



MASON & MASON
CAPITAL RESERVE ANALYSTS, INC.



Condition Assessment
and
Reserve Fund Plan
2006
for
Summer Oak
Burke, Virginia



Prepared for:
The Board of Trustees



MASON & MASON
CAPITAL RESERVE ANALYSTS, INC.



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May 31, 2006

Ms. Karen Rae Frank, Finance Administrator
The Burke Centre Conservancy
6060 Burke Centre Parkway
Burke, Virginia 22015-3702

RE: **CONDITION ASSESSMENT AND RESERVE FUND PLAN 2006**
Summer Oak
Burke, Virginia
Project No. 5983-15

Dear Ms. Frank:

Mason & Mason Capital Reserve Analysts, Inc. has completed the report for the above community.

As outlined in our proposal, the report is being submitted to you and the Board of Trustees for review and comment. A review of Section 1.0 and 2.0 will provide you with our findings and financial analyses.

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

Sincerely,

Mason & Mason Capital Reserve Analysts, Inc.

James G. Mason, R. S.
Principal

N. K. Mason, R. S.
Principal



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RESERVE FUND PLAN

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FOREWORD

One of the most important assets held by a common-property owner's association is its replacement reserve fund. The goal of the fund is to protect property values, not only for common areas, but also the individual properties within the community whose values depend upon the condition of the common assets. Reserve fund plans protect property by providing a methodology for replacement of deteriorating capital assets. The end result of a successfully implemented reserve fund plan is an increased quality of life for community residents.

1.0 INTRODUCTION

1.1 Background: Summer Oak Cluster is comprised of 116 dwelling units within 23 quadrplex buildings located on Summer Oak Way, Oak Thrush Court, Summer Oak Court, and Oak Tanager Court off Oak Leather Drive (Route 6416) north of Burke Centre Parkway in Burke, Virginia. The community was constructed circa 1979. The street layout includes concrete sidewalks, curbs and gutters, and 27 parking bays providing 258 spaces. Site features include concrete leadwalks (to multiple units), concrete steps, split rail fencing, and a storm water drainage system.

James G. Mason, R. S., and N. K. Mason, R. S. conducted the field evaluation for this report on May 30, 2006. The weather was clear and the temperature was approximately 95 degrees F. Precipitation had not occurred for several days prior to the site visit. Pavements, walkways, and grounds were generally dry and clean of debris.

1.2 Principal Findings: The common assets appear to be in overall good condition. The community has now passed its twenty-five-year benchmark in terms of replacement of major systems. We understand that the first full asphalt pavement restoration project was completed in approximately 1993, and the pavement appears to be in fair condition with past seal coat and crack-filling maintenance. The next overlay restoration should be anticipated in approximately 2011. Concrete sidewalks and curbs and gutters have received periodic replacements and appear to be in generally fair to good condition. 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.

The net effect of these changes to the reserve fund plan is that there is a required increase to \$9.67 per unit per month for the 2007 reserve contribution to properly fund at levels consistent with the Component Method. **Anything less than a Component Method level is deficit funding** and will eventually result in a shortage of funds possibly requiring large increases, bank loans, or special assessments, all of which should be avoided. Please see the Financial Overview, Section 2 below, for specific information, and a Cash Flow Alternative Funding Plan.

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 18, and the Asphalt Pavement Supplemental Report in Section 7, for specific information.

2.0 FINANCIAL OVERVIEW

2.1 Calculation Basics: The Association is on a calendar fiscal year. Management reported that the reserve fund balance, including cash and securities, as of December 31, 2005, was \$88,595. We have used the **OMB projected, five-year average 4.00% annual interest income factor** and the **3.50% inflation factor** in our model. The total expenditures for the twenty-year study period for both the **Cash Flow Method and Component Method** are projected to be **\$350,916**.

2.2 Current Funding Analysis, Cash Flow Method (Table 3 & Graph): The current annual contribution to reserves is \$9,034. At this level, the total for all annual contributions for the twenty-year study period would be \$180,680, and the total interest income is projected to be \$20,122. **Continued funding at this level results in the depletion of the reserve fund by 2011, the year of the projected asphalt restoration project.**

2.3 Alternative Funding Analysis, Cash Flow Method (Table 3.1 and Graph): This alternative provides the annual contributions necessary to maintain balances more consistent with the **Component Method funding** by

increasing the annual contribution to **\$13,455** in **2007** and providing an annual escalation factor of **3.50%** (matching inflation) thereafter. This alternative allows for a gradual increase over time after the initial increase and addresses generational equity issues. The total for all annual contributions for the twenty-year study period would be **\$363,680**, and the total interest income is projected to be **\$81,414**. The reserve fund balance in the last year of the study (2025) is **\$182,770**, or a 19% balance to asset base ratio.

2.4 Funding Analysis, Component Method (Table 4 & Graph): This method of funding would require annual contributions ranging from a low of **\$12,677** to a high of **\$25,736** for an average annual contribution throughout the twenty-year study period of **\$18,077**. The total for all annual contributions for the twenty-year study period would be **\$360,147**, and the total interest income is projected to be **\$84,948**. The **Fully Funded** ending balance in 2025 is **\$182,771**. The Component Method model considers the current reserve fund balance in computing individual component contributions for current cycles. **The Component Method model distributes the current reserve fund balance proportionally to all components prior to calculating the individual component contributions for each component cycle.**

2.5 Reserve Funding Philosophy: The condition assessment and reserve fund plan is intended to be a working tool for Management and the Board for planning over the long term in order to help them understand the complex issues before them and make informed decisions. The Board of Directors, in consultation with Management and accounting professionals, should decide which of the two reserve funding methods is appropriate for the community. **We believe that funding using the Cash Flow Method based on levels determined by the Component Method is the most appropriate and manageable approach.**

3.0 VISUAL EVALUATION METHODOLOGY

The condition assessment forming the basis for this report was visual and non-invasive. We did not perform any destructive testing to uncover or expose hidden conditions. No operational testing of mechanical, electrical, plumbing, fire protection, or other internal systems was performed. No spaces were entered that were inaccessible or potentially hazardous. Code compliance, capacities and equipment adequacy for current loads were not addressed. Mason & Mason makes no warranty that every defect is disclosed. Our scope of work does not include an evaluation of moisture penetration, mold, indoor air quality, or other environmental issues. While we may identify safety hazards observed during the course of the field evaluation, this report should not be considered to be a full safety evaluation of components.

Repair and replacement costs are based upon commonly accepted references and our experience with similar components installed in similar circumstances. Our opinions of costs are based on published construction cost data, experience with similar projects, information provided by local contractors and management personnel. 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 presume a normal level of past, present and future maintenance. No warranties or guarantees of component service life expectancies are expressed or implied and none should be inferred by this report. Actual experience in replacing components may differ significantly from the projections in the Reserve Fund Plan, because of conditions beyond our control or that were not visually apparent at the time of the evaluation. This report is not a mandate, but is intended to be a guide for future planning.

4.0 ACCOUNTING METHODS

4.1 Cash Flow Method of Funding (Tables 3, 3.1 etc.): The balance of the reserve fund and corresponding annual contribution is determined by setting a level above a pre-determined minimum balance computed after the yearly expenditures. The minimum balance is typically expressed as a percentage, or ratio, of the total reserve fund balance to

the asset base. The appropriate level is determined by a variety of factors including condition, age, and complexity of the community. This method is becoming widely accepted in part because of advanced computer modeling but also because it can be a more efficient use of capital. **The goal should be to set the first year contribution at a level requiring only small annual inflationary increases, to fully fund the reserves long-term. This addresses generational equity issues, as the first year contribution will be equal to the last year in terms of the cost of money. We have determined through many years of experience that funding under the Cash Flow Method at levels determined by the Component Method will produce the best results. The combination of the two systems is the most manageable.** This method is depicted on Table 3, Current Funding Analysis Cash Flow Method, and Alternatives, if appropriate.

4.2 Component Method of Funding (Table 4): Each component is fully funded at 100% of its replacement value on a ratio directly proportionate to its remaining life cycle years. Each component is also allotted a percentage of the fund's total reserves (balance on hand) as part of this complex calculation prior to determining the actual annual contribution. **Fully funded** means the fund is on target, including time considerations. Funds set aside for replacement of individual components are not normally used for the replacement of other components. In rare cases where a reserve fund is actually overfunded, \$0 will be displayed on the component tables, indicating that the component is fully funded for that cycle. The Component Method usually results in annual contribution fluctuations and fund balances, but is considered to be the most conservative method for accruing reserve funds. This method is depicted on **Table 4, Funding Analysis Component Method.**

4.3 Interest Income on Reserve Funds: In order to replicate approximate financial conditions, interest income on reserve funds should be recognized. The financial tables have been programmed to calculate interest income based on a pre-determined rate. This rate can be set at any level, including zero, for those desiring to not recognize interest. **Typically, the rate used reflects OMB's (Office of Management and Budget) projection for T-Note rates during the 2005 through 2015 time period.** The rate should reflect, as accurately as possible, the actual combined rate of return on all securities and other instruments of investment.

Interest calculations are segregated into three individual asset components, and the results are summed to generate the yearly interest accumulations. Interest accrued by the reserve fund assets are compartmentalized and calculated according to the following three categories; beginning reserve fund balance, interest accumulated upon the reserve fund contributions, and interest lost by the capital expenditures.

Interest earned on the yearly beginning reserve fund balance is calculated by compounding the beginning reserve fund balance on a monthly period by the interest rate. Interest earned for the reserve fund contributions are calculated by assuming that twelve equal installments are deposited, and interest is accrued and compounded monthly upon the accumulating balance. Likewise, the interest lost on the capital expenditures is calculated on the assumption that expenditures are deducted from the reserve balance on a monthly basis, and the interest that is lost is calculated upon the aggregate monthly balance. 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.

4.4 Future Replacement Costs (Inflation): In order to replicate actual financial conditions, 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. Typically, the rate used reflects **OMB's average annual Consumer Price Index (urban) for the period of 2005 through 2015.**

4.5 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. Example: Funding for a re-roofing project, while, at the same time, funding for a second re-roofing project. This method often results in higher annual contribution requirements and leads to generational equity issues. Mason & Mason employs this method only in special circumstances.

4.6 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. 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. This method is the standard by which Mason & Mason calculates funding.

5.0 REPLACEMENT METHODS

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

5.2 Cyclic Replacement: Components are replaced in stages over a period of time. Example: Sidewalks are typically replaced in sections rather than as complete units.

5.3 Minor Components: A minimum component value should be established for inclusion in the reserve fund. Components of insignificant value in relation to the scale of the community should not be included and should be deferred to the maintenance budget. A small community might exclude components with aggregate values less than \$1,000, while a large community might exclude components with aggregate values of less than \$5,000.

5.4 Long Life Components: Almost all communities have some components with useful service lives typically ranging between thirty and sixty years. Traditionally, this type of component has been ignored completely or included at full replacement value far beyond the twenty-year study period. Example: Storm water drainage systems have a useful service life of approximately forty to sixty years. However, they typically require expensive repairs sometime during their service life. Mason & Mason programming addresses these issues by calculating partial funding over a period of time to provide for anticipated localized repairs.

5.5 Projected Useful Service Life: Useful service lives of components are established using construction industry standards as a guideline. Useful service lives can vary greatly due to initial quality and installation, inappropriate materials, maintenance practices, environment 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 replacements and for accumulating reserve funds.

6.0 UPDATING THE RESERVE FUND PLAN

In order for a reserve fund plan to remain a viable planning tool, it should be periodically updated. Changing financial conditions and widely varying aging patterns of components dictate that revisions should be undertaken every three 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 typically involve a site visit to observe current conditions, adjusting fund balances and contributions, and recalculating the financial tables. This updating process insures the integrity of the reserve fund plan and contributes to the financial health of the community. Mason & Mason encourages certain types of communities to perform Administrative Updates on complex properties that are undergoing several costly projects simultaneously. These updates include adjustments to the replacement schedules, annual contributions, balances, replacement costs, and interest income. The Administrative Update does not require a

site visit and can be a cost-effective way of keeping the Reserve Fund Plan current between Full Update cycles. Updates are particularly important for those communities employing the Cash Flow Method because it maintains the twenty-year window. The Cash Flow Method does not consider expenditures beyond the study period. Those expenditures are brought into the study as it is periodically updated.

7.0 ASPHALT PAVEMENT SUPPLEMENTAL REPORT*

Street Name	Total SY Asphalt Pavement	SY Full- Depth Repairs (A)	Linear Footage Cracks (B)	Parking Spaces	Parking Bays
Summer Oak Way	5,392	228	1,200	106	11
Oak Thrush Court	1,565	9	150	46	5
Summer Oak Court	2,805	15	300	54	6
Oak Tanager Court	1,933	78	400	52	5
TOTALS	11,695	330	2,050	258	27

* All quantities approximate (A) Quantity of deflected pavement that will require full-depth repairs near-term (B) Cracks that will require crack-filling maintenance near-term

Reserve Fund Plan for
15. SUMMER OAK
Burke, Virginia

COMPONENT DATA AND
ASSET REPLACEMENT SCHEDULE
TABLE 1
2006 Through 2025

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	18
Component No.	Component	Quantity	Unit of Measurement	Unit Cost	Total Asset Base	Typical Service Life (Yrs)	1st Cycle Year	Percentage of Replacement	Cost F or 1st Cycle	2nd Cycle Year	Percentage of Replacement	Cost F or 2nd Cycle	3rd Cycle Year	Percentage of Replacement	Cost F or 3rd Cycle	DISCUSSION
1. ASPHALT COMPONENTS																
1.1	Asphalt Restoration Project	11,695	SY	\$8.00	\$93,560	18	2011	100%	\$111,425	2029	100%	\$209,020				The asphalt pavement throughout the cluster appears to be the second-cycle 1993 restoration overlay and in generally fair condition, reaching the end of its projected service life in approximately 2011. We observed wide-area cracking and deflection indicative of sub-base damage. The thickness of the pavement could not be visually determined. We understand that the pavement was originally installed in approximately 1979. The cost is based on edgemilling and a 1-1/2" compacted overlay. An issue in the cluster is that the overlay was performed without benefit of edgemilling and the drainage elevation of the curb gutters has been altered. The third-cycle overlay will require removal of the asphalt on the curbs to correct the deficiency. A full useful service life is dependent on preventative maintenance being performed as scheduled in Items 1.2 and 1.3 below. See the Asphalt Pavement Supplemental Report, Section 7, for additional details.
1.2	Asphalt Seal Coat	11,695	SY	\$1.00	\$11,695	6	2007	100%	\$12,111	2017	100%	\$17,178	2023	100%	\$21,185	The pavement appears to have been seal coated. In order to help extend the useful service life of the pavement and improve curb appeal after repairs are performed, we have scheduled seal coating projects generally every six years, except in the year of the pavement restoration project.
1.3	Asphalt Full-Depth Repair & Crack Fill Allowance	1	LS	\$20,000.00	\$20,000	6	2007	65%	\$13,462	2011	100%	\$23,819	2017	25%	\$7,344	Deflected pavement (approximately 330 square yards), indicative of sub-base damage, was observed in the cluster. Filled random longitudinal and transverse cracking were observed. Approximately 2,050 linear feet of additional open cracking require crack-filling maintenance. Repairs are essential in order to achieve the projected remaining useful service life of the pavement. Full-depth repairs and crack filling are scheduled progressively approximately every six years throughout the study period, including the year of the asphalt restoration project. See the Asphalt Pavement Supplemental Report, Section 7, for additional details.
2. CONCRETE COMPONENTS																
2.1	Concrete Sidewalks & Steps	19,827	SF	\$8.68	\$172,098	5	2007	4%	\$7,129	2012	4%	\$8,490	2017	4%	\$10,111	Concrete sidewalks throughout the community are generally 4' or 5' wide with 3' leadwalks to multiple units. Leadwalks to single units are not included in the quantity. We counted 69 3'-wide steps at grade differentials at the multiple-unit leadwalks. The thickness of the concrete could not be visually determined. Sidewalk condition ranges from good to poor. We observed approximately 825 square feet of deficient concrete sidewalks including settlement between sections causing tripping hazards and cracked or scaled section. Most steps are in generally good condition with a few steps cracked at riser/tread interface and some surface scaling. At one location, we observed evidence of concrete grinding in lieu of repairs, which has been generally an ineffective repair. As sidewalks age, scaled surfaces, cracking, and settlement should be anticipated. Replacement of some of the more severely scaled sections should be addressed with each replacement cycle as they will tend to deteriorate more quickly over time. Cyclic repairs are scheduled as full replacement at one time is not appropriate or anticipated. Concrete repairs are scheduled to coincide with other concrete components to promote cost efficiencies.
2.2	Concrete Curbs & Gutters	5,924	LF	\$30.00	\$177,720	5	2012	2%	\$4,384	2017	2%	\$5,221	2022	2%	\$6,218	The driveways and parking bays are lined with standard-profile, cast-in-place, concrete curbs. In many areas the previous asphalt restoration project covered the gutter portion of the curbs, which is not a good practice and may be problematic in future curb and pavement replacement projects. The curbs are generally in good condition with few deficiencies observed other than some minor settlement, which is not currently problematic. As curbs age, cracks, vehicle impact damage, and settlement should be anticipated. Cyclic repairs are scheduled as full replacement at one time is not appropriate or anticipated. Concrete repairs are scheduled to coincide with other concrete components to promote cost efficiencies.
3. SITE FEATURES																
3.1	Split Rail Fencing	1,260	LF	\$12.00	\$15,120	20	2023	100%	\$27,389	2043	100%	\$55,099				Two-rail split rail fencing is constructed adjacent to Oak Leather Drive and also at Summer Oak Court. Fencing appears to be newer and in generally good condition with the exception of a couple of rails down, one broken rail, and a minor amount of warped timbers and out of plumb posts. Replacement of deteriorated timbers and securing of out of plumb posts should be accomplished periodically under the operations budget in order to maintain curb appeal and achieve the full useful service life of the fencing.
3.2	Storm Water Drainage System Allowance	1	LS	\$8,500.00	\$8,500	5	2009	50%	\$4,720	2014	100%	\$11,242	2019	100%	\$13,389	Storm water drainage is provided by concrete yard drains, curb drop inlets, and underground structures. All observable components appear to be in good condition. Though storm water drainage systems are a long life component and catastrophic failure is not anticipated, it is prudent to plan for localized repairs and repairs to ancillary damage as the system ages. This category may also be used to address localized erosion and drainage issues. We observed a few areas of ponding water, such as at the front of 10629 Summer Oak Court, which may be problematic, especially during the winter.

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
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CALENDAR OF EXPENDITURES
TABLE 2
 2006 Through 2025



YEAR	COMPONENT NO.	COMPONENT	PRESENT COST 2006	FUTURE COST (INFLATED)	TOTAL ANNUAL EXPENDITURES	ACTION
1	2	3	4	5	6	7
2006					2006 NO EXPENDITURES	
2007					2007 TOTAL EXPENDITURES	
	1.2	Asphalt Seal Coat	\$11,695	\$12,111		
	1.3	Asphalt Full-Depth Repair & Crack Fill Allowance	\$13,000	\$13,462		
	2.1	Concrete Sidewalks & Steps	\$6,884	\$7,129		
					\$32,702	
2008					2008 NO EXPENDITURES	
2009					2009 TOTAL EXPENDITURES	
	3.2	Storm Water Drainage System Allowance	\$4,250	\$4,720		
					\$4,720	
2010					2010 NO EXPENDITURES	
2011					2011 TOTAL EXPENDITURES	
	1.1	Asphalt Restoration Project	\$93,560	\$111,425		
	1.3	Asphalt Full-Depth Repair & Crack Fill Allowance	\$20,000	\$23,819		
					\$135,243	
2012					2012 TOTAL EXPENDITURES	
	2.1	Concrete Sidewalks & Steps	\$6,884	\$8,490		
	2.2	Concrete Curbs & Gutters	\$3,554	\$4,384		
					\$12,874	
2013					2013 NO EXPENDITURES	
2014					2014 TOTAL EXPENDITURES	
	3.2	Storm Water Drainage System Allowance	\$8,500	\$11,242		
					\$11,242	
2015					2015 NO EXPENDITURES	
2016					2016 NO EXPENDITURES	
2017					2017 TOTAL EXPENDITURES	
	1.2	Asphalt Seal Coat	\$11,695	\$17,178		
	1.3	Asphalt Full-Depth Repair & Crack Fill Allowance	\$5,000	\$7,344		
	2.1	Concrete Sidewalks & Steps	\$6,884	\$10,111		
	2.2	Concrete Curbs & Gutters	\$3,554	\$5,221		
					\$39,853	
2018					2018 NO EXPENDITURES	
2019					2019 TOTAL EXPENDITURES	
	3.2	Storm Water Drainage System Allowance	\$8,500	\$13,389		
					\$13,389	
2020					2020 NO EXPENDITURES	
2021					2021 NO EXPENDITURES	

Reserve Fund Plan for
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CALENDAR OF EXPENDITURES
TABLE 2
 2006 Through 2025



YEAR	COMPONENT NO.	COMPONENT	PRESENT COST 2006	FUTURE COST (INFLATED)	TOTAL ANNUAL EXPENDITURES	ACTION
1	2	3	4	5	6	7
2022					2022	
	2.1	Concrete Sidewalks & Steps	\$6,884	\$12,042	TOTAL EXPENDITURES	
	2.2	Concrete Curbs & Gutters	\$3,554	\$6,218		
					\$18,259	
2023					2023	
	1.2	Asphalt Seal Coat	\$11,695	\$21,185	TOTAL EXPENDITURES	
	1.3	Asphalt Full-Depth Repair & Crack Fill Allowance	\$10,000	\$18,115		
	3.1	Split Rail Fencing	\$15,120	\$27,389		
					\$66,689	
2024					2024	
	3.2	Storm Water Drainage System Allowance	\$8,500	\$15,945	TOTAL EXPENDITURES	
					\$15,945	
2025					2025	
					NO EXPENDITURES	

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.
- Column 8 **Balance to Asset Base Ratio**, expressed as a percentage, is the ratio between the ending reserve fund balance and the total asset base for that year. The ratio is useful to the analysts in understanding general financial condition, but there is no standard ratio as each community's condition and complexity varies.



Reserve Fund Plan for
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**CURRENT FUNDING
ANALYSIS
CASH FLOW METHOD
TABLE 3**



MASON & MASON

Reston, Virginia

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Beginning Reserve Fund Balance: **\$88,592** Annual Contribution To Reserves: **\$9,034** Contribution Percentage Increase: **0.00%** Annual Inflation Factor: **3.50%** Annual Interest Income Factor: **4.00%**

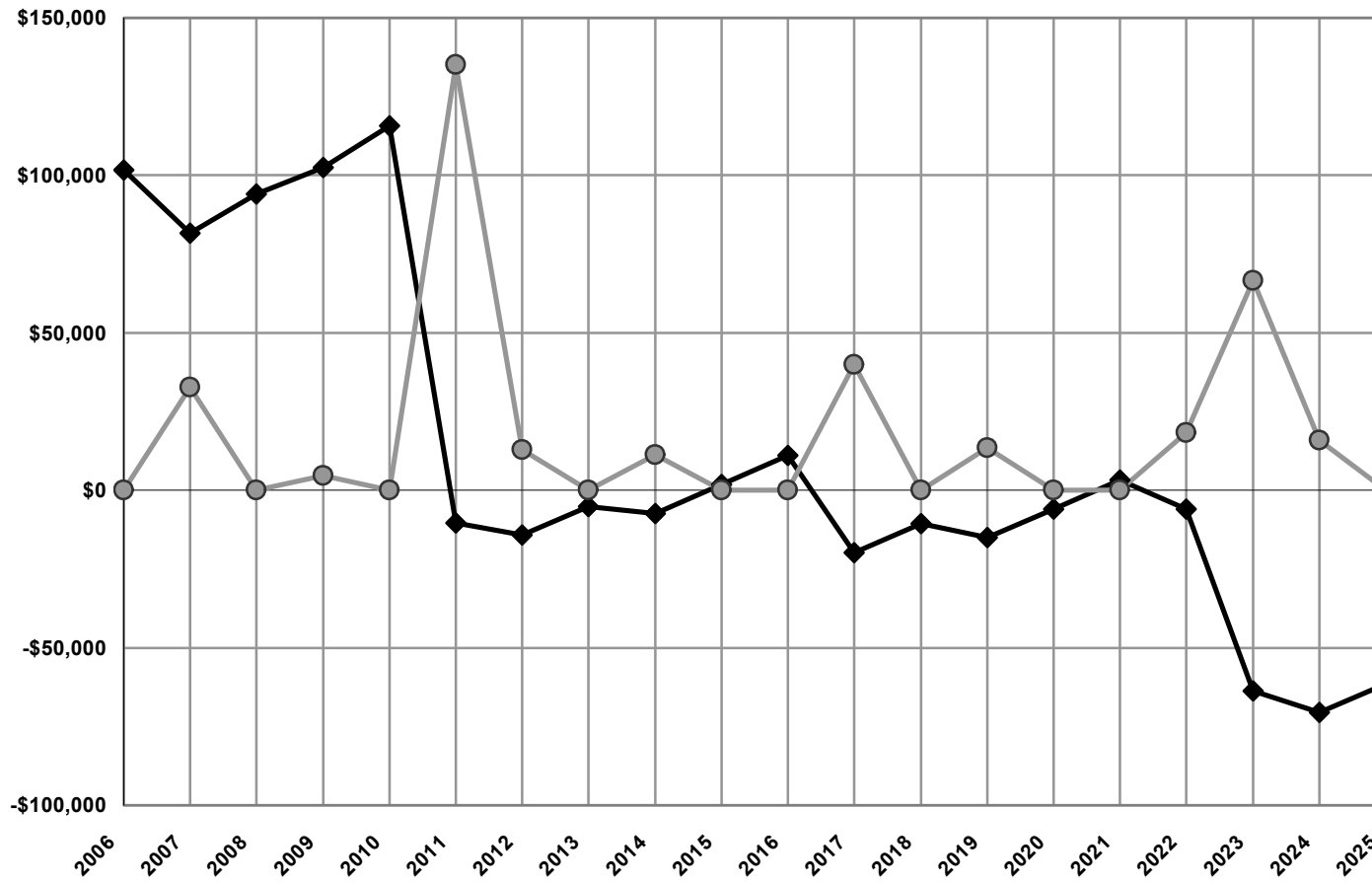
YEAR	TOTAL ASSET BASE	BEGINNING RESERVE FUND BALANCE	ANNUAL CONTRIBUTION	INTEREST INCOME	CAPITAL EXPENDITURES	ENDING RESERVE FUND BALANCE	BALANCE TO ASSET BASE RATIO
1	2	3	4	5	6	7	8
2006	\$498,693	\$88,592	\$9,034	\$4,006	\$0	\$101,632	20%
2007	\$516,148	\$101,632	\$9,034	\$3,626	\$32,702	\$81,589	16%
2008	\$534,213	\$81,589	\$9,034	\$3,522	\$0	\$94,146	18%
2009	\$552,910	\$94,146	\$9,034	\$3,931	\$4,720	\$102,391	19%
2010	\$572,262	\$102,391	\$9,034	\$4,370	\$0	\$115,795	20%
2011	\$592,291	\$115,795	\$9,034	\$0	\$135,243	-\$10,415	-2%
2012	\$613,021	-\$10,415	\$9,034	\$0	\$12,874	-\$14,255	-2%
2013	\$634,477	-\$14,255	\$9,034	\$0	\$0	-\$5,221	-1%
2014	\$656,684	-\$5,221	\$9,034	\$0	\$11,242	-\$7,429	-1%
2015	\$679,668	-\$7,429	\$9,034	\$198	\$0	\$1,804	0%
2016	\$703,456	\$1,804	\$9,034	\$272	\$0	\$11,109	2%
2017	\$728,077	\$11,109	\$9,034	\$0	\$39,853	-\$19,710	-3%
2018	\$753,560	-\$19,710	\$9,034	\$0	\$0	-\$10,676	-1%
2019	\$779,935	-\$10,676	\$9,034	\$0	\$13,389	-\$15,031	-2%
2020	\$807,232	-\$15,031	\$9,034	\$0	\$0	-\$5,997	-1%
2021	\$835,485	-\$5,997	\$9,034	\$198	\$0	\$3,236	0%
2022	\$864,727	\$3,236	\$9,034	\$0	\$18,259	-\$5,990	-1%
2023	\$894,993	-\$5,990	\$9,034	\$0	\$66,689	-\$63,645	-7%
2024	\$926,318	-\$63,645	\$9,034	\$0	\$15,945	-\$70,556	-8%
2025	\$958,739	-\$70,556	\$9,034	\$0	\$0	-\$61,522	-6%

STUDY PERIOD TOTALS

\$180,680 \$20,122 \$350,916

CURRENT FUNDING ANALYSIS
CASH FLOW METHOD
TABLE 3

◆ ENDING RESERVE FUND BALANCE
○ CAPITAL EXPENDITURES



Reserve Fund Plan for
15. SUMMER OAK
Burke, Virginia

**ALTERNATIVE FUNDING
ANALYSIS
CASH FLOW METHOD
TABLE 3.1**



MASON & MASON

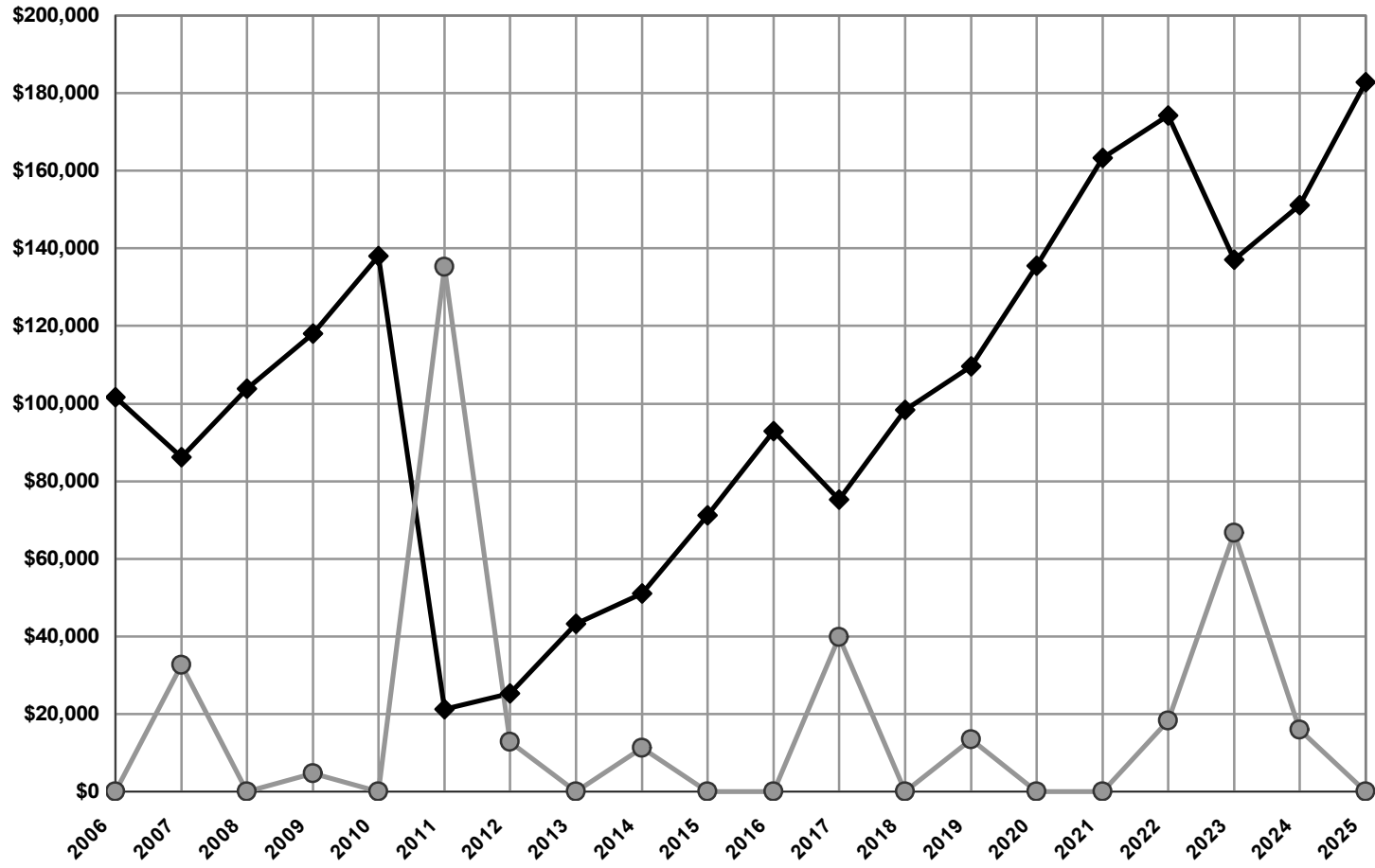
Reston, Virginia reserves@shentel.net 800-776-6980
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Beginning Reserve Fund Balance: **\$88,592** Annual Contribution To Reserves: **\$9,034** Contribution Percentage Increase: **3.50%** Annual Inflation Factor: **3.50%** Annual Interest Income Factor: **4.00%**

YEAR	TOTAL ASSET BASE	BEGINNING	ANNUAL	INTEREST INCOME	CAPITAL	ENDING RESERVE	BALANCE TO
		RESERVE FUND BALANCE	CONTRIBUTION		EXPENDITURES	FUND BALANCE	ASSET BASE RATIO
1	2	3	4	5	6	7	8
2006	\$498,693	\$88,592	\$9,034	\$4,006	\$0	\$101,632	20%
2007	\$516,148	\$101,632	\$13,455	\$3,723	\$32,702	\$86,108	17%
2008	\$534,213	\$86,108	\$13,926	\$3,814	\$0	\$103,848	19%
2009	\$552,910	\$103,848	\$14,414	\$4,444	\$4,720	\$117,986	21%
2010	\$572,262	\$117,986	\$14,918	\$5,134	\$0	\$138,038	24%
2011	\$592,291	\$138,038	\$15,440	\$3,014	\$135,243	\$21,250	4%
2012	\$613,021	\$21,250	\$15,981	\$936	\$12,874	\$25,292	4%
2013	\$634,477	\$25,292	\$16,540	\$1,393	\$0	\$43,226	7%
2014	\$656,684	\$43,226	\$17,119	\$1,891	\$11,242	\$50,994	8%
2015	\$679,668	\$50,994	\$17,718	\$2,466	\$0	\$71,178	10%
2016	\$703,456	\$71,178	\$18,338	\$3,302	\$0	\$92,819	13%
2017	\$728,077	\$92,819	\$18,980	\$3,329	\$39,853	\$75,275	10%
2018	\$753,560	\$75,275	\$19,644	\$3,498	\$0	\$98,417	13%
2019	\$779,935	\$98,417	\$20,332	\$4,164	\$13,389	\$109,524	14%
2020	\$807,232	\$109,524	\$21,044	\$4,924	\$0	\$135,492	17%
2021	\$835,485	\$135,492	\$21,780	\$5,998	\$0	\$163,270	20%
2022	\$864,727	\$163,270	\$22,542	\$6,748	\$18,259	\$174,301	20%
2023	\$894,993	\$174,301	\$23,331	\$6,159	\$66,689	\$137,103	15%
2024	\$926,318	\$137,103	\$24,148	\$5,768	\$15,945	\$151,074	16%
2025	\$958,739	\$151,074	\$24,993	\$6,703	\$0	\$182,770	19%
STUDY PERIOD TOTALS			\$363,680	\$81,414	\$350,916		

ALTERNATIVE FUNDING ANALYSIS
CASH FLOW METHOD
TABLE 3.1

◆ ENDING RESERVE FUND BALANCE
● CAPITAL EXPENDITURES



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.

FUNDING ANALYSIS
COMPONENT METHOD
TABLE 4



Beginning Reserve Fund Balance:
\$88,592

Component Number	COMPONENT	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
1.1	Asphalt Restoration Project	\$5,314	\$5,314	\$5,314	\$5,314	\$5,314	\$5,314	\$7,921	\$7,921	\$7,921	\$7,921	\$7,921	\$7,921	\$7,921	\$7,921	\$7,921	\$7,921	\$7,921	\$7,921	\$7,921
1.2	Asphalt Seal Coat	\$1,103	\$1,103	\$1,395	\$1,395	\$1,395	\$1,395	\$1,395	\$1,395	\$1,395	\$1,395	\$1,395	\$1,395	\$3,120	\$3,120	\$3,120	\$3,120	\$3,120	\$3,120	\$2,090
1.3	Asphalt Full-Depth Repair & Crack Fill Allow	\$1,476	\$1,476	\$5,483	\$5,483	\$5,483	\$5,483	\$1,081	\$1,081	\$1,081	\$1,081	\$1,081	\$1,081	\$2,667	\$2,667	\$2,667	\$2,667	\$2,667	\$2,667	\$6,579
2.1	Concrete Sidewalks & Steps	\$2,779	\$2,779	\$1,532	\$1,532	\$1,532	\$1,532	\$1,532	\$1,824	\$1,824	\$1,824	\$1,824	\$1,824	\$2,172	\$2,172	\$2,172	\$2,172	\$2,172	\$2,587	\$2,587
2.2	Concrete Curbs & Gutters	\$440	\$440	\$440	\$440	\$440	\$440	\$440	\$942	\$942	\$942	\$942	\$942	\$1,122	\$1,122	\$1,122	\$1,122	\$1,122	\$1,336	\$1,336
3.1	Split Rail Fencing	\$681	\$681	\$681	\$681	\$681	\$681	\$681	\$681	\$681	\$681	\$681	\$681	\$681	\$681	\$681	\$681	\$681	\$681	\$1,797
3.2	Storm Water Drainage System Allowance	\$883	\$883	\$883	\$883	\$2,028	\$2,028	\$2,028	\$2,028	\$2,028	\$2,415	\$2,415	\$2,415	\$2,415	\$2,415	\$2,876	\$2,876	\$2,876	\$2,876	\$2,876
ANNUAL COMPONENT CONTRIBUTION TOTALS		\$12,677	\$12,677	\$15,728	\$15,728	\$16,873	\$16,873	\$15,079	\$15,873	\$15,873	\$16,260	\$16,260	\$16,260	\$20,098	\$20,098	\$20,560	\$20,560	\$20,560	\$21,189	\$25,186

COMPONENT METHOD SUMMARY	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
BEGINNING RESERVE FUND BALANCE	\$88,592	\$105,156	\$88,980	\$108,679	\$124,357	\$146,666	\$31,693	\$35,240	\$52,897	\$59,786	\$78,838	\$98,667	\$78,581	\$102,322	\$113,350	\$138,978	\$165,651	\$174,753	\$135,383
PLUS ANNUAL COMPONENT CONTRIBUTION	\$12,677	\$12,677	\$15,728	\$15,728	\$16,873	\$16,873	\$15,079	\$15,873	\$15,873	\$16,260	\$16,260	\$16,260	\$20,098	\$20,098	\$20,560	\$20,560	\$20,560	\$21,189	\$25,186
CAPITAL EXPENDITURES	\$0	\$32,702	\$0	\$4,720	\$0	\$135,243	\$12,874	\$0	\$11,242	\$0	\$0	\$39,853	\$0	\$13,389	\$0	\$0	\$18,259	\$66,689	\$15,945
SUBTOTAL	\$101,269	\$85,131	\$104,708	\$119,687	\$141,230	\$28,296	\$33,899	\$51,113	\$57,528	\$76,046	\$95,098	\$75,074	\$98,680	\$109,032	\$133,909	\$159,538	\$167,951	\$129,253	\$144,625
PLUS INTEREST INCOME @ 4.00%	\$3,887	\$3,849	\$3,970	\$4,670	\$5,437	\$3,397	\$1,341	\$1,784	\$2,258	\$2,792	\$3,569	\$3,508	\$3,642	\$4,318	\$5,069	\$6,113	\$6,802	\$6,131	\$5,721
ENDING RESERVE FUND BALANCE	\$105,156	\$88,980	\$108,679	\$124,357	\$146,666	\$31,693	\$35,240	\$52,897	\$59,786	\$78,838	\$98,667	\$78,581	\$102,322	\$113,350	\$138,978	\$165,651	\$174,753	\$135,383	\$150,345

STUDY PERIOD TOTAL CONTRIBUTIONS	\$360,147
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STUDY PERIOD INTEREST TOTAL	\$84,948
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AVERAGE ANNUAL CONTRIBUTION	\$18,007
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TOTAL EXPENDITURES	
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2025
\$7,921
\$2,090
\$6,579
\$2,587
\$1,336
\$1,797
\$3,426
\$25,736

2025
\$150,345
\$25,736
\$0
\$176,081
\$6,690
\$182,771

\$350,916

**FUNDING ANALYSIS
COMPONENT METHOD
TABLE 4**

◆ ENDING RESERVE FUND BALANCE
● CAPITAL EXPENDITURES

