periodic replacements.

- **Inventory of Items Owned by the Association.** Section B lists the Projected Replacements of the commonly owned items that require periodic replacement using funding from Replacement Reserves. The Replacement Reserve Inventory also provides information about excluded items, which are items whose replacements are not scheduled for funding from Replacement Reserves.
- **Condition of Items Owned by the Association.** Section B includes our estimates of the normal economic life and the remaining economic life for the projected replacements. Section C provides a year-by-year listing of the projected replacements. Section D provides additional detail for items that are unique or deserving of attention because of their condition or the manner in which they have been treated in this study.
- **Financial Plan.** The Association has a fiduciary responsibility to protect the appearance, value, and safety of the property and it is therefore essential the Association have a financial plan that provides funding for the projected replacements. In conformance with American Institute of Certified Public Accountant guidelines, Section A, Replacement Reserve Analysis evaluates the current funding of Replacement Reserves as reported by the Association and recommends annual funding of Replacement Reserves by the Cash Flow Method. Section A, Replacement Reserve Analysis includes graphic and tabular presentations of the reported current funding and the recommended funding based on the Cash Flow Method. An Executive Summary of these calculations is provided on Page A1.

Basis. The data contained in this Replacement Reserve Study is based upon the following:

- The Request for Proposal submitted and executed by the Association.
- Miller+Dodson performed a visual evaluation on April 21, 2023 to determine a remaining useful life and replacement cost for the commonly owned elements of this facility.
- This study contains additional recommendations to address inflation for the Cash Flow Method only. For this recommendation, Miller+Dodson uses the Producers Price Index (PPI), which gauges inflation in manufacturing and construction. Please see page A5 for further details.

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

Acknowledgment. Miller+Dodson Associates would like to acknowledge the assistance and input of Lauren Griffith, Property Manager, who provided very helpful insight into the current operations of the property.

Analyst's Credentials. Mr. Gregory S. Gilbert (RS) holds a Bachelor's Degree in Architecture from the Georgia Institute of Technology and a Master of Architecture from the University of Oklahoma. Mr. Gilbert is a licensed Architect. Mr. Gilbert's experience includes the design of residential homes, fire stations, and most recently, educational projects. Greg has also performed over twenty feasibility studies for the U. S. Navy, Boards of Education, and retail developers, which included performing existing condition surveys to address maintenance issues, code violations, and general conditions of the structure to determine if and how the buildings can be renovated or modified. Mr. Gilbert is currently a Reserve Specialist for Miller+Dodson Associates.

Respectfully Submitted,



Greg Gilbert

Gregory S. Gilbert, RS

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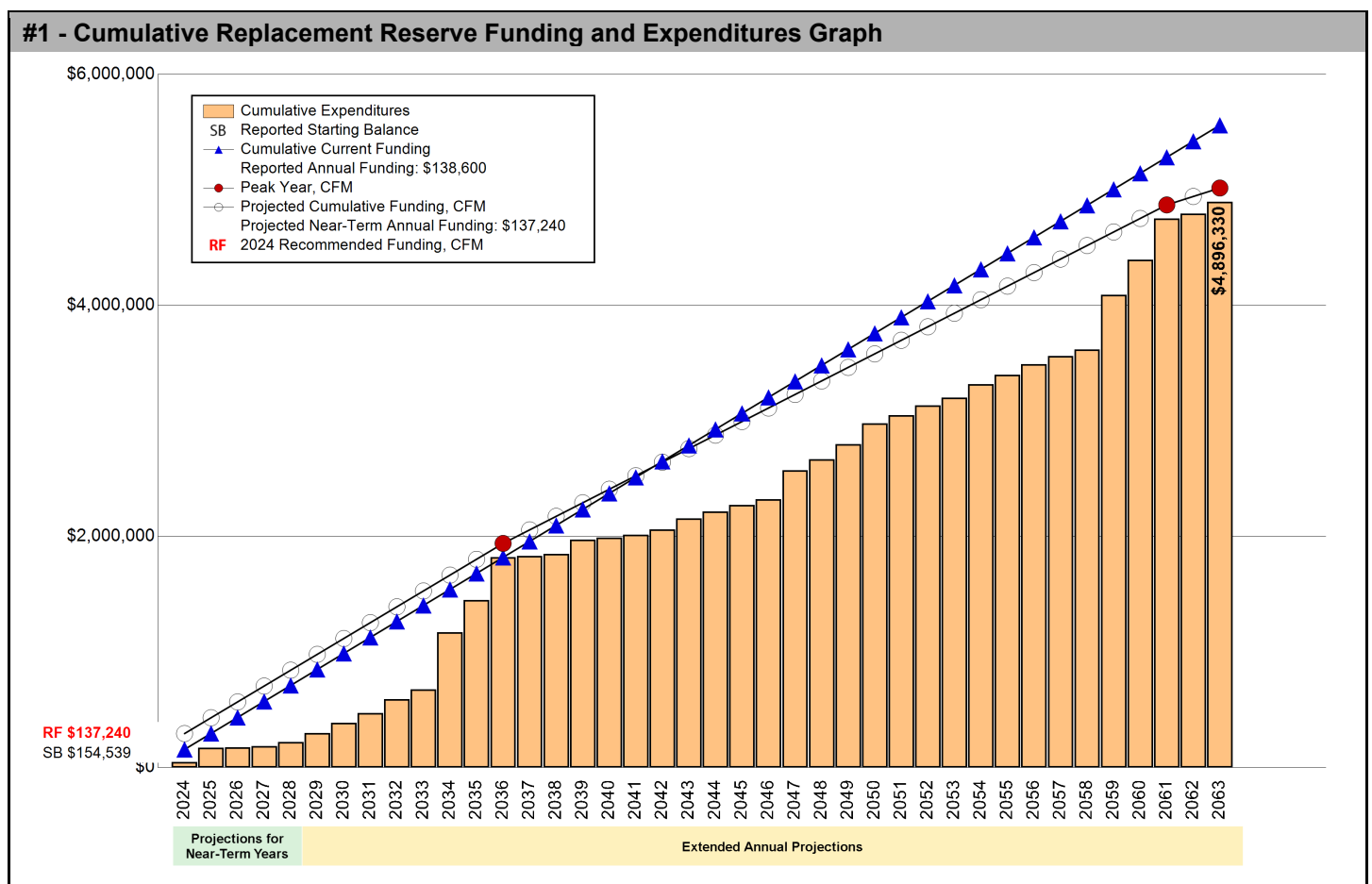
SECTION A - FINANCIAL ANALYSIS

The Bethany Proper Townhomes Replacement Reserve Analysis uses the Cash Flow Method (CFM) to calculate Replacement Reserve funding for the periodic replacement of the 94 Projected Replacements identified in the Replacement Reserve Inventory.

\$137,240 **RECOMMENDED REPLACEMENT RESERVE FUNDING FOR THE STUDY YEAR, 2024**
\$90.77 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.

Bethany Proper Townhomes reports a Starting Balance of \$154,539 and Annual Funding totaling \$138,600, which is inadequate to fund projected replacements starting in 2036. See Page A.3 for a more detailed evaluation.



The Association is currently funding the Reserves at a somewhat higher funding level than is calculated in this Reserve Study. However, due to the high rate of inflation in today's construction industry and its effect on Replacement costs, we recommend that the Association continue to fund at their current higher funding level. This can be adjusted in the future when inflation rates stabilize.

REPLACEMENT RESERVE ANALYSIS - GENERAL INFORMATION

The Bethany Proper Townhomes 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.

2024 | 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, 2024.

40 Years | STUDY PERIOD

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

\$154,539 | STARTING BALANCE

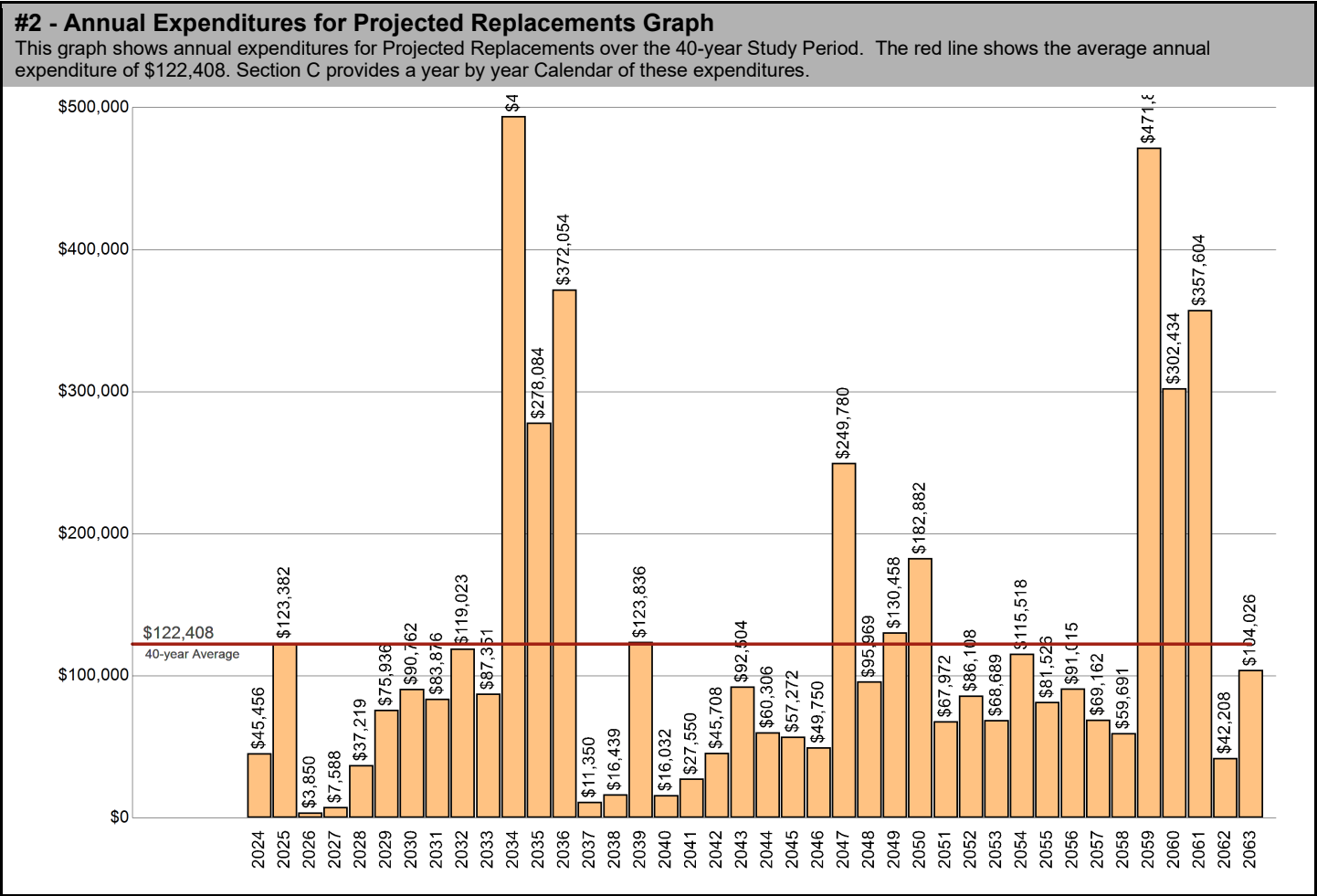
The Association reports Replacement Reserves on Deposit totaling \$154,539 at the start of the Study Year.

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).

\$4,896,330 | REPLACEMENT RESERVE INVENTORY - PROJECTED REPLACEMENTS

The Bethany Proper Townhomes Replacement Reserve Inventory identifies 94 items that will require periodic replacement, which are to be funded from Replacement Reserves. We estimate the cost of these replacements will be \$4,896,330 over the 40-year Study Period. The Projected Replacements are divided into 4 major categories starting on Page B.3. Pages B.1-B.2 provide detailed information on the Replacement Reserve Inventory.



UPDATING OF THE FUNDING PLAN

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

UPDATING OF THE REPLACEMENT RESERVE STUDY

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

ANNUAL EXPENDITURES AND CURRENT FUNDING

The annual expenditures that comprise the \$4,896,330 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	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Starting Balance	\$154,539									
Projected Replacements	(\$45,456)	(\$123,382)	(\$3,850)	(\$7,588)	(\$37,219)	(\$75,936)	(\$90,762)	(\$83,876)	(\$119,023)	(\$87,351)
Annual Deposit	\$138,600	\$138,600	\$138,600	\$138,600	\$138,600	\$138,600	\$138,600	\$138,600	\$138,600	\$138,600
End of Year Balance	\$247,683	\$262,901	\$397,651	\$528,663	\$630,044	\$692,709	\$740,547	\$795,270	\$814,847	\$866,096
Cumulative Expenditures	(\$45,456)	(\$168,838)	(\$172,688)	(\$180,276)	(\$217,495)	(\$293,430)	(\$384,193)	(\$468,069)	(\$587,092)	(\$674,443)
Cumulative Receipts	\$293,139	\$431,739	\$570,339	\$708,939	\$847,539	\$986,139	\$1,124,739	\$1,263,339	\$1,401,939	\$1,540,539
Year	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043
Projected Replacements	(\$494,080)	(\$278,084)	(\$372,054)	(\$11,350)	(\$16,439)	(\$123,836)	(\$16,032)	(\$27,550)	(\$45,708)	(\$92,504)
Annual Deposit	\$138,600	\$138,600	\$138,600	\$138,600	\$138,600	\$138,600	\$138,600	\$138,600	\$138,600	\$138,600
End of Year Balance	\$510,616	\$371,132	\$137,678	\$264,928	\$387,089	\$401,853	\$524,421	\$635,471	\$728,363	\$774,459
Cumulative Expenditures	(\$1,168,523)	(\$1,446,607)	(\$1,818,661)	(\$1,830,011)	(\$1,846,450)	(\$1,970,286)	(\$1,986,318)	(\$2,013,868)	(\$2,059,576)	(\$2,152,080)
Cumulative Receipts	\$1,679,139	\$1,817,739	\$1,956,339	\$2,094,939	\$2,233,539	\$2,372,139	\$2,510,739	\$2,649,339	\$2,787,939	\$2,926,539
Year	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053
Projected Replacements	(\$60,306)	(\$57,272)	(\$49,750)	(\$249,780)	(\$95,969)	(\$130,458)	(\$182,882)	(\$67,972)	(\$86,108)	(\$68,689)
Annual Deposit	\$138,600	\$138,600	\$138,600	\$138,600	\$138,600	\$138,600	\$138,600	\$138,600	\$138,600	\$138,600
End of Year Balance	\$852,754	\$934,082	\$1,022,932	\$911,752	\$954,383	\$962,525	\$918,243	\$988,871	\$1,041,363	\$1,111,274
Cumulative Expenditures	(\$2,212,386)	(\$2,269,658)	(\$2,319,408)	(\$2,569,188)	(\$2,665,156)	(\$2,795,614)	(\$2,978,496)	(\$3,046,468)	(\$3,132,576)	(\$3,201,265)
Cumulative Receipts	\$3,065,139	\$3,203,739	\$3,342,339	\$3,480,939	\$3,619,539	\$3,758,139	\$3,896,739	\$4,035,339	\$4,173,939	\$4,312,539
Year	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063
Projected Replacements	(\$115,518)	(\$81,526)	(\$91,015)	(\$69,162)	(\$59,691)	(\$471,880)	(\$302,434)	(\$357,604)	(\$42,208)	(\$104,026)
Annual Deposit	\$138,600	\$138,600	\$138,600	\$138,600	\$138,600	\$138,600	\$138,600	\$138,600	\$138,600	\$138,600
End of Year Balance	\$1,134,356	\$1,191,430	\$1,239,015	\$1,308,452	\$1,387,361	\$1,054,082	\$890,248	\$671,244	\$767,636	\$802,210
Cumulative Expenditures	(\$3,316,783)	(\$3,398,309)	(\$3,489,324)	(\$3,558,487)	(\$3,618,178)	(\$4,090,058)	(\$4,392,492)	(\$4,750,096)	(\$4,792,304)	(\$4,896,330)
Cumulative Receipts	\$4,451,139	\$4,589,739	\$4,728,339	\$4,866,939	\$5,005,539	\$5,144,139	\$5,282,739	\$5,421,339	\$5,559,939	\$5,698,539

EVALUATION OF CURRENT FUNDING

The evaluation of Current Funding (Starting Balance of \$154,539 & annual funding of \$138,600) 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 94 Projected Replacements identified in the Replacement Reserve Inventory and that the Association will continue Annual Funding of \$138,600 throughout the 40-year Study Period.

Annual Funding of \$138,600 is approximately 101 percent of the \$137,240 recommended Annual Funding calculated by the Cash Flow Method for 2024, the Study Year.

See the Executive Summary for the Current Funding Statement.

CASH FLOW METHOD FUNDING

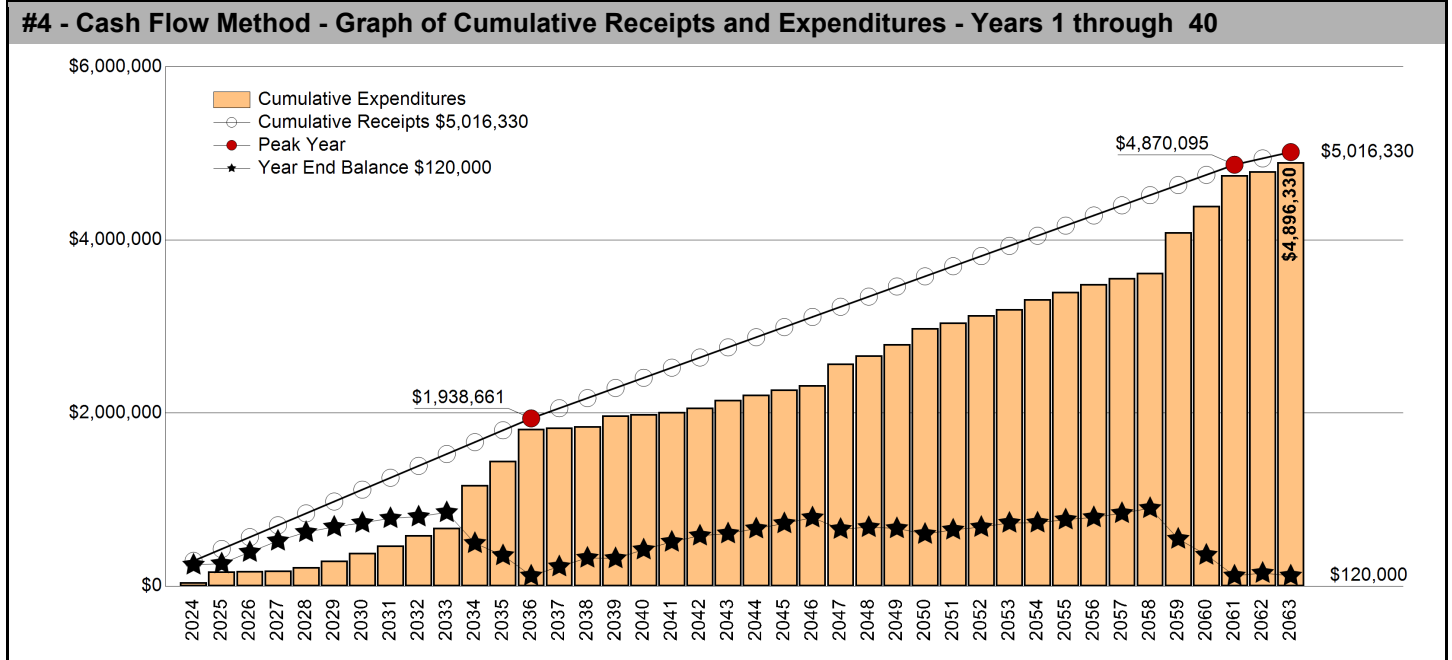
\$137,240

RECOMMENDED REPLACEMENT RESERVE FUNDING FOR 2024

\$90.77 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 2036 with Replacement Reserves on Deposit dropping to the Minimum Balance after the completion of \$1,818,661 of replacements from 2024 to 2036. Recommended funding is projected to decline from \$137,240 in 2036 to \$117,257 in 2037. Peak Years are identified in Chart 4 and Table 5.
- Threshold (Minimum Balance).** The calculations assume a Minimum Balance of \$120,000 will always be held in reserve, which is calculated by rounding the 12-month 40-year average annual expenditure of \$122,408 as shown on Graph #2.
- Cash Flow Method Study Period.** The Cash Flow Method calculates funding for \$4,896,330 of expenditures over the 40-year Study Period. It does not include funding for any projects beyond 2063 and in 2063, the end of year balance will always be the Minimum Balance.



#5 - Cash Flow Method - Table of Receipts & Expenditures - Years 1 through 40											
Year	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	
Starting Balance	\$154,539										
Projected Replacements	(\$45,456)	(\$123,382)	(\$3,850)	(\$7,588)	(\$37,219)	(\$75,936)	(\$90,762)	(\$83,876)	(\$119,023)	(\$87,351)	
Annual Deposit	\$137,240	\$137,240	\$137,240	\$137,240	\$137,240	\$137,240	\$137,240	\$137,240	\$137,240	\$137,240	
End of Year Balance	\$246,323	\$260,182	\$393,572	\$523,224	\$623,245	\$684,550	\$731,028	\$784,392	\$802,609	\$852,498	
Cumulative Expenditures	(\$45,456)	(\$168,838)	(\$172,688)	(\$180,276)	(\$217,495)	(\$293,430)	(\$384,193)	(\$468,069)	(\$587,092)	(\$674,443)	
Cumulative Receipts	\$291,779	\$429,019	\$566,260	\$703,500	\$840,740	\$977,980	\$1,115,220	\$1,252,460	\$1,389,701	\$1,526,941	
Year	2034	2035	1st Peak - 2036	2037	2038	2039	2040	2041	2042	2043	
Projected Replacements	(\$494,080)	(\$278,084)	(\$372,054)	(\$11,350)	(\$16,439)	(\$123,836)	(\$16,032)	(\$27,550)	(\$45,708)	(\$92,504)	
Annual Deposit	\$137,240	\$137,240	\$137,240	\$117,257	\$117,257	\$117,257	\$117,257	\$117,257	\$117,257	\$117,257	
End of Year Balance	\$495,658	\$354,814	\$120,000	\$225,907	\$326,726	\$320,148	\$421,373	\$511,080	\$582,630	\$607,383	
Cumulative Expenditures	(\$1,168,523)	(\$1,446,607)	(\$1,818,661)	(\$1,830,011)	(\$1,846,450)	(\$1,970,286)	(\$1,986,318)	(\$2,013,868)	(\$2,059,576)	(\$2,152,080)	
Cumulative Receipts	\$1,664,181	\$1,801,421	\$1,938,661	\$2,055,919	\$2,173,176	\$2,290,433	\$2,407,691	\$2,524,948	\$2,642,205	\$2,759,463	
Year	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	
Projected Replacements	(\$60,306)	(\$57,272)	(\$49,750)	(\$249,780)	(\$95,969)	(\$130,458)	(\$182,882)	(\$67,972)	(\$86,108)	(\$68,689)	
Annual Deposit	\$117,257	\$117,257	\$117,257	\$117,257	\$117,257	\$117,257	\$117,257	\$117,257	\$117,257	\$117,257	
End of Year Balance	\$664,335	\$724,320	\$791,827	\$659,305	\$680,593	\$667,393	\$601,768	\$651,054	\$682,203	\$730,772	
Cumulative Expenditures	(\$2,212,386)	(\$2,269,658)	(\$2,319,408)	(\$2,569,188)	(\$2,665,156)	(\$2,795,614)	(\$2,978,496)	(\$3,046,468)	(\$3,132,576)	(\$3,201,265)	
Cumulative Receipts	\$2,876,720	\$2,993,978	\$3,111,235	\$3,228,492	\$3,345,750	\$3,463,007	\$3,580,264	\$3,697,522	\$3,814,779	\$3,932,037	
Year	2054	2055	2056	2057	2058	2059	2060	2nd Peak - 2061	2062	3rd Peak - 2063	
Projected Replacements	(\$115,518)	(\$81,526)	(\$91,015)	(\$69,162)	(\$59,691)	(\$471,880)	(\$302,434)	(\$357,604)	(\$42,208)	(\$104,026)	
Annual Deposit	\$117,257	\$117,257	\$117,257	\$117,257	\$117,257	\$117,257	\$117,257	\$117,257	\$73,117	\$73,117	
End of Year Balance	\$732,511	\$768,242	\$794,484	\$842,579	\$900,146	\$545,523	\$360,347	\$120,000	\$150,909	\$120,000	
Cumulative Expenditures	(\$3,316,783)	(\$3,398,309)	(\$3,489,324)	(\$3,558,487)	(\$3,618,178)	(\$4,090,058)	(\$4,392,492)	(\$4,750,096)	(\$4,792,304)	(\$4,896,330)	
Cumulative Receipts	\$4,049,294	\$4,166,551	\$4,283,809	\$4,401,066	\$4,518,323	\$4,635,581	\$4,752,838	\$4,870,095	\$4,943,212	\$5,016,330	

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.

\$137,240 2024 - CASH FLOW METHOD RECOMMENDED FUNDING

The 2024 Study Year calculations have been made using current replacement costs (see Page B.2), modified by the Analyst for any project specific conditions.

\$145,475 2025 - INFLATION ADJUSTED FUNDING

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

- Replacement Reserves on Deposit totaling \$246,323 on January 1, 2025.
- All 2024 Projected Replacements listed on Page C.2 accomplished at a cost to Replacement Reserves less than \$45,456.
- Construction Cost Inflation of 6.00 percent in 2024.

The \$145,475 inflation adjusted funding in 2025 is a 6.00 percent increase over the non-inflation adjusted funding of \$137,240.

\$154,203 2026 - INFLATION ADJUSTED FUNDING

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

- Replacement Reserves on Deposit totaling \$175,835 on January 1, 2026.
- All 2025 Projected Replacements listed on Page C.2 accomplished at a cost to Replacement Reserves less than \$123,382.
- Construction Cost Inflation of 6.00 percent in 2025.

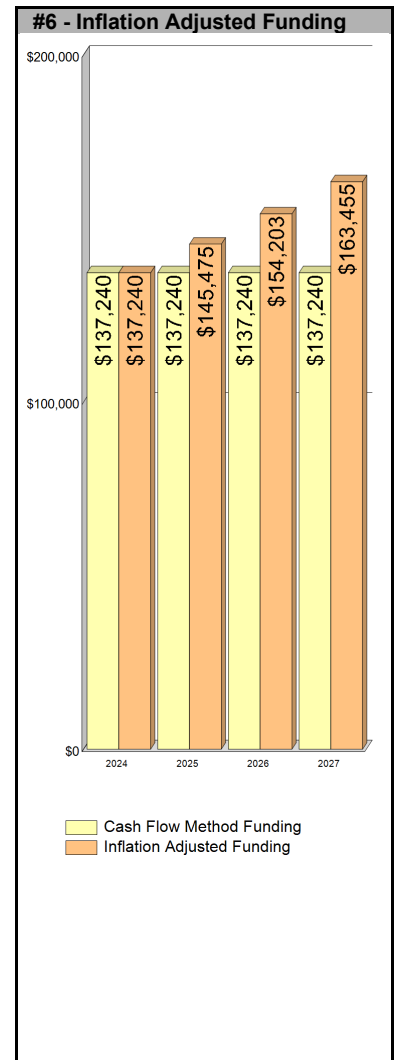
The \$154,203 inflation adjusted funding in 2026 is a 12.36 percent increase over the non-inflation adjusted funding of \$137,240.

\$163,455 2027 - INFLATION ADJUSTED FUNDING

A new analysis calculates the 2027 funding based on three assumptions:

- Replacement Reserves on Deposit totaling \$305,908 on January 1, 2027.
- All 2026 Projected Replacements listed on Page C.2 accomplished at a cost to Replacement Reserves less than \$4,230.
- Construction Cost Inflation of 6.00 percent in 2026.

The \$163,455 inflation adjusted funding in 2027 is a 19.10 percent increase over the non-inflation adjusted funding of \$137,240.



Year Four and Beyond

The inflation-adjusted funding calculations outlined above are not intended to be a substitute for periodic evaluation of common elements by an experienced Reserve Analyst. Industry Standards, lender requirements, and many state and local statutes require a Replacement Reserve Study to be professionally updated every 3 to 5 years.

Inflation Adjustment

Prior to approving a budget based upon the 2025, 2026 and 2027 inflation-adjusted funding calculations above, the 6.00 percent base rate of inflation used in our calculations should be compared to rates published by the Bureau of Labor Statistics. If there is a significant discrepancy (over 1 percentage point), contact Miller+Dodson Associates prior to using the Inflation Adjusted Funding.

Interest on Reserves

The recommended funding calculations do not account for interest earned on Replacement Reserves. In 2024, based on a 1.00 percent interest rate, we estimate the Association may earn \$2,004 on an average balance of \$200,431, \$2,111 on an average balance of \$211,079 in 2025, and \$2,409 on \$240,872 in 2026. The Association may elect to attribute 100 percent of the earned interest to Reserves, resulting in a reduction in the 2024 funding from \$137,240 to \$135,236 (a 1.46 percent reduction), \$145,475 to \$143,364 in 2025 (a 1.45 percent reduction), and \$154,203 to \$151,794 in 2026 (a 1.56 percent reduction).

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SECTION B - REPLACEMENT RESERVE INVENTORY

- **PROJECTED REPLACEMENTS.** Bethany Proper Townhomes - Replacement Reserve Inventory identifies 94 items which are Projected Replacements, and the periodic replacements of these items are scheduled for funding from Replacement Reserves. The Projected Replacements have an estimated one-time replacement cost of \$2,614,022. Cumulative Replacements totaling \$4,896,330 are scheduled in the Replacement Reserve Inventory over the 40-year Study Period. Cumulative Replacements include those components that are replaced more than once during the period of the study.

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

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

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

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

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

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

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

- **CATEGORIES.** The 94 items included in the Bethany Proper Townhomes Replacement Reserve Inventory are divided into 4 major categories. Each category is printed on a separate page, beginning on page B.3.
- **LEVEL OF SERVICE.** This Replacement Reserve Inventory has been developed in compliance with the standards established for a Level 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 2018. 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 94 Projected Replacements listed in the Replacement Reserve Inventory includes the following data:
 - Item Number.** The Item Number is assigned sequentially and is intended for identification purposes only.
 - Item Description.** We have identified each item included in the Inventory. Additional information may be included in the Comments section at the bottom of each page of the Inventory.
 - Units.** We have used standard abbreviations to identify the number of units including SF-square feet, LF-lineal feet, SY-square yard, LS-lump sum, EA-each, and PR-pair. Non-standard abbreviations are noted in the Comments section at the bottom of the page.
 - Number of Units.** The methods used to develop the quantities are discussed in "Level of Service" above.
 - Unit Replacement Cost.** We use four sources to develop the unit cost data shown in the Inventory; actual replacement cost data provided by the client, information provided by local contractors and suppliers, industry standard estimating manuals, and a cost database we have developed based upon our detailed interviews with contractors and service providers who are specialists in their respective lines of work.
 - Normal Economic Life (Years).** The number of years that a new and properly installed item should be expected to remain in service.
 - Remaining Economic Life (Years).** The estimated number of years before an item will need to be replaced. In "normal" conditions, this could be calculated by subtracting the age of the item from the Normal Economic Life of the item, but only rarely do physical assets age "normally". Some items may have longer or shorter lives depending on many factors such as environment, initial quality of the item, maintenance, etc.
 - Total Replacement Cost.** This is calculated by multiplying the Unit Replacement Cost by the Number of Units.
- **PARTIAL FUNDING.** Items may have been included in the Replacement Reserve Inventory at less than 100 percent of their full quantity and/or replacement cost. This is done on items that will never be replaced in their entirety, but which may require periodic replacements over an extended period of time. The assumptions that provide the basis for any partial funding are noted in the Comments section.
- **REMAINING ECONOMIC LIFE GREATER THAN 40 YEARS.** The calculations do not include funding for initial replacements beyond 40 years. These replacements are included in this Study for tracking and evaluation. They should be included for funding in future Studies when they enter the 40-year window.
- **ACCURACY OF THE ANALYSIS.** The accuracy of the Replacement Reserve Analysis is dependent upon expenditures from Replacement Reserves being made ONLY for the 94 Projected Replacements specifically listed in the Replacement Reserve Inventory. The inclusion/exclusion of items from the Replacement Reserve Inventory is discussed on Page B.1.

SITE ITEMS PROJECTED REPLACEMENTS					NEL- Normal Economic Life (yrs) REL- Remaining Economic Life (yrs)		
ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NEL	REL	REPLACEMENT COST (\$)
1	Entrance monument	ea	2	\$4,500.00	40	28	\$9,000
2	Landscape light	ea	4	\$550.00	15	5	\$2,200
3	Asphalt - overlay - Azalea Ct	sf	13,664	\$2.45	24	8	\$33,477
4	Asphalt - overlay - Bayberry Ct	sf	16,860	\$2.45	24	7	\$41,307
5	Asphalt - overlay - Cedar Ct	sf	15,636	\$2.45	24	6	\$38,308
6	Asphalt - overlay - Daylilly Ct	sf	15,941	\$2.45	24	8	\$39,055
7	Asphalt - overlay - Evergreen Ct	sf	16,416	\$2.45	24	7	\$40,219
8	Asphalt - overlay - Forsythia Ct	sf	24,241	\$2.45	24	9	\$59,390
9	Asphalt - overlay - Geranium Ct	sf	13,920	\$2.45	24	6	\$34,104
10	Asphalt - overlay - Holly Ct	sf	17,654	\$2.45	24	10	\$43,252
11	Asphalt - overlay - standalone units	sf	6,891	\$2.45	24	8	\$16,883
12	Asphalt pavement, seal coat	sf	141,223	\$0.25	5	none	\$35,306
13	Concrete curb and gutter, barrier (6% allowance)	ft	52	\$42.00	6	9	\$2,184
14	Concrete flatwork (6% allowance)	sf	292	\$14.00	6	3	\$4,088
15	Dumpster wood stairs	ea	4	\$975.00	15	5	\$3,900
16	Masonry dumpster enclosure	ea	4	\$11,250.00	30	138	\$45,000
17	Domestic water main (allowance)	ls	1	\$8,000.00	30	17	\$8,000
18	Sanitary main (allowance)	ls	1	\$4,750.00	30	17	\$4,750
19	Stormwater management (allowance)	ls	1	\$1,100.00	20	7	\$1,100
20	Site light, decorative single head, LED	ea	4	\$850.00	20	17	\$3,400
21	Site light, 12' aluminum pole	ea	4	\$2,450.00	30	17	\$9,800
22	Flag poles	ea	1	\$1,750.00	30	13	\$1,750
Replacement Costs - Page Subtotal							\$476,474

COMMENTS

- Item #19: Stormwater management (allowance) - Stormwater Management System consists of 14 inlet structures and 575 linear feet of corrugated piping.

RECREATION ITEMS - SWIMMING POOL 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 (\$)
23	Swimming pool, structure	sf	1,500	\$120.00	60	23	\$180,000
24	Swimming pool, whitecoat	sf	2,188	\$8.00	10	8	\$17,504
25	Swimming pool, waterline tile (6x6)	ft	172	\$12.00	10	8	\$2,064
26	Swimming pool coping, precast concrete	ft	172	\$75.00	20	18	\$12,900
27	Wading pool, structure	sf	180	\$120.00	60	23	\$21,600
28	Wading pool, whitecoat	sf	240	\$8.00	10	8	\$1,920
29	Wading pool, waterline tile (6x6)	ft	60	\$12.00	10	8	\$720
30	Wading pool coping, precast concrete	ft	60	\$75.00	20	18	\$4,500
31	Pool deck, concrete (25% allowance)	sf	1,813	\$16.00	10	5	\$29,008
32	Pool cover, safety mesh	sf	1,500	\$4.00	12	none	\$6,000
33	Pool pump (3/4 hp)	ea	2	\$1,000.00	10	8	\$2,000
34	Pool filter, cartridge (150 sf)	ea	3	\$3,000.00	15	12	\$9,000
35	Chemical feed pump	ea	1	\$600.00	10	8	\$600
36	Chemical tank	ea	1	\$600.00	15	12	\$600
37	Pool fence, 4' vinyl coated chain link	ft	253	\$24.00	45	25	\$6,072
38	Lifeguard chair, mounted	ea	1	\$4,800.00	20	8	\$4,800
39	Pool furniture	ea	1	\$3,500.00	3	3	\$3,500
Replacement Costs - Page Subtotal							\$302,788

COMMENTS

RECREATION ITEMS - COURTS					NEL- Normal Economic Life (yrs)		
PROJECTED REPLACEMENTS					REL- Remaining Economic Life (yrs)		
ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NEL	REL	REPLACEMENT COST (\$)
40	Tennis court, asphalt overlay	sf	12,494	\$5.80	20	19	\$72,465
41	Tennis court, color coat (3 coats)	sf	12,949	\$1.20	5	4	\$15,539
42	Tennis court, post and footings	pr	2	\$1,800.00	20	19	\$3,600
43	Tennis court, net	ea	2	\$450.00	5	4	\$900
44	Fence, tennis court, 10' vinyl coated	ft	450	\$42.00	45	20	\$18,900
Replacement Costs - Page Subtotal							\$111,404

COMMENTS

COMMUNITY BUILDING ITEMS - POOL HOUSE (PH)					NEL- Normal Economic Life (yrs)		
PROJECTED REPLACEMENTS					REL- Remaining Economic Life (yrs)		
ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NEL	REL	REPLACEMENT COST (\$)
45	PH - Roofing, asphalt shingles	sf	1,432	\$7.00	30	10	\$10,024
46	PH - Skylight	ea	4	\$525.00	30	6	\$2,100
47	PH - Window, interior	ea	1	\$680.00	40	23	\$680
48	PH - Window, exterior	ea	1	\$680.00	20	4	\$680
49	PH - Interior door and frame, metal, flush	ea	6	\$1,600.00	30	13	\$9,600
50	PH - Exterior door, steel, flush	ea	6	\$1,600.00	20	4	\$9,600
51	PH - Garage door	ea	1	\$1,750.00	15	9	\$1,750
52	PH - Interior renovation	ls	1	\$12,000.00	10	6	\$12,000
53	PH - AC split system	ls	1	\$10,500.00	20	4	\$10,500
54	PH - Exhaust fan, bathroom	ea	2	\$220.00	20	5	\$440
55	PH - Water heater, commercial electric (80 gal.)	ea	1	\$2,250.00	15	none	\$2,250
56	PH - Interior lighting, fluorescent	ea	10	\$125.00	30	7	\$1,250
57	PH - Interior lighting, fluorescent, garage	ea	8	\$125.00	30	none	\$1,000
58	PH - Interior lighting, recessed	ea	6	\$125.00	30	6	\$750
Replacement Costs - Page Subtotal							\$62,624

COMMENTS

COMMUNITY BUILDING ITEMS - POOL PUMP HOUSE (PPH)					NEL- Normal Economic Life (yrs)		
PROJECTED REPLACEMENTS					REL- Remaining Economic Life (yrs)		
ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NEL	REL	REPLACEMENT COST (\$)
59	PPH - Roofing, asphalt shingles	sf	576	\$7.00	30	10	\$4,032
60	PPH - Soffit & trim, pine	sf	288	\$14.00	40	16	\$4,032
61	PPH - Door, steel, flush	ea	1	\$1,600.00	15	2	\$1,600
62	PPH - Deck, structure PTL	sf	288	\$25.00	45	25	\$7,200
63	PPH - Deck, decking PTL	sf	288	\$14.00	20	5	\$4,032
64	PHH - Exterior lighting, fluorescent	ea	6	\$150.00	25	none	\$900
65	PHH - Exterior lighting, recessed	ea	6	\$175.00	25	5	\$1,050
66	PHH - Drinking fountain	ea	3	\$750.00	20	2	\$2,250
Replacement Costs - Page Subtotal							\$25,096

COMMENTS

TOWNHOUSE ITEMS - TOWNHOUSES					NEL- Normal Economic Life (yrs)		
PROJECTED REPLACEMENTS					REL- Remaining Economic Life (yrs)		
ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NEL	REL	REPLACEMENT COST (\$)
67	Roofing, asphalt shingles - Azalea Ct	sf	17,626	\$7.00	25	10	\$123,382
68	Roofing, asphalt shingles - Bayberry Ct	sf	17,626	\$7.00	25	10	\$123,382
69	Roofing, asphalt shingles - Ceder Ct	sf	17,626	\$7.00	25	10	\$123,382
70	Roofing, asphalt shingles - Daylilly Ct	sf	17,626	\$7.00	25	11	\$123,382
71	Roofing, asphalt shingles - Evergreen Ct	sf	17,626	\$7.00	25	11	\$123,382
72	Roofing, asphalt shingles - Forsythia Ct	sf	17,626	\$7.00	25	1	\$123,382
73	Roofing, asphalt shingles - Geranium Ct	sf	17,626	\$7.00	25	12	\$123,382
74	Roofing, asphalt shingles - Holly Ct	sf	17,626	\$7.00	25	12	\$123,382
75	Roofing, asphalt shingles - Single units	sf	11,210	\$7.00	25	12	\$78,470
76	Gutter and downspouts - Azalea Ct	ft	870	\$12.00	25	10	\$10,440
77	Gutter and downspouts - Bayberry Ct	ft	870	\$12.00	25	10	\$10,440
78	Gutter and downspouts - Ceder Ct	ft	870	\$12.00	25	10	\$10,440
79	Gutter and downspouts - Daylilly Ct	ft	870	\$12.00	25	11	\$10,440
80	Gutter and downspouts - Evergreen Ct	ft	870	\$12.00	25	11	\$10,440
81	Gutter and downspouts - Forsythia Ct	ft	870	\$12.00	25	11	\$10,440
82	Gutter and downspouts - Geranium Ct	ft	870	\$12.00	25	12	\$10,440
83	Gutter and downspouts - Holly Ct	ft	870	\$12.00	25	12	\$10,440
84	Gutter and downspouts - Single units	ft	570	\$12.00	25	12	\$6,840
85	Crawlspace membrane 20 mil	ea	10	\$4,750.00	25	15	\$47,500
Replacement Costs - Page Subtotal							\$1,203,386

COMMENTS

TOWNHOUSE ITEMS - CHIMNEYS					NEL- Normal Economic Life (yrs)		
PROJECTED REPLACEMENTS					REL- Remaining Economic Life (yrs)		
ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NEL	REL	REPLACEMENT COST (\$)
86	Chimneys (10 per year)	ea	10	\$4,750.00	30	21	\$47,500
87	Chimneys (10 per year)	ea	10	\$4,750.00	30	22	\$47,500
88	Chimneys (10 per year)	ea	10	\$4,750.00	30	23	\$47,500
89	Chimneys (10 per year)	ea	10	\$4,750.00	30	24	\$47,500
90	Chimneys (10 per year)	ea	10	\$4,750.00	30	25	\$47,500
91	Chimneys (10 per year)	ea	10	\$4,750.00	30	26	\$47,500
92	Chimneys (10 per year)	ea	10	\$4,750.00	30	27	\$47,500
93	Chimneys (10 per year)	ea	10	\$4,750.00	30	28	\$47,500
94	Chimneys (10 per year)	ea	11	\$4,750.00	30	29	\$52,250
Replacement Costs - Page Subtotal							\$432,250

COMMENTS

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SECTION C - CALENDAR OF PROJECTED ANNUAL REPLACEMENTS

GENERAL STATEMENT. The 94 Projected Replacements in the Bethany Proper Townhomes Replacement Reserve Inventory whose replacement is scheduled to be funded from Replacement Reserves are broken down on a year-by-year basis, beginning on Page C.2.

REPLACEMENT RESERVE ANALYSIS AND INVENTORY POLICIES, PROCEDURES, AND ADMINISTRATION

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

PROJECTED REPLACEMENTS

Item	2024 - Study Year	\$	Item	2025 - YEAR 1	\$
12	Asphalt pavement, seal coat	\$35,306	72	Roofing, asphalt shingles - Forsythia Ct	\$123,382
32	Pool cover, safety mesh	\$6,000			
55	PH - Water heater, commercial electric (80 gal.)	\$2,250			
57	PH - Interior lighting, fluorescent, garage	\$1,000			
64	PHH - Exterior lighting, fluorescent	\$900			
Total Scheduled Replacements		\$45,456	Total Scheduled Replacements		\$123,382
Item	2026 - YEAR 2	\$	Item	2027 - YEAR 3	\$
61	PPH - Door, steel, flush	\$1,600	14	Concrete flatwork (6% allowance)	\$4,088
66	PHH - Drinking fountain	\$2,250	39	Pool furniture	\$3,500
Total Scheduled Replacements		\$3,850	Total Scheduled Replacements		\$7,588
Item	2028 - YEAR 4	\$	Item	2029 - YEAR 5	\$
41	Tennis court, color coat (3 coats)	\$15,539	2	Landscape light	\$2,200
43	Tennis court, net	\$900	12	Asphalt pavement, seal coat	\$35,306
48	PH - Window, exterior	\$680	15	Dumpster wood stairs	\$3,900
50	PH - Exterior door, steel, flush	\$9,600	31	Pool deck, concrete (25% allowance)	\$29,008
53	PH - AC split system	\$10,500	54	PH - Exhaust fan, bathroom	\$440
Total Scheduled Replacements		\$37,219	63	PPH - Deck, decking PTL	\$4,032
			65	PHH - Exterior lighting, recessed	\$1,050
Total Scheduled Replacements		\$37,219	Total Scheduled Replacements		\$75,936
Item	2030 - YEAR 6	\$	Item	2031 - YEAR 7	\$
5	Asphalt - overlay - Cedar Ct	\$38,308	4	Asphalt - overlay - Bayberry Ct	\$41,307
9	Asphalt - overlay - Geranium Ct	\$34,104	7	Asphalt - overlay - Evergreen Ct	\$40,219
39	Pool furniture	\$3,500	19	Stormwater management (allowance)	\$1,100
46	PH - Skylight	\$2,100	56	PH - Interior lighting, fluorescent	\$1,250
52	PH - Interior renovation	\$12,000			
58	PH - Interior lighting, recessed	\$750			
Total Scheduled Replacements		\$90,762	Total Scheduled Replacements		\$83,876

PROJECTED REPLACEMENTS

2032 - YEAR 8			2033 - YEAR 9		
Item		\$	Item		\$
3	Asphalt - overlay - Azalea Ct	\$33,477	8	Asphalt - overlay - Forsythia Ct	\$59,390
6	Asphalt - overlay - Daylilly Ct	\$39,055	13	Concrete curb and gutter, barrier (6% allowance)	\$2,184
11	Asphalt - overlay - standalone units	\$16,883	14	Concrete flatwork (6% allowance)	\$4,088
24	Swimming pool, whitecoat	\$17,504	39	Pool furniture	\$3,500
25	Swimming pool, waterline tile (6x6)	\$2,064	41	Tennis court, color coat (3 coats)	\$15,539
28	Wading pool, whitecoat	\$1,920	43	Tennis court, net	\$900
29	Wading pool, waterline tile (6x6)	\$720	51	PH - Garage door	\$1,750
33	Pool pump (3/4 hp)	\$2,000			
35	Chemical feed pump	\$600			
38	Lifeguard chair, mounted	\$4,800			
Total Scheduled Replacements		\$119,023	Total Scheduled Replacements		\$87,351
2034 - YEAR 10			2035 - YEAR 11		
Item		\$	Item		\$
10	Asphalt - overlay - Holly Ct	\$43,252	70	Roofing, asphalt shingles - Daylilly Ct	\$123,382
12	Asphalt pavement, seal coat	\$35,306	71	Roofing, asphalt shingles - Evergreen Ct	\$123,382
45	PH - Roofing, asphalt shingles	\$10,024	79	Gutter and downspouts - Daylilly Ct	\$10,440
59	PPH - Roofing, asphalt shingles	\$4,032	80	Gutter and downspouts - Evergreen Ct	\$10,440
67	Roofing, asphalt shingles - Azalea Ct	\$123,382	81	Gutter and downspouts - Forsythia Ct	\$10,440
68	Roofing, asphalt shingles - Bayberry Ct	\$123,382			
69	Roofing, asphalt shingles - Ceder Ct	\$123,382			
76	Gutter and downspouts - Azalea Ct	\$10,440			
77	Gutter and downspouts - Bayberry Ct	\$10,440			
78	Gutter and downspouts - Ceder Ct	\$10,440			
Total Scheduled Replacements		\$494,080	Total Scheduled Replacements		\$278,084
2036 - YEAR 12			2037 - YEAR 13		
Item		\$	Item		\$
32	Pool cover, safety mesh	\$6,000	22	Flag poles	\$1,750
34	Pool filter, cartridge (150 sf)	\$9,000	49	PH - Interior door and frame, metal, flush	\$9,600
36	Chemical tank	\$600			
39	Pool furniture	\$3,500			
73	Roofing, asphalt shingles - Geranium Ct	\$123,382			
74	Roofing, asphalt shingles - Holly Ct	\$123,382			
75	Roofing, asphalt shingles - Single units	\$78,470			
82	Gutter and downspouts - Geranium Ct	\$10,440			
83	Gutter and downspouts - Holly Ct	\$10,440			
84	Gutter and downspouts - Single units	\$6,840			
Total Scheduled Replacements		\$372,054	Total Scheduled Replacements		\$11,350
2038 - YEAR 14			2039 - YEAR 15		
Item		\$	Item		\$
41	Tennis court, color coat (3 coats)	\$15,539	12	Asphalt pavement, seal coat	\$35,306
43	Tennis court, net	\$900	13	Concrete curb and gutter, barrier (6% allowance)	\$2,184
			14	Concrete flatwork (6% allowance)	\$4,088
			31	Pool deck, concrete (25% allowance)	\$29,008
			39	Pool furniture	\$3,500
			55	PH - Water heater, commercial electric (80 gal.)	\$2,250
			85	Crawlspace membrane 20 mil	\$47,500
Total Scheduled Replacements		\$16,439	Total Scheduled Replacements		\$123,836

PROJECTED REPLACEMENTS

Item	2040 - YEAR 16	\$	Item	2041 - YEAR 17	\$
52	PH - Interior renovation	\$12,000	17	Domestic water main (allowance)	\$8,000
60	PPH - Soffit & trim, pine	\$4,032	18	Sanitary main (allowance)	\$4,750
			20	Site light, decorative single head, LED	\$3,400
			21	Site light, 12' aluminum pole	\$9,800
			61	PPH - Door, steel, flush	\$1,600
Total Scheduled Replacements		\$16,032	Total Scheduled Replacements		\$27,550
Item	2042 - YEAR 18	\$	Item	2043 - YEAR 19	\$
24	Swimming pool, whitecoat	\$17,504	40	Tennis court, asphalt overlay	\$72,465
25	Swimming pool, waterline tile (6x6)	\$2,064	41	Tennis court, color coat (3 coats)	\$15,539
26	Swimming pool coping, precast concrete	\$12,900	42	Tennis court, post and footings	\$3,600
28	Wading pool, whitecoat	\$1,920	43	Tennis court, net	\$900
29	Wading pool, waterline tile (6x6)	\$720			
30	Wading pool coping, precast concrete	\$4,500			
33	Pool pump (3/4 hp)	\$2,000			
35	Chemical feed pump	\$600			
39	Pool furniture	\$3,500			
Total Scheduled Replacements		\$45,708	Total Scheduled Replacements		\$92,504
Item	2044 - YEAR 20	\$	Item	2045 - YEAR 21	\$
2	Landscape light	\$2,200	13	Concrete curb and gutter, barrier (6% allowance)	\$2,184
12	Asphalt pavement, seal coat	\$35,306	14	Concrete flatwork (6% allowance)	\$4,088
15	Dumpster wood stairs	\$3,900	39	Pool furniture	\$3,500
44	Fence, tennis court, 10' vinyl coated	\$18,900	86	Chimneys (10 per year)	\$47,500
Total Scheduled Replacements		\$60,306	Total Scheduled Replacements		\$57,272
Item	2046 - YEAR 22	\$	Item	2047 - YEAR 23	\$
66	PHH - Drinking fountain	\$2,250	23	Swimming pool, structure	\$180,000
87	Chimneys (10 per year)	\$47,500	27	Wading pool, structure	\$21,600
			47	PH - Window, interior	\$680
			88	Chimneys (10 per year)	\$47,500
Total Scheduled Replacements		\$49,750	Total Scheduled Replacements		\$249,780

PROJECTED REPLACEMENTS

2048 - YEAR 24			2049 - YEAR 25		
Item		\$	Item		\$
32	Pool cover, safety mesh	\$6,000	12	Asphalt pavement, seal coat	\$35,306
39	Pool furniture	\$3,500	31	Pool deck, concrete (25% allowance)	\$29,008
41	Tennis court, color coat (3 coats)	\$15,539	37	Pool fence, 4' vinyl coated chain link	\$6,072
43	Tennis court, net	\$900	54	PH - Exhaust fan, bathroom	\$440
48	PH - Window, exterior	\$680	62	PPH - Deck, structure PTL	\$7,200
50	PH - Exterior door, steel, flush	\$9,600	63	PPH - Deck, decking PTL	\$4,032
51	PH - Garage door	\$1,750	64	PHH - Exterior lighting, fluorescent	\$900
53	PH - AC split system	\$10,500	90	Chimneys (10 per year)	\$47,500
89	Chimneys (10 per year)	\$47,500			
Total Scheduled Replacements		\$95,969	Total Scheduled Replacements		\$130,458

2050 - YEAR 26			2051 - YEAR 27		
Item		\$	Item		\$
52	PH - Interior renovation	\$12,000	13	Concrete curb and gutter, barrier (6% allowance)	\$2,184
72	Roofing, asphalt shingles - Forsythia Ct	\$123,382	14	Concrete flatwork (6% allowance)	\$4,088
91	Chimneys (10 per year)	\$47,500	19	Stormwater management (allowance)	\$1,100
			34	Pool filter, cartridge (150 sf)	\$9,000
			36	Chemical tank	\$600
			39	Pool furniture	\$3,500
			92	Chimneys (10 per year)	\$47,500
Total Scheduled Replacements		\$182,882	Total Scheduled Replacements		\$67,972

2052 - YEAR 28			2053 - YEAR 29		
Item		\$	Item		\$
1	Entrance monument	\$9,000	41	Tennis court, color coat (3 coats)	\$15,539
24	Swimming pool, whitecoat	\$17,504	43	Tennis court, net	\$900
25	Swimming pool, waterline tile (6x6)	\$2,064	94	Chimneys (10 per year)	\$52,250
28	Wading pool, whitecoat	\$1,920			
29	Wading pool, waterline tile (6x6)	\$720			
33	Pool pump (3/4 hp)	\$2,000			
35	Chemical feed pump	\$600			
38	Lifeguard chair, mounted	\$4,800			
93	Chimneys (10 per year)	\$47,500			
Total Scheduled Replacements		\$86,108	Total Scheduled Replacements		\$68,689

2054 - YEAR 30			2055 - YEAR 31		
Item		\$	Item		\$
5	Asphalt - overlay - Cedar Ct	\$38,308	4	Asphalt - overlay - Bayberry Ct	\$41,307
9	Asphalt - overlay - Geranium Ct	\$34,104	7	Asphalt - overlay - Evergreen Ct	\$40,219
12	Asphalt pavement, seal coat	\$35,306			
39	Pool furniture	\$3,500			
55	PH - Water heater, commercial electric (80 gal.)	\$2,250			
57	PH - Interior lighting, fluorescent, garage	\$1,000			
65	PHH - Exterior lighting, recessed	\$1,050			
Total Scheduled Replacements		\$115,518	Total Scheduled Replacements		\$81,526

PROJECTED REPLACEMENTS

Item	2056 - YEAR 32	\$	Item	2057 - YEAR 33	\$
3	Asphalt - overlay - Azalea Ct	\$33,477	8	Asphalt - overlay - Forsythia Ct	\$59,390
6	Asphalt - overlay - Daylilly Ct	\$39,055	13	Concrete curb and gutter, barrier (6% allowance)	\$2,184
11	Asphalt - overlay - standalone units	\$16,883	14	Concrete flatwork (6% allowance)	\$4,088
61	PPH - Door, steel, flush	\$1,600	39	Pool furniture	\$3,500
Total Scheduled Replacements		\$91,015	Total Scheduled Replacements		\$69,162
Item	2058 - YEAR 34	\$	Item	2059 - YEAR 35	\$
10	Asphalt - overlay - Holly Ct	\$43,252	2	Landscape light	\$2,200
41	Tennis court, color coat (3 coats)	\$15,539	12	Asphalt pavement, seal coat	\$35,306
43	Tennis court, net	\$900	15	Dumpster wood stairs	\$3,900
Total Scheduled Replacements		\$59,691	31	Pool deck, concrete (25% allowance)	\$29,008
			67	Roofing, asphalt shingles - Azalea Ct	\$123,382
			68	Roofing, asphalt shingles - Bayberry Ct	\$123,382
			69	Roofing, asphalt shingles - Cedar Ct	\$123,382
			76	Gutter and downspouts - Azalea Ct	\$10,440
			77	Gutter and downspouts - Bayberry Ct	\$10,440
			78	Gutter and downspouts - Cedar Ct	\$10,440
Total Scheduled Replacements		\$59,691	Total Scheduled Replacements		\$471,880
Item	2060 - YEAR 36	\$	Item	2061 - YEAR 37	\$
32	Pool cover, safety mesh	\$6,000	20	Site light, decorative single head, LED	\$3,400
39	Pool furniture	\$3,500	56	PH - Interior lighting, fluorescent	\$1,250
46	PH - Skylight	\$2,100	73	Roofing, asphalt shingles - Geranium Ct	\$123,382
52	PH - Interior renovation	\$12,000	74	Roofing, asphalt shingles - Holly Ct	\$123,382
58	PH - Interior lighting, recessed	\$750	75	Roofing, asphalt shingles - Single units	\$78,470
70	Roofing, asphalt shingles - Daylilly Ct	\$123,382	82	Gutter and downspouts - Geranium Ct	\$10,440
71	Roofing, asphalt shingles - Evergreen Ct	\$123,382	83	Gutter and downspouts - Holly Ct	\$10,440
79	Gutter and downspouts - Daylilly Ct	\$10,440	84	Gutter and downspouts - Single units	\$6,840
80	Gutter and downspouts - Evergreen Ct	\$10,440	Total Scheduled Replacements		\$357,604
81	Gutter and downspouts - Forsythia Ct	\$10,440			
Total Scheduled Replacements		\$302,434			
Item	2062 - YEAR 38	\$	Item	2063 - YEAR 39	\$
24	Swimming pool, whitecoat	\$17,504	13	Concrete curb and gutter, barrier (6% allowance)	\$2,184
25	Swimming pool, waterline tile (6x6)	\$2,064	14	Concrete flatwork (6% allowance)	\$4,088
26	Swimming pool coping, precast concrete	\$12,900	39	Pool furniture	\$3,500
28	Wading pool, whitecoat	\$1,920	40	Tennis court, asphalt overlay	\$72,465
29	Wading pool, waterline tile (6x6)	\$720	41	Tennis court, color coat (3 coats)	\$15,539
30	Wading pool coping, precast concrete	\$4,500	42	Tennis court, post and footings	\$3,600
33	Pool pump (3/4 hp)	\$2,000	43	Tennis court, net	\$900
35	Chemical feed pump	\$600	51	PH - Garage door	\$1,750
Total Scheduled Replacements		\$42,208	Total Scheduled Replacements		\$104,026

SECTION D - CONDITION ASSESSMENT

General Comments. Miller+Dodson Associates conducted a Reserve Study at Bethany Proper Townhomes in April 2023. Bethany Proper Townhomes is in generally good condition for a homeowner's association constructed between 1983 and 1990. A review of the Replacement Reserve Inventory will show that we are anticipating most of the components achieving their normal economic lives.

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

IMPORTANT NOTE: This Condition Assessment is based upon visual and apparent conditions of the common elements of the community which were observed by the Reserve Analyst at the time of the site visit. This Condition Assessment does not constitute, nor is it a substitute for, a professional Structural Evaluation of the buildings, amenities, or systems. Miller Dodson strongly recommends that the Association retain the services of a Structural Engineer to conduct thorough and periodic evaluations of the buildings, balconies, and any other structural components of the buildings and amenities of the Association.

General Condition Statements.

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

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

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

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

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

SITE ITEMS

Asphalt Pavement. The Association is responsible for the courts and parking areas within the community. Other roadways are maintained by the City, County, or other municipality. In general, the Association's asphalt pavements appear to be in fair condition.





The Defects noted include the following:

- **Open Cracks.** There are multiple locations where open cracks allow water to penetrate the asphalt base and the bearing soils beneath. Over time, water will erode the base and accelerate the deterioration of the asphalt pavement. If cracks extend to the base and bearing materials, remove the damaged areas, and replace defective materials. As a part of normal maintenance, clean and fill all other cracks.
- **Alligatoring.** There are multiple locations where the asphalt has developed a pattern of cracking known as alligatoring. The primary cause of alligatoring is an unstable base. Once these cracks extend through the asphalt, they will allow water to penetrate the base, accelerating the rate of deterioration, and eventually leading to potholes. The only solution is to remove the defective asphalt, compact the base, and install new base materials and asphalt.
- **Improper Grading.** The asphalt pavement is not properly graded, resulting in the ponding of water. Proper grading of the asphalt pavement will require replacing portions of the asphalt. It may also require resetting improperly sloped curb and gutter segments that are not conveying water to the stormwater management system. If ponding is left unattended it can result in unsafe travel areas, by creating conditions for hydroplaning and pockets of ice to form.
- **Depressions.** There are areas where the asphalt surface is depressed due to deformation in the surface or underlying layers. These depressions may continue to grow with exposure to traffic. Water ponding is evident in several of these areas. Repair of these areas will require the removal of the asphalt and base material and reinstallation, by compacting the new base material and resurfacing with asphalt.
- **Tree Root Damage.** This is known as Heaving, there are locations where tree roots cause heaving in the pavement surface. The repair of these areas requires the removal of the asphalt and the tree roots, then replenishing and re-compacting the base material and resurfacing the asphalt. Root trimming can also be an effective way to control this defect.
- **Edge Cracking.** Sections of the asphalt pavement have developed cracks along the pavement edges due to improper confinement. Installation of curbs or installation of a compacted gravel shoulder at the time of an overlay project can address this defect.

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

As a rule of thumb, asphalt should be overlaid when approximately 5% of the surface area is cracked or otherwise deteriorated. The normal service life of asphalt pavement is typically 18 to 20 years.

To maintain the condition of the pavement throughout the community and ensure the longest life of the asphalt, we recommend the Association adopts 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 by the 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 by Reserves. Areas of extensive cracking or deterioration that cannot be made watertight should be cut out and patched.
- **Seal Coating.** The asphalt should be seal coated every five to seven years. For this maintenance, activity to be effective in extending the life of the asphalt, cleaning, and crack repair should be performed first.

The pricing used is based on recent contracts for a two-inch overlay, which reflects the current local market for this work.

For seal coating, several different products are available. The older, more traditional seal coating product is paint. They coat the surface of the asphalt, and they are minimally effective. However, the newer coating materials, such as those from Total Asphalt Management, Asphalt Restoration Technologies, Inc., and others, are penetrating. They are engineered, so to speak, to 're-moisturize' 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 form of cracking and potholes. Re-moisturizing the pavement can return its flexibility and extend pavement life.

Concrete Work. The concrete work includes the community sidewalks, leadwalks, curbs, and gutter as well as other flatwork. The overall condition of the concrete work appears to be good.



The standards we use for recommending replacement are as follows:

- Trip hazard, ½ inch height difference.
- Severe cracking.
- Severe spalling and scale.

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.

Trash Corrals. The community has 4 trash corrals at various locations. Trash corrals include a concrete pad and enclosures that are constructed from concrete block, which appears to be in good condition.



Underground Utilities. The Association is responsible for the underground utility line maintenance and replacement, including the stormwater management pipes.



Engineering drawings were not used in the determination of these underground components. Instead, we have provided an estimate of the approximate replacement costs based on our experience with other facilities of similar size and configuration. The inspection and evaluation of underground lines and structures are beyond the scope of work for this study.

Site Lighting. The Association is responsible for the operation of the facility's lighting at the pool house. The lights were not on at the time of our site visit, but we understand they remain in good operating condition.



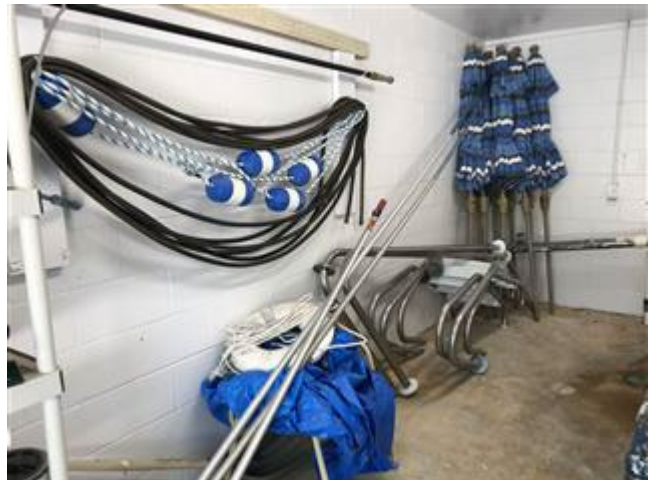
This study assumes the replacement of the light fixtures every 15 to 20 years, and pole replacement every 30 to 40 years. When the light poles are replaced, we assume that the underground wiring will also be replaced.

(Continued on next page)

RECREATION ITEMS

Swimming Pool. The community operates an outdoor pool and a wading pool of concrete construction. Listed below are the major components of the pool facilities:

The pool was winterized at the time of inspection and is reported to be in fair condition.



- **Pool Shell.** The shell for the swimming pool appears to be in good condition.
- **Pool Deck.** The pool has a concrete deck, and the overall condition of the deck appears to be in fair condition with areas of cracking.

- **Whitecoat.** The pool whitecoat appears to be in fair condition. We have assumed a service life of eight to ten years for the pool whitecoat.
- **Waterline Tile.** The waterline tile appears to be in good condition. We have assumed that the waterline tile will be replaced or restored when the pool is whitecoated.
- **Coping.** The pool is edged with masonry brick coping. The coping appears to be in good condition.
- **Pump and Filter System.** The filter system appears to be in good operating condition.
- **Pool Fence.** The swimming pool is enclosed by a chain link fence that appears to be in fair condition.

Tennis Courts. The community maintains multiple tennis courts. The overall condition of these courts appears to be good.



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

- **Asphalt Pavement (base layer).** We have assumed a service life of 20 to 30 years for the asphalt base layer.
- **Color Coat (surface layer).** Annual cleaning is recommended to maintain the surface of the court. The base of a tennis court is subject to cracking and low spots known as "birdbaths" that can occur from weather and earth movement. A program to address cracks as they appear will help to prolong the useful life of the color coat. We have assumed a service life of five to ten years for the color coat.
- **Fencing.** We have assumed that the fencing will be replaced when the asphalt pavement is replaced. Posts and fencing should be inspected, repaired, and painted as needed to prolong their economic life. Periodic inspection of the posts, gates, hinges, and latches is also recommended, and it is important that posts and footings be protected to prevent soil erosion. In addition, care should be taken so that damage from string trimmers is minimized.
- **Net Posts.** We have assumed that the new posts will be replaced when the asphalt pavement is replaced.

(Continued on next page)

TOWNHOUSE ITEMS

Building Roofing. All of the buildings are constructed with asphalt shingles which are in varying conditions.

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

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



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

End of Condition Assessment

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1. COMMON INTEREST DEVELOPMENTS - AN OVERVIEW

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

The growth of Community Associations has been explosive. In 1965, there were only approximately 500 Community Associations in the United States. According to the 1990 U.S. Census, there were roughly 130,000 Community Associations. The Community Associations Institute (CAI), a national trade association, estimates in 2020 that there were more than 350,000 communities with over 75 million residents.

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

2. REPLACEMENT RESERVE STUDY

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

Replacement Reserve Study Introduction. The introduction provides a description of the property, an Executive Summary of the Funding Recommendations, Level of Reserve Study service, and a statement of the Purpose of the Replacement Reserve Study. It also lists documents and site evaluations upon which the Replacement Reserve Study is based, and provides the Credentials of the Reserve Analyst.

Section A Replacement Reserve Analysis. Many components that are owned by the Association have a limited life and require periodic replacement. Therefore, it is essential that the Association have a financial plan that provides funding for the timely replacement of these components in order to protect the safety, appearance, and ultimately, the property value of the home in the community. In conformance with National Reserve Study Standards, a Replacement Reserve Analysis evaluates the current funding of Replacement Reserves as reported by the Association and recommends annual funding of Replacement Reserves using the Threshold Cash Flow Method. See definition below.

Section B Replacement Reserve Inventory. The Replacement Reserve Inventory lists the commonly owned components within the community that require periodic replacement using funding from Replacement Reserves. Replacement Reserve Inventory includes estimates of the Normal Economic Life (NEL) and the Remaining Economic Life (REL) for those components whose replacement is scheduled for funding from Replacement Reserves.

The Replacement Reserve Inventory also provides information about those components which are excluded from the Replacement Reserve Inventory and whose replacement is not scheduled for funding from Replacement Reserves.

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

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

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

3. METHODS OF ANALYSIS

The Replacement Reserve industry generally recognizes two different methods of accounting for Replacement Reserve Analysis, the Cash Flow Method and the Component Method. Due to the difference in accounting methodologies, these methods lead to different calculated values for the Recommended Annual Funding to the Reserves. A brief description is included below:

Cash Flow Threshold Method. This Reserve Study uses the Threshold Cash Flow Method, sometimes referred to as the "Pooling Method." It calculates the minimum constant annual funding to reserves (Minimum Annual Deposit) required to meet projected expenditures without allowing total reserves on hand to fall below the predetermined Minimum Balance, or Threshold, in any year.

Component Method. The Component Method of calculating Reserve Funding needs is based upon an older mathematical model. Instead of calculating total funding based on yearly funding requirements, the Component method treats each component as its own "line item" budget that can only be used for that component. As a result, the Component Method is typically more conservative requiring greater Annual Reserve Funding levels.

4. REPLACEMENT RESERVE STUDY DATA

Identification of Reserve Components. The Reserve Analyst has only two methods of identifying Reserve Components; (1) information provided by the Association and (2) observations made at the site. It is important that the Reserve Analyst be provided with all available information detailing the components owned by the Association. It is our policy to request such information prior to bidding on a project and to meet with the parties responsible for maintaining the community after acceptance of our proposal. Upon submission of the initial Study, the Study should be reviewed by the Board of Directors and the individuals responsible for maintaining the community. We depend upon the Association for correct information, documentation, and drawings. We also look to the Association representative to help us fashion the Reserve Study so that it reflects what the community hopes to accomplish in the coming years.

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

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 the cost of regular repairs or maintenance.

5. DEFINITIONS

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

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

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

Component Analysis. See Component Method, above.

Contingency. An allowance for unexpected requirements. The "Threshold" used in the Cash Flow Method is a predetermined minimum balance that serves the same purpose as a "contingency." However, IRS Guidelines do not allow for a "contingency" line item in the inventory. Therefore, it is built into the mathematical model as a "Threshold."

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

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

Estimated Remaining Economic Life (REL). Used in the Normal Replacement Schedules. Number of years until the item is expected to need replacement. Normally, this number would be considered to be the difference between the Estimated

Economic Life and the age of the item. However, this number must be modified to reflect maintenance practice, climate, original construction and quality, or other conditions. For the purpose of this report, this number is determined by the Reserve Analyst based on the present condition of the item relative to the actual age.

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

Minimum Balance. Otherwise referred to as the Threshold, this amount is used in the Cash Flow Threshold Method only. Normally derived using the average annual expenditure over the study period, this is the minimum amount held in reserves in the Peak Year.

National Reserve Study Standards. A set of Standards developed by the Community Associations Institute in 1995 (and updated in 2017) which establishes the accepted methods of Reserve Calculation and stipulates what data must be included in the Reserve Study for each component listed in the inventory. These Standards can be found at CALonline.org.

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

Number of Years of Study. The numbers of years into the future for which expenditures are projected and reserve levels calculated. This number should be large enough to include the projected replacement of every item on the schedule, at least once. The Reserve Study must cover a minimum of 20 years to comply with the National Reserve Study Standards. However, your study covers a 40-year period.

Peak Year. In the Cash Flow Threshold Method, a year in which the reserves on hand are projected to fall to the established threshold level. See Minimum Balance, above.

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

Replacement Reserve Study. An analysis of all of the components of the common property of a Community Association for which replacement should be anticipated within the economic life of the property as a whole. The analysis involves estimation for each component of its Estimated Replacement Cost, Normal Economic Life, and Remaining Economic Life. The objective of the study is to calculate a Recommended Annual Funding to the Association's Replacement Reserve Fund.

Total Replacement Cost. Shown on the Summary Sheet A1, this is the 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/40SodajTW1q>

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



<https://youtu.be/pYSMZ013VjQ>

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



<https://youtu.be/Qx8WHB9Cgnc>

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



<https://youtu.be/ZfBoAEhtf3E>

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



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

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



<https://youtu.be/aARD1B1Oa3o>

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



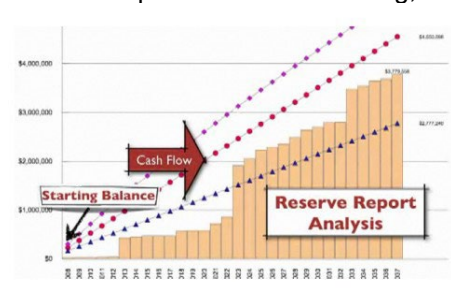
<https://youtu.be/diZfM1lyJYU>

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?



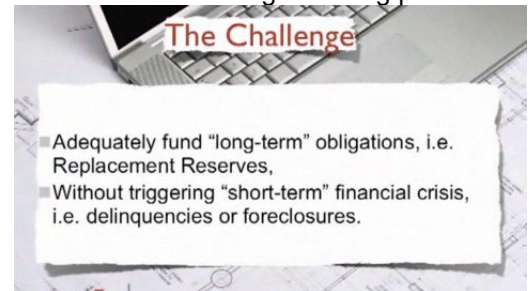
<https://youtu.be/SePdWVDvHWI>

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



<https://youtu.be/W8CDLwRlv68>

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



<https://youtu.be/hlxV9X1tlcA>