



**MASON & MASON**  
CAPITAL RESERVE ANALYSTS, INC.



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(Final Report, Revised July 11, 2017)  
Condition Assessment  
&  
Reserve Fund Plan Update  
2017  
**SNOW HILL**  
Warrenton, Virginia



Prepared for:  
The Board of Directors  
&  
SFMC, Inc.

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**MASON & MASON**  
CAPITAL RESERVE ANALYSTS, INC.



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July 11, 2017

Ms. Kathy Simonovich, CMCA, AMS, PCAM  
Owner / President  
SFMC, Inc.  
12084 Cadet Court  
Manassas, Virginia 20109

RE: **CONDITION ASSESSMENT AND RESERVE FUND PLAN UPDATE 2017**  
**Snow Hill Homeowners Association**  
**(Final Report, Revised July 11, 2017)**  
Warrenton, Virginia  
Project No. 8403

Dear Ms. Simonovich:

Mason & Mason Capital Reserve Analysts, Inc. has completed the final report for Snow Hill.

We have revised the report to reflect changes you and the Board requested via email on June 30, 2017.

We genuinely appreciate the opportunity to work with you and the Association.

Sincerely,

**Mason & Mason Capital Reserve Analysts, Inc.**

James G. Mason III, R. S.  
Vice President

James G. Mason, R. S.  
Principal



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### RESERVE FUND PLAN

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## **FOREWORD**

### **PLEASE READ THIS FIRST**

This report contains information the Board requires to fulfill its fiduciary responsibilities with respect to the financial health of the Association. Even if you are already familiar with the concepts of capital reserve planning, it requires some study. The information in this report is vital to your Association's financial health. Unless you understand it, your Association may not follow it. This may lead to underfunding and financial stress at some time in the future.

Our years of experience providing reserve analysis to both first-time and multi-update return clients have compelled us to develop a logical funding approach, which is based on generational equity and fairness to common-interest property owners that helps ensure realistic reserve funding levels.

Our approach is neither standard, nor is it necessarily easy to understand without first becoming familiar with some basic concepts. Section 3 explains these concepts in more detail. We want you to understand them because a well-informed Association makes the best decisions for its common-property owners.

## SUMMARY OF KEY ISSUES

Different readers will look for different things from this report. Perhaps the *homeowner* will just be looking for the high points. A *prospective buyer* may be looking at the general financial condition of the Association's reserves. A *Board member* should probe deeper in order to understand the financial tools that will be helpful in fulfilling their fiduciary responsibilities to the Association.

The Summary of Key Issues presents a recapitulation of the most important findings of Snow Hill's Reserve Fund Plan Update. Each is discussed in greater detail in the body of the report. We encourage the reader to "go deeper" into the report, and we have written it in a way that's understandable to a first-time reader.

Analyzing the capital reserves reveals that:

- The reserve fund is approximately **76%** funded through 2016. **See Paragraph 3.1. This is a significant improvement from past years. Our goal is to become fully funded by the end of the 20-year period (2036).**

In order to achieve this goal, the Association should:

- Set the annual contribution in **2018** to **\$23,767**, and plan on annual increases of **2.5%** to reflect inflation thereafter.
- This sets the annual reserve contribution to **\$12.07** per residential unit, per month (based on **164** homes).

Supporting data are contained in the body of this report, and we encourage the reader to take the time to understand it.

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## **VISUAL EVALUATION METHODOLOGY**

The first step in the process is collection of specific data on each of your community's commonly-held components. This information includes quantity and condition of each included component. We collect most of this data during the on-site field survey. When this information is not available in the field, we may obtain it by discussion with those knowledgeable through management or service activities.

The field survey or condition assessment is visual and non-invasive. We don't perform destructive testing to uncover hidden conditions; perform operational testing of mechanical, electrical, plumbing, fire and life safety protection; or perform code compliance analysis.

We make no warranty that every defect has been identified. Our scope of work doesn't include an evaluation of moisture penetration, mold, indoor air quality, or other environmental issues. While we may identify, pedestrian hazards observed during the course of the field survey, this report shouldn't be considered a safety evaluation of components.

Replacement costs are sometimes based on published references, such as R. S. Means. However, our opinions of replacement costs usually include removal and disposal and are usually based on experience with similar projects including information provided by local contractors and reported client experience. Actual construction costs can vary significantly due to seasonal considerations, material availability, labor, economy of scale, and other factors beyond our control.

Projected useful service lives are based on statistical data and our opinion of their current visual condition. No guarantee of component service life expectancies is expressed or implied and none should be inferred by this report. Your actual experience in replacing components may differ significantly from the projections in the report, because of conditions beyond our control or that were not visually apparent at the time of the survey.

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## 1. INTRODUCTION

**1.1 Background:** Snow Hill Homeowners Association is a single-family home community located on Highway 29 and Snow Hill Drive, east of Warrenton, in Fauquier County, Virginia. It is comprised of approximately 164 residences located on one- to three-acre sites. The community was constructed circa 1989. There are no private streets within the community. The major assets of the Association include two retention ponds, which are a part of a natural stream system, and a tennis facility.

We are providing the Condition Assessment and Reserve Fund Plan based on Proposal Acceptance Agreement No. 8403 dated April 19, 2017. Our services are subject to all terms and conditions specified therein.

Mason & Mason did not review the declarations, covenants, or other organization documents pertaining to the establishment and governance of the Homeowners Association. Ultimately, the establishment, management, and expenditure of reserves are within the discretion of the Association and its Board of Directors pursuant to their organizational documents and subject to the laws of the applicable jurisdiction. We are not otherwise financially associated with the Management Company or the Association, and we therefore do not have any conflicts of interest that would bias this report. Information provided by Management is deemed reliable. This report is not intended to be an audit or a forensic investigation. This report is not a mandate, but is intended to be a guide for future planning.

Mason & Mason provided a Level I Condition Assessment and Reserve Fund Plan for Snow Hill in 1999 and a Level II Update in 2004. This report is an additional Level II Update and includes a new condition assessment. All common components were visually observed. Measurements and quantities were generally accepted from the previous report except where changes have occurred. The update report is a stand-alone document and reference to the previous report should not be necessary.

James G. Mason III, R. S. conducted the field evaluation for this report on June 20, 2017. The weather was clear and the temperature was approximately 87 degrees F. Precipitation had occurred for several days prior to the site visit. The pavements, walkways, and grounds were generally dry and clean of debris.

**1.2 Principal Findings:** The common assets appear to be in overall fair to good condition. The community is approaching a 30-year benchmark in terms of replacement of major systems. Site features such as the entrance monuments, entrance signage, landscape lighting, wood retaining walls, timber steps, footbridge, and outdoor furniture range from fair to continuing good condition.

We understand that the community has a contract with Solitude Lake Management to maintain both the upper and lower retention ponds. This maintenance does not include major repair work. Significant work to both ponds, including dredging, shoreline stabilization, overflow replacement or repair, and dam maintenance, was performed by contractors, for the Association in 2004 and 2008. Due to the live-fed streams, both ponds will continue to require dredging to remove silt build-up every 15 to 20 years. We have scheduled the next dredging project of one or both ponds near- to mid-term, as significant silt levels were observed at the stream inflow sites. Since we do not have data on current silt levels, we cannot determine which pond will require work first. We are simply including an allowance for the future work.

We have established a sufficient contribution schedule to begin in 2018 that will eventually achieve the fully funded goal.

In order to maintain the physical attributes that preserve property values and provide a safe environment for occupants and guests, a series of capital expenditures should be anticipated. Consequently, we have scheduled near-, mid-, and late-term restoration and replacement projects based on anticipated need from our experience with similar properties.

Generally, our approach is to group appropriately related component replacement items into projects. This creates a more realistic model and allows a grouping time line that is more convenient to schedule and logical to accomplish. Please see the Table 1 Discussion, Column 17, for specific information.

## 2. FINANCIAL ANALYSIS

We track the annual inflation rate among our clients based on their reported costs for typical services. A 3.5% annual rate reflects their general pre-recession experience. However, currently we are seeing somewhat lower rates and we are using 2.5%. Interest income has dropped substantially, and many smaller Associations and Condominiums are reduced to savings accounts or certificates of deposit, which are yielding 1% or less. Unlike reserves, interest income is taxable, so this further reduces the net gain. It is prudent to keep a close watch on the economy and be ready to respond by updating the reserve fund plan as economic changes dictate.

**2.1 Calculation Basics:** The Association is on a calendar fiscal year. Management reported that the un-audited reserve fund balance, including cash and securities, as of **December 31, 2016**, was **\$135,385**. We have used a **1.00%** annual interest income factor and a **2.50%** inflation factor in our calculations. The total expenditures for the twenty-year period for both the **Cash Flow Method** and **Component Method** are projected to be **\$522,371**.

**2.2 Funding Analysis, Cash Flow Method, Hybrid Approach (Table 3):** This plan provides the annual contributions necessary to maintain balances consistent with the **fully funded goal by setting the annual contribution to \$23,767 in 2018 and providing an annual escalation factor of 2.50%, matching inflation thereafter. This plan allows for a gradual increase over time and addresses generational equity issues.** The total for all annual contributions for the twenty-year period would be **\$569,136**, and the total interest income is projected to be **\$30,945**. **The fully funded balance in 2036 is \$213,095.**

**2.3 Funding Analysis, Component Method (Table 4):** This method of funding would require variable annual contributions, averaging **\$27,938** over the twenty-year period. The total for all annual contributions would be **\$558,765**, and the total interest income is projected to be **\$41,316**. **The fully funded balance in 2036 is \$213,095.** The Component Method model considers the current reserve fund balance in computing individual component contributions for current cycles.

### 3. METHODS OF FUNDING

Once the data are compiled, our proprietary software produces two distinct funding methods. These are the **Component Method and Cash Flow Method**. Each of these methods is used in analyzing your Association's reserve status and each plays a role in the Board's decision on how to fund reserves. While we provide the guidance, the choice of funding method is ultimately the prerogative of the Board. Considering the vulnerability of the Association's assets, its risk tolerance, and its ability to fund contributions, the Board should decide how the Association will fund its reserves and at what level.

**3.1 Component Method:** As reserve analysts, we recognize the value of Component Method calculations as they address both future replacement costs and the time remaining to fund them. **This is the foundation of the savings concept. You will see the term "fully funded." This simply means you are on schedule, in any given year, to accrue sufficient funds by the component's replacement date. It does not mean you must have 100% of the funds ahead of time.** Simplified Example: A component projected to cost \$1,000 at the end of its 10-year life cycle would require a \$100 annual contribution in each of the 10 years. As long as you follow this contribution plan, the component is "fully funded."

Prior to determining the actual required annual contribution, a complex calculation apportions the existing reserve fund to each component. Each component's remaining unfunded balance forms the basis for the required contribution going forward.

Funds set aside for replacement of individual components are not normally used for the replacement of other components, even though the funds reside in the same bank account. In rare cases where a reserve fund is actually overfunded, \$0 will be displayed on the Component Method tables, indicating that the component is fully funded for that cycle.

While the time basis for the report is a 20-year period, the Component Method allows for inclusion of long-life components that may require replacement after the specified period. **This allows for funding of long-life components contemporaneously, which is fundamentally fair if they are serving the current owners. This is in contrast to saying, "if it doesn't require replacement within our 20-year period, we're going to ignore it."**

Due to replacement cycle time and cost differentials, the Component Method typically results in annual contribution fluctuations, which often makes it difficult for a Board to implement. **However, its guidance is essential and invaluable for understanding funding liabilities and making informed recommendations.** Table 4 shows these calculations, as well as projects interest income, expenses with inflation, and yearly balances, which will be "fully funded."

**3.2 Cash Flow Method:** The Cash Flow Method is easier to implement. It is a simple 20-year spread sheet that includes the starting balance, current contribution, interest income, inflation rate, projected expenses, and resulting yearly balances. The Cash Flow Method pools the contributions allocated to each of the Association's common components into a single "account."

Table 3 shows these calculations. This table reflects the information you provided on your reserve fund balance and current contribution. It also shows projected yearly positive or negative balances. **The Cash Flow Method doesn't include replacement funding for anything beyond the 20-year period, thus leaving a potential shortfall in funding and failing to address generational equity if not specifically set to do so.** It doesn't provide any real guidance beyond the basic information. There are several variations on cash flow goals such as Threshold Funding (just enough to stay positive) and Percentage Funding (a predetermined level based on some arbitrary percentage), but these schemes don't address the reality of fully funding, and typically are just a way of passing the obligation on to the next generation.

**3.3 Hybrid Approach: Please note that this is not a method, rather a way (approach) for us to utilize the Cash Flow Method, while insuring the appropriate funding levels are achieved long-term. Our Hybrid Approach uses the projected fully funded balance at the end of the 20-year period from Table 4 as a funding goal. We then set up Cash Flow funding plans. Table 3 is your "where we are now" Cash Flow spreadsheet modeling your reserve balance and current contribution. Table 3.1 (and possibly others) provides alternative(s) to this that meet the fully funded goal from Table 4.**

**We usually establish a new Cash Flow contribution that requires only small annual inflationary increases to reach the fully funded goal at the end of the 20-year period. This has the added effect of establishing a funding plan that addresses inflation. The contribution in the first year, adjusted for inflation, is equal to the contribution in the last year, based on inflated dollars (future value of money). This approach will also allow underfunded Associations the time to catch up, mitigating undue hardships. It balances the risk of temporary underfunding with the benefit of consistent predictable increasing contributions. The combination of the Component and Cash Flow Methods (Hybrid Approach) provides the advantages of both methods.**

## **4. RESERVE PROGRAMMING**

The Mason & Mason proprietary software used to produce the financial tables (Tables 1 through 4) have been under continual refinement for over a decade. It is unique in the industry as it provides comprehensive modeling through Microsoft Access and Excel that addresses the many challenges of reserve funding, allows analysts and clients to run "what if" scenarios, provides an easy to understand matrix of views and functions, and is easily provided to clients through e-mail.

**4.1 Interest Income on Reserve Funds:** Most Associations invest at least part of their reserve funds. Small Associations may simply use a savings account or certificates of deposit, while large Associations may have multiple investments with short-, medium-, and long-term instruments. One issue that is difficult to quantify is the percentage of funds invested. Some Associations invest a fairly substantial portion, while others hold back due to current cash outflow obligations. Some Associations do not reinvest the investment proceeds in their reserves; rather they divert the cash into their operations fund. We do not agree with this approach as it has the effect of requiring additional reserve contributions to make up for the difference. There is also the issue of changing rates over the 20-year period. In the recent past, we have seen large swings in relatively short time periods. While reserve funds are not usually taxable by the IRS, the investment income generated by the reserve fund is taxable in most

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situations. Even with all these potential pitfalls, investment income still represents a substantial source of additional funds and for this reason should not be ignored. There is no way to make “one size fits all” with any accuracy for the individual Association. Our approach to this dilemma is to use lower approximations that compensate for less than 100% of funds invested. We feel this is still better than not recognizing it, and periodic updates allow for adjustments based on experience. The rate can be set at any level, including zero, for Associations desiring to not recognize interest. **The rate should reflect, as accurately as possible, the actual composite rate of return on all securities and other instruments of investment including allowances for taxes.**

The interest income displayed on Table 3 and Table 4 is the summation of the beginning reserve fund interest accrual and the interest earned on the contributions minus the interest lost by withdrawing the capital expenditures. This method of calculation, while not exact, approximates the averages of the three principal components of a reserve fund for each twelve-month period.

**4.2 Future Replacement Costs (Inflation):** Inflation is a fact of life. In order to replicate future financial conditions as accurately as possible, inflation on replacement costs should be recognized. The financial tables have been programmed to calculate inflation based upon a pre-determined rate. This rate can be set at any level, including zero. **A plan that doesn't include inflation is a 1-year plan, and any data beyond that first year won't reflect reality.**

**4.3 Simultaneous Funding:** This is a method of calculating funding for multiple replacement cycles of a single component over a period of time from the same starting date. Simple Example: Funding for a re-roofing project, while, at the same time, funding for a second, subsequent re-roofing project. This method serves a special purpose if multiple-phase projects are all near-term, but will result in higher annual contribution requirements and leads to generational equity issues otherwise. We use this type of programming only in special circumstances.

**4.4 Sequential Funding:** This is a method of calculating funding for multiple replacement cycles of a single component over a period of time where each funding cycle begins when the previous cycle ends. Simple Example: Funding for the second re-roofing project begins after the completion of the initial re-roofing project. This method of funding appears to be fundamentally equitable. We use this type of programming except in special circumstances.

**4.5 Normal Replacement:** Components are scheduled for complete replacement at the end of their useful service lives. Simple Example: An entrance sign is generally replaced all at once.

**4.6 Cyclic Replacement:** Components are replaced in stages over a period of time. Simple Example: Deficient sidewalk panels are typically replaced individually as a small percentage, rather than the complete system.

**4.7 Minor Components:** A minimum component value is usually established for inclusion in the reserve fund. Components of insignificant value in relation to the scale of the Association shouldn't be included and should be deferred to the operations budget. A small Association might exclude components with aggregate values less than \$1,000, while a large Association might exclude components with aggregate values of less than \$10,000. Including many small components tends to over complicate the plan and doesn't provide any relative value or utility.

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**4.8 Long Life Components:** Almost all Associations have some components with long or very long useful service lives typically ranging between thirty and sixty years. Traditionally, this type of component has been ignored completely. Simple Example: Single replacement components such as entrance monuments should be programmed for full replacement at their statistical service life. This allows for all common property owners to pay their fair share during the time the component serves them. This also has the added effect of reducing the funding burden significantly as it is carried over many years.

**4.9 Projected Useful Service Life:** Useful service lives of components are established using construction industry standards and our local experience as a guideline. Useful service lives can vary greatly due to initial quality and installation, inappropriate materials, maintenance practices or lack thereof, environment, parts attrition, and obsolescence. By visual observation, the projected useful service life may be shortened or extended due to the present condition. The projected useful service life is not a mandate, but a guideline, for anticipating when a component will require replacement and how many years remain to fund it.

**4.10 Generational Equity:** As the term applies to reserves, it is the state of fairness between and over the generations relating to responsibility for assets you are utilizing during your time of ownership. It is neither reasonable, nor good business to defer current liabilities to future owners. This practice is not only unfair; it can also have a very negative impact on future property values.

## 5. UPDATING THE RESERVE FUND PLAN

A reserve fund plan should be periodically updated to remain a viable planning tool. Changing financial conditions and widely varying aging patterns of components dictate that revisions should be undertaken periodically from one to five years, depending upon the complexity of the common assets and the age of the community. Weather, which is unpredictable, plays a large part in the aging process.

Full Updates (Level II) include a site visit to observe current conditions. These updates include adjustments to the component inventory, replacement schedules, annual contributions, balances, replacement costs, inflation rates, and interest income.

We encourage Associations that are undergoing multiple simultaneous or sequential costly restoration projects (usually high-rise buildings) to perform Level III Administrative Updates. Administrative updates do not include a condition assessment. They are accomplished by comparing original projections with actual experience during the interim period as reported by Management. These updates can be performed annually and include adjustments to the replacement schedules, contributions, balances, replacement costs, inflation rates, and interest income. The Level III Administrative Update can be a cost-effective way of keeping current between Level II Full Update cycles. Full Updates (Level II) and Administrative Updates (Level III) help to ensure the integrity of the reserve fund plan.

## 6. PREVENTIVE MAINTENANCE

The following preventive maintenance practices are suggested to assist the Association in the development of a routine maintenance program. The recommendations are not to be considered the only maintenance required, but should be included in an overall program. The development of a maintenance checklist and an annual condition survey will help extend the useful service lives of the Association's assets.

This section includes best maintenance practices or life-extension maintenance for many, but not necessarily all, components in the report. Items for which no maintenance is necessary, appropriate or beyond the purview of this report are not included in this section. We typically include them for townhomes and garden condominiums while mid- and high-rise buildings are generally too complex.

**6.1 Signage:** Wood painted signs mounted on painted wood posts generally require very little maintenance over their useful service life. Signage tends to fade due to environmental exposure. The wood components of entrance signs should be periodically cleaned of loose paint and repainted to maintain appearance. Cleaning of peeled paint and repainting of wood posts will maintain appearance. There is little that can be done with signs except to replace them periodically. Out-of-plumb posts should be straightened and secured.

**6.2 Stone Monument Repair:** Stone monuments should be inspected periodically for cracks indicating settlement problems. All vegetation, such as vines, tree limbs, and tree roots should be kept clear to prevent damage. As stone retaining walls age, depending upon the initial quality of the mortar and the long-term environment of the wall, mortar joints may deteriorate. This condition can be corrected by tuckpointing. Deteriorated or cracked mortar should be removed, and the void should then be filled with new mortar. Major settlement cracks or deflection may require the rebuilding of that section.

**6.3 Painted Wood Components:** The service life of painted wood components depends greatly on the type of wood used, the initial installation method, level of exposure to the elements, and preventative maintenance practices during its service life. Kiln dried trim pieces should be primed on all surfaces prior to installation. Repainting projects should be performed every four years or as needed. Loose and flaking paint should be thoroughly removed and deteriorated trim pieces replaced with primed trim pieces prior to repainting projects.

**6.4 Bare Wood Components:** Bare wood components, both non-treated and pressure-treated, generally will achieve a greater useful service life and improved appearance if preventative maintenance is performed. Periodic pressure washing and sealing with wood preservative is recommended on all wood components. Rough edges and splinters should be sanded prior to sealing. Damaged or deteriorated wood components should be replaced as necessary. Warped boards of wood decks, which can cause tripping hazards, should be replaced. Generally, securing or repairing wood components with screws will provide a better fastening method than nails.

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**6.5 Retention Ponds:** Vegetation control in the ponds and on adjacent banks is required to prevent root damage to the earthen structures. Sedimentation problems can result in dredging requirements to maintain capacity of the pond in the long term. Pond sediment levels should be monitored to establish the rate over a multi-year period. The information would be helpful in determining future reserve funding for dredging if found to be necessary. Typically, storm water drainage systems have a fifty-year estimated service life, and problems are not anticipated. However, as the systems age, it is prudent to maintain funding should problems occur. Inflow and outflow structures should be periodically examined for damage, leaks, or deterioration, and cleaned of debris to prevent clogging. Streambank erosion includes two basic processes; undercutting and sloughing. Serious undercutting generally occurs when the lower third to half of the bank is silt, sand, gravel or other material not incorporated in a cohesive material, such as clay, and not protected by adequate streamside vegetation. Sloughing of streambanks occurs most often with a rapidly falling stream when the bank is saturated. The combination of extra weight and reduced structural strength often results in mass movements of material from the bank into the channel. Sloughing is especially extensive along low-gradient streams with high banks and where excessive silt transport occurs during floods. Correcting these problems involves the development of an overall plan because the issues are often more complex than they first appear. Environmental impact on down-stream properties and conformance with governmental regulation are major considerations.

**6.6 Tennis Court Surface Overlay:** Court surface overlays are usually required when settlement of the sub-base causes cracks to appear at the surface. Direct overlays usually allow any cracks to migrate (reflective cracking) to the new surface. A technique to eliminate this problem is to separate the old surface from the new surface with a layer of fine marble dust. This allows the two surfaces to move independently and results in a more stable top surface. Net post footing displacement caused by over-tensioning of the net cable also results in court surface damage. However, the footings can be replaced without overlaying the court. In this region, tennis courts usually give about fifteen years of service before this procedure is necessary. Some courts fail much sooner and some last much longer. It is prudent to plan for overlay now because of the large expense involved if required. Good maintenance practices, including frequent sweeping, periodic color coating of the surface and proper tensioning of the net cable can extend the service life of tennis courts.

**6.7 Tennis Court Color Coat:** Color coating extends the life of the surface if cracking and other surface problems are not present. An average five-year life for color coating is scheduled, except within a year or two of scheduled surface overlay. Any cracking around net post footings should be sealed to prevent moisture infiltration.

**6.8 Chain Link Fencing:** Very little maintenance is necessary for chain link fencing and gates. Periodic removal of encroaching vegetation should be performed to prevent damage to components. Damaged components should be repaired or replaced. Rusted fencing components may be painted to improve appearance.

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## COMPONENT DATA AND ASSET REPLACEMENT SCHEDULE TABLE 1 EXPLANATION

This table lists the common assets included in the reserve fund plan and provides details of the replacement schedules. A narrative discussion is provided adjacent to each component. Photo references and maintenance protocol reference numbers are also provided. An explanation of each column in the table follows:

- Column **1** **Component No.** is consistent throughout all tables.
- Column **2** **Component** is a brief description of the component.
- Column **3** **Quantity** of the component studied, which may be an exact number, a rough estimate, or simply a (1) if the expenditure forecast is a lump sum allowance for replacement of an unquantified component.
- Column **4** **Unit of Measurement** used to quantify the component:      SY = Square Yards  
    SF = Square Feet  
    LF = Linear Feet  
    EA = Each  
    LS = Lump Sum  
    PR = Pair  
    CY = Cubic Yards
- Column **5** **Unit Cost** used to calculate the required expenditure. This unit cost includes removal of existing components and installation of new components, including materials, labor, and overhead and profit for the contractor.
- Column **6** **Total Asset Base** is the total value of common assets included in the study in current dollars. In addition to capital assets, this figure includes one cycle of maintenance liability.
- Column **7** **Typical Service Life (Yrs) or Cycle** is the typical life expectancy of similar components in average conditions or the length of years between replacement cycles, and does not necessarily reflect the conditions observed during the field evaluation. This number is furnished for reference and is not necessarily computed in the system.
- Column **8** **1<sup>st</sup> Cycle Year** is the scheduled year of the first projected replacement or repair.
- Column **9** **Percentage of Replacement** is the percentage of component value to be replaced in the first replacement cycle.
- Column **10** **Cost for 1<sup>st</sup> Cycle** is the future cost (with inflation) of the replacement. It is the product of Column 6 times Column 9 in future dollars.
- Column **11** **2<sup>nd</sup> Cycle Year** is the scheduled year of the second projected replacement or repair. If a second cycle is not listed, it is because the first cycle is beyond the end of the study.
- Column **12** **Percentage of Replacement** is the percentage of component value to be replaced in the second replacement cycle. This can vary from the percentage of the first cycle for various reasons, such as the increased age of a component may require a larger amount of repair.
- Columns **13** **Cycles, Percentage, and Cost** repeat as itemized above. Although not shown on the tables, Through **16** the cycles continue throughout the study period and beyond.
- Column **17** **Discussion** is the description and observed condition of the component and the methodology employed in the decision-making process. Includes the photo reference, **(Photo #1, #2, etc.)** and Maintenance Protocol reference numbers **(7.1, 7.2 etc.)** if applicable.

Reserve Fund Plan for  
SNOW HILL HOMEOWNERS ASSOCIATION  
Warrenton, Virginia

COMPONENT DATA AND  
ASSET REPLACEMENT SCHEDULE

TABLE 1  
2017 Through 2036



The cells within these Excel spreadsheets contain proprietary code and are intended only for the client and its management. Unauthorized use of the formulae for other clients or other purposes is strictly forbidden and will be considered piracy.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Component No.	Component	Quantity	Unit of Measurement	Unit Cost	Total Asset Base	Typical Service or Cycle Life in Yrs	1st Cycle Year	Percentage of Replacement	Cost For 1st Cycle	2nd Cycle Year	Percentage of Replacement	Cost For 2nd Cycle	3rd Cycle Year	Percentage of Replacement	Cost For 3rd Cycle	DISCUSSION
<b>1 SITE FEATURES</b>																
1.1	Main Entrance Sign	1	LS	\$3,800.00	\$3,800	15	2029	100%	\$5,111	2044	100%	\$7,402				The entrance sign is comprised of two carved wood signs mounted back to back on 4" by 4" posts. They appear to have been recently replaced or refurbished and are in very good condition. Repairs and painting will be necessary in the future, in order to maintain appearance and achieve the projected service life.
1.2	Main Entrance Stone Planter	80	SF	\$68.00	\$5,440	40	2029	100%	\$7,316	2069	100%	\$19,644				Surrounding the sign is a stone wall planter approximately 2-1/2 feet high. It appears to be in generally good condition, although some stones are loose and require repairs. Stone walls are a long-life component, and with periodic maintenance such as tuckpointing, should provide a long service life.
1.3	Main Entrance Landscape Lighting	6	EA	\$550.00	\$3,300	20	2018	100%	\$3,383	2028	100%	\$4,330	2038	100%	\$5,543	Six lighting fixtures are installed adjacent to the entrance on both sides of the road. They appear to be high-quality fixtures, and they appear to be in continuing good condition. There are five of one type of fixture and one of another type. Lighting was not observed after dark, but no problems with lighting were reported by Management. The Board requested the timing for this component.
1.4	Main Entrance Sign Lighting	4	EA	\$250.00	\$1,000	12	2022	100%	\$1,131	2034	100%	\$1,522	2046	100%	\$2,046	Four spotlight fixtures have been installed to provide illumination to the entrance signs. The lights appear to be in continuing good condition, although they were not illuminated during our condition assessment.
1.5	Rear Entrance Sign	1	EA	\$2,300.00	\$2,300	20	2030	100%	\$3,171	2045	100%	\$4,592				A single wood sign, approximately 3' x 3', is installed at the stone monument at the rear entrance. The sign is in good condition. Maintenance, such as painting and repairs will be necessary to achieve the projected service life.
1.6	Rear Entrance Stone Monument	1	EA	\$6,000.00	\$6,000	40	2045	100%	\$11,979							An approximately 10' x 5' stone and mortar entrance monument is constructed at the Snow Hill Drive intersection with Old Alexandria Turnpike. The monument supports the wood community name sign. It appears to be in continuing good condition, with no deteriorated stone or mortar. Stone walls are a long-life component, and with periodic maintenance, such as tuckpointing, should provide a long service life.
1.7	Rear Entrance Landscape Lights	2	EA	\$800.00	\$1,600	10	2022	100%	\$1,810	2032	100%	\$2,317	2042	100%	\$2,966	Two ground mounted L.E.D. landscape lights are installed at the rear monument. The right side light appears to be deflected, but its operational status was not observed. We are budgeting for replacement of both lights near-term. The Board requested the timing for this component.
1.8	Wood Retaining Walls	784	SF	\$32.00	\$25,088	20	2019	100%	\$26,358	2039	100%	\$43,191				This category includes the wood retaining walls constructed at the grade differential at the rear of the tennis court area, at the rear boundary of each tennis court, and the wood planters constructed at the front of each tennis court. The walls appear to be in fair condition with minor deterioration, but no deflection observed.
1.9	Wood Riser & Border Timber Steps	380	LF	\$13.00	\$4,940	20	2019	100%	\$5,190	2039	100%	\$8,505				This category includes the pressure-treated wood timbers making up the borders and risers of the steps that provide access to the tennis courts and the wood border along the side of the tennis courts. These appear to be in generally fair condition having had some timbers replaced in recent years. This type of step and riser construction is generally problematic because of settlement of the pedestrian surface material. Diligent maintenance of the gravel treads to prevent tripping hazards is essential throughout the life of the steps. Additional gravel should be installed to bring the surface flush with the riser timbers.
1.10	Wood Footbridge	1	LS	\$4,000.00	\$4,000	15	2020	100%	\$4,308	2040	100%	\$7,058				The footbridge appears to be in fair condition with no major deterioration except minor rot of the horizontal treads was observed. The cost for the replacement bridge used in the study is based upon the actual construction cost plus inflation.
1.11	Site Signage Allowance	1	LS	\$1,800.00	\$1,800	15	2022	100%	\$2,037	2037	100%	\$2,950				Painted wood signs mounted on 4" by 4" wood posts are located at each retention pond and at the tennis court area. The signs appear to be in continuing good condition. An additional six small signs have been added throughout the community. We have budgeted a periodic allowance for replacements as necessary throughout the study period.
1.12	Outdoor Furniture	1	LS	\$3,500.00	\$3,500	15	2020	100%	\$3,769	2035	100%	\$5,459	2050	100%	\$7,906	This category includes two wood benches located at the retention ponds and the wood trash enclosure located at the tennis court area. They appear to be in generally fair condition with damaged, deteriorated components. They are scheduled for near-term replacement. The furniture may be cleaned and re-stained, which may provide a longer service life.
1.13	Retention Pond & Riparian Restoration Allowance	1	LS	\$20,000.00	\$20,000	5	2017	100%	\$20,000	2022	100%	\$22,628	2027	100%	\$25,602	The two ponds appear to be the result of excavation and construction of earthen impoundment structures. The upper pond overflow riser was observed with some vegetation, which should be cleared. The lower pond overflow structure appears to be in continuing good condition. There are a number of pond maintenance issues such as shoreline stabilization, chemical applications for weed control, bacterial improvement to control algae, surface aerators, diffusers, beaver control, mosquito control, and installation of sedimentation forebays, all of which may be required at some time over the life of a pond. We understand that Solitude Lake Management is maintaining the ponds under contract. This component should cover issues that the maintenance company does not. This allowance is not intended to cover the cost of dredging, if determined to be required.
1.14	Retention Pond Dredging & Remediation Project Allowance	1	LS	\$70,000.00	\$70,000	15	2020	100%	\$75,382	2035	100%	\$109,176	2050	100%	\$158,120	Ponds with live streams may experience siltation over time, especially during periods high storm water runoff. Sedimentation appears to have decreased the capacity of the ponds to some degree at the stream inflow sites, and additional sedimentation should be anticipated over time. We understand that the upper pond was dredged in 2003/04 and the lower pond was dredged circa 2008/09. We have budgeted an allowance to address future dredging requirements for the storm water management ponds based on the costs for projects of a similar scope, and based on of proposals supplied by Management. The next cycle of dredging is scheduled for the upper and/or lower pond near- to mid-term.
<b>2 RECREATIONAL COMPONENTS</b>																

Reserve Fund Plan for  
SNOW HILL HOMEOWNERS ASSOCIATION  
Warrenton, Virginia

COMPONENT DATA AND  
ASSET REPLACEMENT SCHEDULE  
TABLE 1  
2017 Through 2036



The cells within these Excel spreadsheets contain proprietary code and are intended only for the client and its management. Unauthorized use of the formulae for other clients or other purposes is strictly forbidden and will be considered piracy.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Component No.	Component	Quantity	Unit of Measurement	Unit Cost	Total Asset Base	Typical Service or Cycle Life in Yrs	1st Cycle Year	Percentage of Replacement	Cost For 1st Cycle	2nd Cycle Year	Percentage of Replacement	Cost For 2nd Cycle	3rd Cycle Year	Percentage of Replacement	Cost For 3rd Cycle	DISCUSSION
2.1	Tennis Pavilion	1	LS	\$18,600.00	\$18,600	35	2022	100%	\$21,044	2057	100%	\$49,942				The tennis pavilion is constructed of wood timbers covered with pressure-treated lumber. The floor is constructed of pressure-treated lumber. Built-in planters are constructed at window openings. All interior components appear to be in continuing good condition for their age with no deteriorated or damaged areas observed. The exterior lumber and trim appears to be weathered with beginning deterioration observed. The remaining projected service life is dependent on preventative maintenance being performed.
2.2	Pavilion Re-Roofing	350	SF	\$8.00	\$2,800	20	2042	100%	\$5,191							The roof of the pavilion is a 4/12 pitch, wood shake construction. The roof appears to be in fair condition with a couple of curled shakes observed. These deficiencies were noted in 1999 and 2004, and appear to have not resulted in any leaks as evidenced by a lack of water staining on the underside of the plywood sheathing. Damaged or deteriorated shakes should periodically be replaced.
2.3	Wood Deck & Benches	520	SF	\$13.50	\$7,020	15	2019	100%	\$7,375	2039	100%	\$12,085				The wood deck in front of the tennis pavilion appears to be in fair condition. It appears that the wood components have not been sealed or maintained. Many boards are cracked, deteriorated, and splintered. It appears that some boards, including the bench seats, have been replaced, and we have extended the service life somewhat.
2.4	Tennis Court Restoration Project	2	EA	\$21,000.00	\$42,000	20	2031	100%	\$59,345	2051	100%	\$97,244				The tennis courts were restored circa 2011 and are in generally good condition. No cracking of the courts were observed. However, the color coating is in poor condition, requiring replacement near-term (Component 2.5). We have scheduled restoration of both courts mid-term in the study. With proper maintenance, tennis court surfaces should achieve a long service life. Homeowners should be advised that tension on the nets should be released when not in use, and nets should not be over-tensioned when in use, which can cause cracking at the net post footings, thereby allowing water infiltration into the court. Any cracks which occur in the future should be sealed to prevent water infiltration. There are several after-market rubber/composite products offered for court restoration as an alternative to standard restoration practices. In our experience, in the case of court cracking, these methods should not be employed as they are generally unsuccessful at mitigating dynamic cracks except for a very short period of time.
2.5	Tennis Court Color Coat	2	EA	\$5,000.00	\$10,000	5	2018	100%	\$10,250	2023	100%	\$11,597	2028	100%	\$13,121	The tennis court color coat seals the surface of the courts and helps prevent water infiltration into the structure. The color coating of both courts is in poor condition, requiring replacement near-term. Color coat generally has a five-year service life and is scheduled for each cycle except the year of the restoration projects, which would include color coat.
2.6	Tennis Court Fencing	624	LF	\$28.00	\$17,472	35	2031	100%	\$24,687	2061	100%	\$51,784				Plastic coated, chain link fencing is constructed at the perimeter of both courts. The fencing appears to be in continuing good condition. Other than securing loose components and replacing damaged components periodically, no maintenance is necessary for the fencing.

## CALENDAR OF EXPENDITURES TABLE 2 EXPLANATION

This table is a yearly plan of action of replacements and costs. A description of the columns in the table follows:

- Column 1 **Year** is the year of the projected replacement and expenditure.
- Column 2 **Component No.** itemizes the components and is consistent throughout the tables.
- Column 3 **Component** is a brief description of the component.
- Column 4 **Present Cost** is the cost for the cycle in today's dollars.
- Column 5 **Future Cost (Inflated)** is the cost for the cycle in future dollars.
- Column 6 **Total Annual Expenditures** gives the total expenditures by year.
- Column 7 **Action** is an area provided for the Board to make notations as to action taken on each component.

Reserve Fund Plan for  
**SNOW HILL HOMEOWNERS ASSOCIATION**  
 Warrenton, Virginia

**CALENDAR OF EXPENDITURES**

**TABLE 2**  
 2017 Through 2036



YEAR	COMPONENT NO.	COMPONENT	PRESENT COST 2017	FUTURE COST (INFLATED)	TOTAL ANNUAL EXPENDITURES	ACTION
1	2	3	4	5	6	7
2017					2017	
	1.13	Retention Pond & Riparian Restoration Allowance	\$20,000	\$20,000	TOTAL EXPENDITURES	
					\$20,000	
2018					2018	
	1.3	Main Entrance Landscape Lighting	\$3,300	\$3,383	TOTAL EXPENDITURES	
	2.5	Tennis Court Color Coat	\$10,000	\$10,250		
					\$13,633	
2019					2019	
	1.8	Wood Retaining Walls	\$25,088	\$26,358	TOTAL EXPENDITURES	
	1.9	Wood Riser & Border Timber Steps	\$4,940	\$5,190		
	2.3	Wood Deck & Benches	\$7,020	\$7,375		
					\$38,924	
2020					2020	
	1.10	Wood Footbridge	\$4,000	\$4,308	TOTAL EXPENDITURES	
	1.12	Outdoor Furniture	\$3,500	\$3,769		
	1.14	Retention Pond Dredging & Remediation Project A	\$70,000	\$75,382		
					\$83,459	
2021					2021	
					NO EXPENDITURES	
2022					2022	
	1.4	Main Entrance Sign Lighting	\$1,000	\$1,131	TOTAL EXPENDITURES	
	1.7	Rear Entrance Landscape Lights	\$1,600	\$1,810		
	1.11	Site Signage Allowance	\$1,800	\$2,037		
	1.13	Retention Pond & Riparian Restoration Allowance	\$20,000	\$22,628		
	2.1	Tennis Pavilion	\$18,600	\$21,044		
					\$48,651	
2023					2023	
	2.5	Tennis Court Color Coat	\$10,000	\$11,597	TOTAL EXPENDITURES	
					\$11,597	
2024					2024	
					NO EXPENDITURES	
2025					2025	
					NO EXPENDITURES	
2026					2026	
					NO EXPENDITURES	
2027					2027	
	1.13	Retention Pond & Riparian Restoration Allowance	\$20,000	\$25,602	TOTAL EXPENDITURES	
					\$25,602	
2028					2028	
	1.3	Main Entrance Landscape Lighting	\$3,300	\$4,330	TOTAL EXPENDITURES	
	2.5	Tennis Court Color Coat	\$10,000	\$13,121		
					\$17,451	
2029					2029	
	1.1	Main Entrance Sign	\$3,800	\$5,111	TOTAL EXPENDITURES	
	1.2	Main Entrance Stone Planter	\$5,440	\$7,316		
					\$12,427	
2030					2030	
	1.5	Rear Entrance Sign	\$2,300	\$3,171	TOTAL EXPENDITURES	
					\$3,171	
2031					2031	
	2.4	Tennis Court Restoration Project	\$42,000	\$59,345	TOTAL EXPENDITURES	
	2.6	Tennis Court Fencing	\$17,472	\$24,687		
					\$84,032	
2032					2032	
	1.7	Rear Entrance Landscape Lights	\$1,600	\$2,317	TOTAL EXPENDITURES	
	1.13	Retention Pond & Riparian Restoration Allowance	\$20,000	\$28,966		

Reserve Fund Plan for  
**SNOW HILL HOMEOWNERS ASSOCIATION**  
 Warrenton, Virginia

**CALENDAR OF EXPENDITURES**  
**TABLE 2**  
 2017 Through 2036

YEAR	COMPONENT NO.	COMPONENT	PRESENT COST 2017	FUTURE COST (INFLATED)	TOTAL ANNUAL EXPENDITURES	ACTION
1	2	3	4	5	6	7
					\$31,283	
<b>2033</b>					<b>2033</b>	
					NO EXPENDITURES	
<b>2034</b>					<b>2034</b>	
	1.4	Main Entrance Sign Lighting	\$1,000	\$1,522	TOTAL EXPENDITURES	
					\$1,522	
<b>2035</b>					<b>2035</b>	
	1.12	Outdoor Furniture	\$3,500	\$5,459	TOTAL EXPENDITURES	
	1.14	Retention Pond Dredging & Remediation Project A	\$70,000	\$109,176		
					\$114,635	
<b>2036</b>					<b>2036</b>	
	2.5	Tennis Court Color Coat	\$10,000	\$15,987	TOTAL EXPENDITURES	
					\$15,987	

## CURRENT FUNDING ANALYSIS CASH FLOW METHOD TABLE 3.0 EXPLANATION

and, if applicable,

## ALTERNATIVE FUNDING ANALYSIS CASH FLOW METHOD TABLE 3.1, 3.2, 3.3 (etc.) EXPLANATION

Table 3.0 shows the financial picture over the twenty-year study period, using the current annual contribution and the reserve fund balance reported at the beginning of the study year. If the results of the study indicate a need to increase the annual contribution to maintain adequate balances throughout the study period, Table 3.1, and possibly, 3.2 will be provided for consideration. Alternatives might also be provided if a community is over-funded and desires to adjust the annual contribution downward.

Alternative funding may be achieved by increasing the annual contribution to a fixed yearly amount or by applying an annual escalation factor to increase contributions over time, or a combination of both methods. An inflation factor and interest income factor may be included in the calculations on this page.

A description of the columns in the table follows:

- Column 1    **Year**
- Column 2    **Total Asset Base** of all common capital assets included in the reserve fund with costs adjusted for inflation.
- Column 3    **Beginning Reserve Fund Balance** is the reserve fund balance after all activity in the prior year is completed.
- Column 4    **Annual Contribution**, on Table 3, is the amount contributed annually to the reserve fund as reported by the Board of Directors. On the Alternative Funding Analysis tables (3.1, 3.2, etc.), the annual contribution is projected to maintain positive balances throughout the study period.
- Column 5    **Interest Income**, which is indicated in the heading of the table, is applied to the reserve fund balance and is accrued monthly throughout each year after the yearly expenditures are deducted. The interest income percentage may be varied to reflect actual experience of the community investments.
- Column 6    **Capital Expenditures** are annual totals of expenditures for each year of the study period adjusted by the inflation percentage listed in the heading of the table.
- Column 7    **Ending Reserve Fund Balance** is the result of the beginning reserve fund balance plus the annual contribution, plus interest income, less capital expenditures for the year.

Reserve Fund Plan for  
SNOW HILL HOMEOWNERS  
ASSOCIATION  
Warrenton, Virginia

FUNDING ANALYSIS  
CASH FLOW METHOD  
HYBRID APPROACH  
TABLE 3



Beginning Reserve Fund Balance: **135,385** Annual Contribution To Reserves: **1** Contribution Percentage Increase: **2.50%** Annual Inflation Factor: **2.50%** Annual Interest Income Factor: **1.00%**

In Dollars

YEAR	TOTAL ASSET BASE	BEGINNING RESERVE FUND BALANCE	ANNUAL CONTRIBUTION	INTEREST INCOME	CAPITAL EXPENDITURES	ENDING RESERVE FUND BALANCE
1	2	3	4	5	6	7
2017	250,660	135,385	1	1,252	20,000	116,638
2018	256,927	116,638	23,767	1,227	13,632	128,000
2019	263,350	128,000	24,362	1,207	38,923	114,646
2020	269,933	114,646	24,971	835	83,459	56,992
2021	276,682	56,992	25,595	712	0	83,298
2022	283,599	83,298	26,235	715	48,650	61,599
2023	290,689	61,599	26,891	702	11,597	77,594
2024	297,956	77,594	27,563	929	0	106,087
2025	305,405	106,087	28,252	1,219	0	135,558
2026	313,040	135,558	28,958	1,519	0	166,035
2027	320,866	166,035	29,682	1,690	25,602	171,806
2028	328,888	171,806	30,424	1,797	17,451	186,576
2029	337,110	186,576	31,185	1,976	12,427	207,310
2030	345,538	207,310	31,965	2,239	3,171	238,343
2031	354,176	238,343	32,764	2,117	84,032	189,191
2032	363,030	189,191	33,583	1,913	31,283	193,404
2033	372,106	193,404	34,422	2,130	0	229,956
2034	381,409	229,956	35,283	2,494	1,522	266,211
2035	390,944	266,211	36,165	2,249	114,635	189,990
2036	400,718	189,990	37,069	2,023	15,987	213,095

STUDY PERIOD TOTALS

569,136      30,945      522,371

FULLY FUNDED BALANCE GOAL

## FUNDING ANALYSIS COMPONENT METHOD TABLE 4 EXPLANATION

Table 4 is a yearly list of annual contributions toward each component, which must be made to achieve 100% funding. The reserve fund balance is the balance at the beginning of the study year. The beginning reserve fund balance is applied, proportionately, to each component prior to calculating the yearly contribution for each component. Future costs (inflation) are factored into the replacement cycles. The annual contribution for each year is calculated in the bottom row of the study labeled **Annual Component Contribution Totals**. Interest and inflation are calculated at the same annual rates as the Cash Flow Method (Table 3).

Column 1            **Component Number** is consistent throughout the tables.

Column 2            **Component** is a brief description of the component.

Columns 3 - 22    **Years** lists the annual contribution amount toward each component throughout the twenty-year study period, which is totaled at the bottom of the component table.

### COMPONENT METHOD SUMMARY

The component method summary computes the beginning reserve fund balance, the annual component contribution, the annual expenditures, and interest income. It then provides the ending reserve fund balance for each year of the study.

Beginning Reserve Fund Balance:

In Dollars **135,385**

Component Number	COMPONENT	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
<b>1 SITE FEATURES</b>																					
1.1	Main Entrance Sign	401	401	401	401	401	401	401	401	401	401	401	401	457	457	457	457	457	457	457	457
1.2	Main Entrance Stone Planter	293	293	293	293	293	293	293	293	293	293	293	293	399	399	399	399	399	399	399	399
1.3	Main Entrance Landscape Lighting	1,144	412	412	412	412	412	412	412	412	412	412	412	527	527	527	527	527	527	527	527
1.4	Main Entrance Sign Lighting	124	124	124	124	124	119	119	119	119	119	119	119	119	119	119	119	119	119	160	160
1.5	Rear Entrance Sign	166	166	166	166	166	166	166	166	166	166	166	166	166	166	284	284	284	284	284	284
1.6	Rear Entrance Stone Monument	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280
1.7	Rear Entrance Landscape Lights	219	219	219	219	219	220	220	220	220	220	220	220	220	220	220	220	282	282	282	282
1.8	Wood Retaining Walls	4,807	4,807	1,950	1,950	1,950	1,950	1,950	1,950	1,950	1,950	1,950	1,950	1,950	1,950	1,950	1,950	1,950	1,950	1,950	1,950
1.9	Wood Riser & Border Timber Steps	947	947	384	384	384	384	384	384	384	384	384	384	384	384	384	384	384	384	384	384
1.10	Wood Footbridge	591	591	591	319	319	319	319	319	319	319	319	319	319	319	319	319	319	319	319	319
1.11	Site Signage Allowance	283	283	283	283	283	182	182	182	182	182	182	182	182	182	182	182	182	182	182	182
1.12	Outdoor Furniture	518	518	518	337	337	337	337	337	337	337	337	337	337	337	337	337	337	337	488	488
1.13	Retention Pond & Riparian Restoration Allow	9,236	4,412	4,412	4,412	4,412	4,991	4,991	4,991	4,991	4,991	5,647	5,647	5,647	5,647	5,647	6,389	6,389	6,389	6,389	6,389
1.14	Retention Pond Dredging & Remediation Prd	10,350	10,350	10,350	6,744	6,744	6,744	6,744	6,744	6,744	6,744	6,744	6,744	6,744	6,744	6,744	6,744	6,744	6,744	9,767	9,767
<b>2 RECREATIONAL COMPONENTS</b>																					
2.1	Tennis Pavilion	1,791	1,791	1,791	1,791	1,791	1,191	1,191	1,191	1,191	1,191	1,191	1,191	1,191	1,191	1,191	1,191	1,191	1,191	1,191	1,191
2.2	Pavilion Re-Roofing	183	183	183	183	183	183	183	183	183	183	183	183	183	183	183	183	183	183	183	183
2.3	Wood Deck & Benches	1,373	1,373	546	546	546	546	546	546	546	546	546	546	546	546	546	546	546	546	546	546
2.4	Tennis Court Restoration Project	3,011	3,011	3,011	3,011	3,011	3,011	3,011	3,011	3,011	3,011	3,011	3,011	3,011	3,011	4,391	4,391	4,391	4,391	4,391	4,391
2.5	Tennis Court Color Coat	4,079	2,261	2,261	2,261	2,261	2,261	2,558	2,558	2,558	2,558	2,558	1,919	1,919	1,919	1,919	1,919	1,919	1,919	1,919	3,526
2.6	Tennis Court Fencing	922	922	922	922	922	922	922	922	922	922	922	922	922	922	1,480	1,480	1,480	1,480	1,480	1,480
<b>ANNUAL COMPONENT CONTRIBUTION TOTALS</b>		<b>40,718</b>	<b>33,344</b>	<b>29,097</b>	<b>25,038</b>	<b>25,038</b>	<b>24,912</b>	<b>25,209</b>	<b>25,209</b>	<b>25,209</b>	<b>25,209</b>	<b>25,865</b>	<b>25,341</b>	<b>25,503</b>	<b>25,621</b>	<b>27,559</b>	<b>28,363</b>	<b>28,363</b>	<b>28,404</b>	<b>31,578</b>	<b>33,185</b>

COMPONENT METHOD SUMMARY	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
BEGINNING RESERVE FUND BALANCE	135,385	157,684	179,162	171,294	114,729	141,056	118,870	133,813	160,504	187,462	214,691	217,252	227,462	242,961	267,991	214,360	213,748	244,412	273,904	193,770
PLUS ANNUAL COMPONENT CONTRIBUTION	40,718	33,344	29,097	25,038	25,038	24,912	25,209	25,209	25,209	25,209	25,865	25,341	25,503	25,621	27,559	28,363	28,363	28,404	31,578	33,185
CAPITAL EXPENDITURES	20,000	13,632	38,923	83,459	0	48,650	11,597	0	0	0	25,602	17,451	12,427	3,171	84,032	31,283	0	1,522	114,635	15,987
SUBTOTAL	156,103	177,396	169,336	112,873	139,767	117,318	132,482	159,022	185,713	212,671	214,954	225,142	240,538	265,411	211,518	211,440	242,111	271,294	190,847	210,968
PLUS INTEREST INCOME @ 1.00%	1,581	1,765	1,958	1,857	1,289	1,552	1,331	1,481	1,749	2,020	2,297	2,320	2,424	2,580	2,842	2,308	2,301	2,610	2,923	2,127
FULLY FUNDED RESERVE FUND BALANCE	157,684	179,162	171,294	114,729	141,056	118,870	133,813	160,504	187,462	214,691	217,252	227,462	242,961	267,991	214,360	213,748	244,412	273,904	193,770	213,095

PERCENT FUNDED FOR CURRENT CYCLE **76%**

TOTAL EXPENDITURES **522,371**

TOTAL CONTRIBUTIONS **558,765**

STUDY PERIOD TOTAL INTEREST **41,316**

AVERAGE ANNUAL CONTRIBUTION **27,938**



**PHOTOGRAPHS  
WITH  
DESCRIPTIVE  
NARRATIVES**



**MASON & MASON**  
CAPITAL RESERVE ANALYSTS, INC.



**PHOTO #1**  
The main entrance sign, stone planter, and the landscape lights appear to be in continuing good condition.



**PHOTO #2**  
The landscape lighting installed along Snow Hill Drive at the entrance appear to be in fair to continuing good condition. Lighting was not observed after dark.



**PHOTO #3**  
The rear entrance sign and monument appears to be in continuing good condition. One landscape light at this monument is deflected.



**PHOTO #4**  
The wood retaining walls and the timber steps range from fair to continuing good condition.



**PHOTO #5**  
The wood footbridge is in fair condition. A few of the treads are beginning to deteriorate, but the railing and bridge framing appear to be in continuing good condition.



**PHOTO #6**  
The outdoor furniture is in generally fair condition. Cleaning and re-staining the furniture may help to extend the service life and improve appearance.



**PHOTO #7**  
The upper pond overflow riser has vegetation growing in it, which should be cleared before it becomes an issue.



**PHOTO #8**  
The upper pond appears to be healthy. Heavy rains the night before had helped the pond reach a full level.



**PHOTO #9**  
The inlet of the lower pond was quite full of sedimentation. The ponds may require dredging at least every 15 to 20 years.



**PHOTO #10**  
The Tennis pavilion structure, roofing, and siding ranges from fair to continuing good condition. Continued maintenance of the building will be required in order to achieve a long service life.



**PHOTO #11**  
The tennis courts were restored circa 2011. Structurally, the courts appear to be in good condition, with no cracking observed. However, they require new color coating near-term.



**PHOTO #12**  
The tennis court fencing is in continuing good condition.