

# REPLACEMENT RESERVE REPORT FY 2013

## VILLAS AT PARKWOOD ESTATES



Community Management by:

### **WEST POINT COMMUNITY MANAGEMENT**

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# REPLACEMENT RESERVE REPORT

## VILLAS AT PARKWOOD ESTATES

CRESCENT, PENNSYLVANIA



**Scope.** The Villas at Parkwood Estates is a residential condominium community located in Crescent, Pennsylvania. The Villas at Parkwood Estates was constructed in 2000. The community consists of eighteen patio/quad buildings with a total of 72 units. The survey examined the common elements of the property, including:

Fieldwork for this study was conducted on May 14, 2012. The survey examined common elements of the property, including the following:

- Site facilities, including asphalt driveways, concrete leadwalks, concrete front entrance stoops, concrete garage aprons, mailbox pads, site lighting, and community signage.
- Underground utilities, including storm water management, domestic water and sanitary sewer laterals.
- Building exteriors, including roofing, siding, trim, and masonry.

The interior portions of the residential units are individually owned and are not the responsibility of the Association. The interior components and finishes were not evaluated and are not included in the Replacement Reserve Inventory.

### Section A

#### Replacement Reserve Analysis

Executive Summary  
Reserve Status & Funding Plan - A1  
General Information - A2  
Cash Flow Method - A4  
Cash Flow Inflation Funding - A6  
Component Method - A8  
Current Funding and Reserve Analysis  
Comments - A10

### Section B

#### Replacement Reserve Inventory

Replacement Reserve Inventory  
General information - B1  
Replacement Reserve Inventory  
Comments - B2  
Schedule of Projected Replacements  
and Exclusions - B3

### Section C

#### Projected Annual Replacements

Projected Annual Replacements  
General Information - C1  
Reserve Analysis and Inventory Policies,  
Procedures, and Administration - C2  
Calendar of  
Projected Annual Replacements - C2

### Section D

#### Condition Assessment

### Section E

#### Attachments

Accounting Summary  
Appendix  
Video Answers to Frequently Asked Questions

**Level of Service.** This study has been performed as a Level II Update, With Site Visit/On-Site Review as defined under the National Reserve Study Standards that have been adopted by the Community Associations Institute. As such, the component inventory is based on the study that was performed by Miller - Dodson Associates on March 23, 2007. This information was adjusted to reflect changes to the inventory that were provided the community adjusted manager, and the quantities accordingly from field measurement and/or quantity takeoffs from to-scale drawings. The condition of all commonly owned components was ascertained from a site visit and the visual inspection of each component by the Analyst. The life expectancy and the value of components are provided based in part on these observations. The fund status and funding plan have been derived from analysis of this data.

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

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

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

- The Request for Proposal submitted and executed by the Association.
- Our visual evaluation and measurements on May 14, 2012. Miller - Dodson Associates has visually inspected the common elements of the property in order to ascertain the remaining useful life and the replacement costs of these components.

**Engineering Drawings.** No architectural drawings or engineering site plans were available for review in connection with this study. We recommend the Association assemble a library of site and building plans of the entire community. Reproducible drawings should be stored and kept in a secure fireproof location. The Association will find these drawings to be a valuable resource in planning and executing future projects.

**Current Funding.** This reserve study has been prepared for Fiscal Year 2013 covering the period from January 1, 2013 to December 31, 2013. The Replacement Reserves on deposit as of April 30, 2012 are reported to be \$22,454. The planned contribution for the fiscal year is \$45,600. This results in a Reserve Fund balance at the start of the fiscal year as follows:

4/30/2012 balance	\$222,454
8 months contribution	27,840
Planned expenditures	0
FY 2013 opening balance	\$250,294

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

**Acknowledgement.** Miller - Dodson Associates would like to acknowledge the assistance and input of Mr. Scott Bright. He provided very helpful insight into the current operations at the property.

**Analyst's Credentials.** This study has been performed by John R. Stegmiller, who holds a Bachelor's Degree in Architecture in the College of Engineering at The Ohio State University. Mr. Stegmiller is a Registered Architect in the State of Ohio. Mr. Stegmiller is the owner of Stegmiller Architects, a design and construction management firm, which was established in Columbus, Ohio in 1939. Mr. Stegmiller is a retired Captain of the United States Naval Civil Engineer Corps, where he served for nearly 30 years both on active and reserve duty. Condition assessments of naval facilities and equipment represented a large part of his naval experience.

Respectfully submitted,  
MILLER - DODSON ASSOCIATES, INC.

John Stegmiller  
Reserve Analyst

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## EXECUTIVE SUMMARY

The Villas at Parkwood Estates Replacement Reserve Inventory identifies 43 Projected Replacements for funding from Replacement Reserves, with an estimated one-time replacement cost of \$1,638,648.

The Replacement Reserve Analysis calculates recommended funding of Replacement Reserves by the two generally accepted methods, the Cash Flow Method and the Component Method. The Analysis also evaluates current funding of Replacement Reserves, as reported by the Association. The calculations and evaluation are summarized below:

● **\$86,239 CASH FLOW METHOD MINIMUM ANNUAL FUNDING OF REPLACEMENT RESERVES IN THE STUDY YEAR, 2013.**

\$99.81 Per unit (average), minimum monthly funding of Replacement Reserves

The Cash Flow Method (CFM) calculates Minimum Annual Funding of Replacement Reserves that will fund Projected Replacements identified in the Replacement Reserve Inventory from a common pool of Replacement Reserves and prevent Replacement Reserves from dropping below a Minimum Recommended Balance.

CFM - Minimum Annual Funding remains the same between peaks in cumulative expenditures called Peak Years.

The first Peak Year occurs in 2021 and the CFM - Minimum Annual Funding of Replacement Reserves in 2022 declines to \$83,659 (\$96.83 per unit, per month), after the completion of \$944,510 of replacements in 2013 to 2021.

A subsequent Peak Year and decline in the Cash Flow Method, Minimum Annual Funding, occurs in 2041.

● **\$182,063 COMPONENT METHOD RECOMMENDED ANNUAL FUNDING OF REPLACEMENT RESERVES IN THE STUDY YEAR, 2013.**

\$210.72 Per unit (average), recommended monthly funding of Replacement Reserves

The Component Method is a very conservative funding model developed by HUD in the early 1980's.

The Component Method treats each projected replacement in the Replacement Reserve Inventory as a separate account. Deposits are made to each individual account, where funds are held for exclusive use by that item.

Based on this funding model, the Association has a Current Funding Objective of \$822,288.

The Association reports having \$250,294 on deposit, which is 30.4% funded.

● **\$45,600 CURRENT ANNUAL FUNDING OF REPLACEMENT RESERVES (as reported by the Association).**

\$52.78 Per unit (average), reported current monthly funding of Replacement Reserves

The evaluation of Current Funding, as reported by the Association, has calculated that if the Association continues to fund Replacement Reserves at the current level, there will NOT be adequate funds for Projected Replacements in 25 years of the 30-year Study Period, and a maximum shortfall of \$-1,044,994 occurs in 2041.

Pages A2 and A3 explain the Study Year, Study Period, Adjustments (interest & inflation), Beginning Balance, and Projected Replacements. Pages A4 to A9 explain in more detail the calculations associated with the Cash Flow Method, Component Method, and Current Funding.

## REPLACEMENT RESERVE STATUS AND FUNDING PLAN

Current funding of Replacement Reserves is inadequate to fund Projected Replacements.

We recommend the Association adopt a Replacement Reserve Funding Plan based on the Cash Flow Method or the Component Method, to ensure that adequate funding is available throughout the 30-Year Study Period for the \$2,640,663 of Projected Replacements listed in the Villas at Parkwood Estates Replacement Reserve Inventory.

The Funding Plan should be professionally updated every three to five years or after completion of each major replacement project. The Board of Directors has a fiduciary responsibility to review the Funding Plan annually and should consider annual increases in Replacement Reserve funding at least equal to the Producer Price Index.

## REPLACEMENT RESERVE ANALYSIS - GENERAL INFORMATION

The Villas at Parkwood Estates Replacement Reserve Analysis calculations of recommended funding of Replacement Reserves by the Cash Flow Method and the Component Method, and the evaluation of the Current Funding, are based upon the same General Information; including the Study Year, Study Period, Beginning Balance, and Projected Replacements.

### STUDY YEAR

The Association reports that their accounting year begins on January 1, and the Study Year, the first year evaluated by the Replacement Reserve Analysis, begins on January 1, 2013.

### STUDY PERIOD

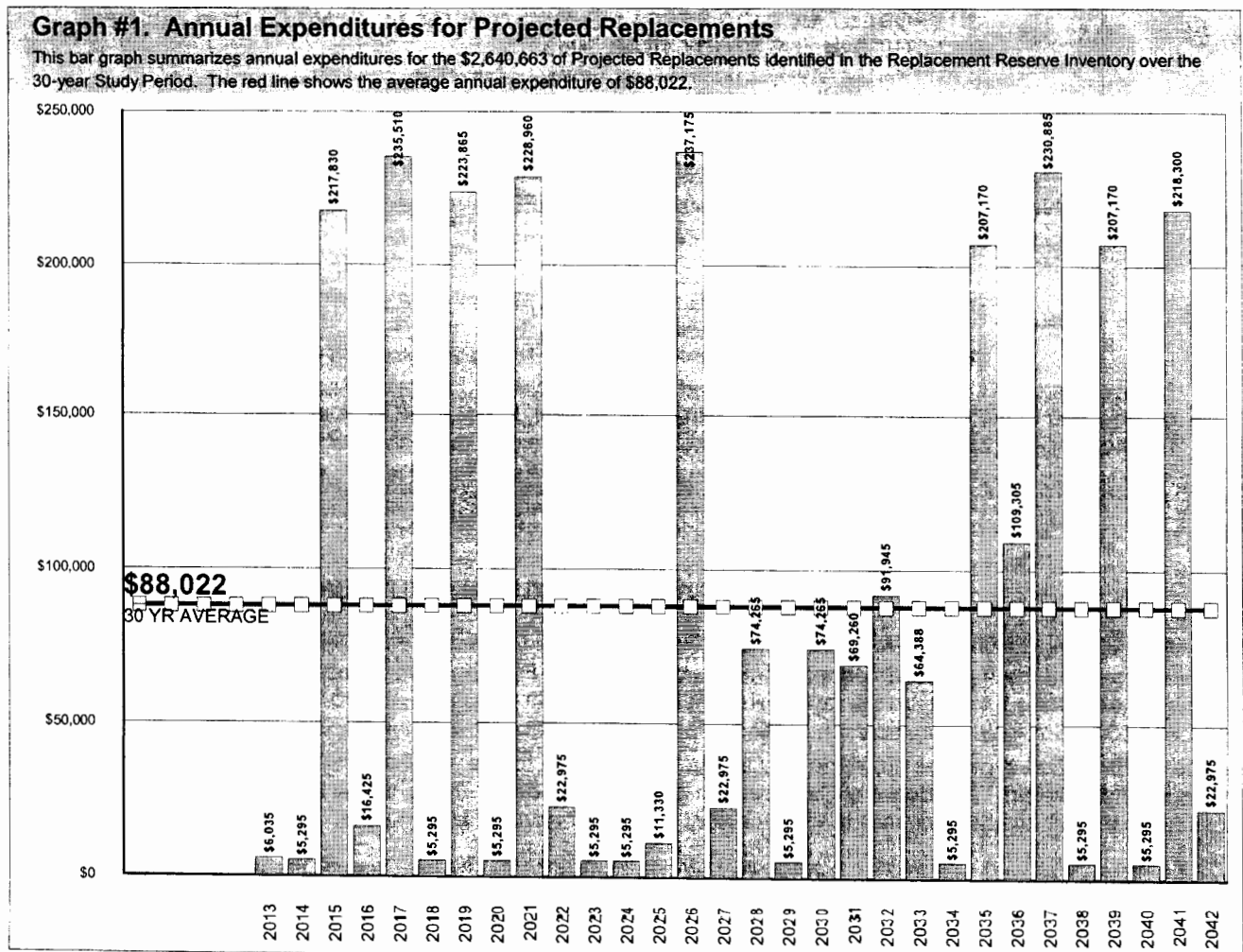
The Replacement Reserve Analysis evaluates the funding of Replacement Reserves over a 30-year Study Period that begins on January 1, 2013.

### BEGINNING BALANCE

The Association reports Replacement Reserves on Deposit totaling \$250,294 at the start of the Study Year.

### ADJUSTMENTS AND INFLATION

The short term consequences of 4.50% inflation and no constant annual increase in Reserve funding on the Cash Flow Method, as calculated by a proprietary model developed by Miller + Dodson Associates, are shown on Pages A6 and A7. Other calculations in this Analysis do not account for inflation or a constant annual increase. The calculations in this Analysis do not account for interest earned on Replacement Reserves.





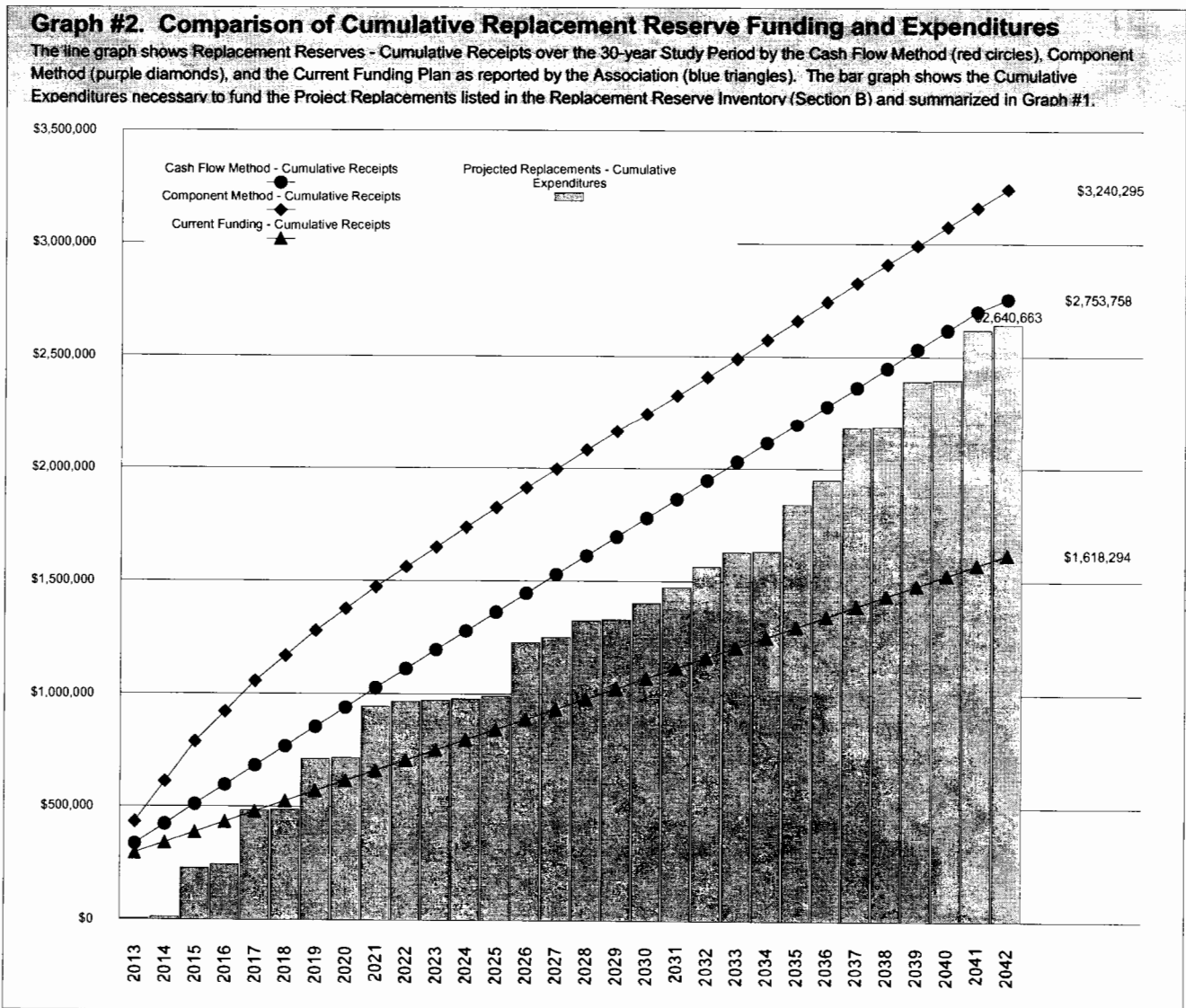
**PROJECTED REPLACEMENTS**

The Villas at Parkwood Estates Replacement Reserve Inventory (Section B) identifies 43 Projected Replacements with a one-time Replacement Cost of \$1,638,648 and replacements totaling \$2,640,663 in the 30-year Study Period. Projected Replacements are the replacement of commonly-owned items that:  
 require periodic replacement and  
 whose replacement is to be funded from Replacement Reserves.

The accuracy of the Villas at Parkwood Estates Replacement Reserve Analysis is dependent upon expenditures from Replacement Reserves being made ONLY for the 43 Projected Replacements specifically listed in the Replacement Reserve Inventory.

To further assist in the identification of items not appropriately funded from Replacement Reserves, the Replacement Reserve Inventory identifies 30 Excluded Items. The rationale behind the exclusion of items from funding by Replacement Reserves is discussed in detail on Page B1.

The Section B - Replacement Reserve Inventory, contains Tables that list each Projected Replacement (and any Excluded Items) broken down into 12 major categories (Pages B3 to B13). Tables are also included that list each Projected Replacement by year for each of the 30 years of the Study Period beginning on Page C1.



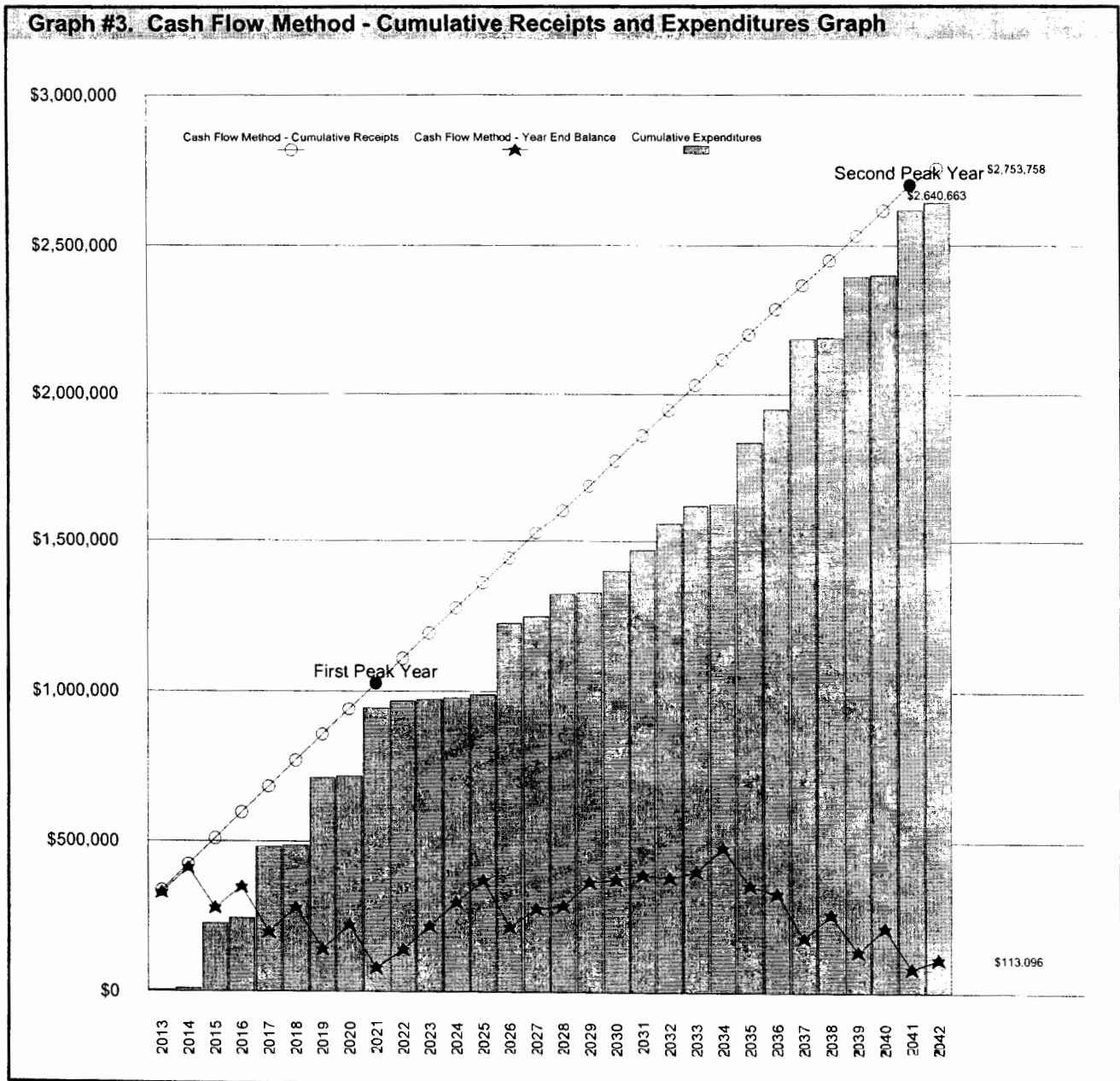
### CASH FLOW METHOD

**\$86,239 CASH FLOW METHOD MINIMUM ANNUAL FUNDING OF REPLACEMENT RESERVES IN THE STUDY YEAR, 2013.**

\$99.81 Per unit (average), minimum monthly funding of Replacement Reserves

General. The Cash Flow Method (also referred to as the Straight Line Method) is founded on the concept that the Replacement Reserve Account is solvent if cumulative receipts always exceed cumulative expenses. The Cash Flow Method calculates a MINIMUM annual deposit to Replacement Reserves that will:

- Fund all Projected Replacements listed in the Replacement Reserve Inventory (see Section B)
- Prevent Replacement Reserves from dropping below the Minimum Recommended Balance (see Page A-5)
- Allow a constant annual funding level between peaks in cumulative expenditures



CASH FLOW METHOD (cont'd)

- Replacement Reserves - Minimum Recommended Balance. The Minimum Recommended Balance is \$81,932, which is 5.0 percent of the one-time replacement cost of the Projected Replacements listed in the Replacement Reserve Inventory. Unless otherwise noted in the Comments on Page A-9, the Minimum Recommended Balance has been established by the Analyst based upon an evaluation of the types of items included in the Replacement Reserve Inventory.
- Peak Years. The Cash Flow Method calculates a constant annual funding of Replacement Reserves between peaks in cumulative expenditures called Peak Years. In Peak Years, Replacement Reserves on Deposit decline to the Replacement Reserves - Minimum Recommended Balance discussed in the paragraph above.  
 First Peak Year. The First Peak Year occurs in 2021, after the completion of \$944,510 of replacements in 2013 to 2021. The Cash Flow Method - Minimum Annual Funding of Replacement Reserves declines from \$86,239 in 2021 to \$83,659 in 2022.  
 Subsequent Peak Year. A subsequent Peak Year and decline in the Cash Flow Method - Minimum Annual Funding, occurs in: 2041.
- Study Period. The Cash Flow Method calculates the recommended contributions to Replacement Reserves over the 30-year Study Period. These calculations are based upon a 40-year projection of expenditures for Projected Replacements to avoid the Replacement Reserve balance dropping to the Minimum Recommended Balance in the final year of the Study Period.
- Failure to Fund. The Cash Flow Method calculates a MINIMUM annual funding of Replacement Reserves. Failure to fund Replacement Reserves at the minimum level calculated by the Cash Flow Method will result in Replacement Reserves not being available for the Projected Replacements listed in the Replacement Reserve Inventory and/or Replacement Reserves dropping below the Minimum Recommended Balance.
- Adjustment to the Cash Flow Method for interest and inflation. The funding recommendations on Pages A4 and A5 do not account for interest earned on Replacement Reserves, the effects of inflation of the cost of Projected Replacements, or a constant annual increase in Annual Funding of Replacement Reserves.
- Comparison of Cash Flow Funding and Average Annual Expenditure. The Average Annual Expenditure for Projected Replacements listed in the Reserve Inventory over the 30-year Study Period is \$88,022 (see Graph #1). The Cash Flow Method - Minimum Annual Funding of Replacement Reserves in the Study Year is \$86,239. This is 98.0 percent of the Average Annual Expenditure, indicating that the Association is building Replacement Reserves in advance of the first Peak Year in 2021.

Table #1. Cash Flow Method Data - Years 1 through 40

Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Beginning balance	\$250,294									
Minimum annual funding	\$86,239	\$86,239	\$86,239	\$86,239	\$86,239	\$86,239	\$86,239	\$86,239	\$86,239	\$83,659
Expenditures	\$6,035	\$5,295	\$217,830	\$16,425	\$235,510	\$5,295	\$223,865	\$5,295	\$228,960	\$22,975
Year end balance	\$330,498	\$411,441	\$279,850	\$349,664	\$200,393	\$281,336	\$143,710	\$224,654	\$81,932	\$142,616
Minimum recommended balance	\$81,932	\$81,932	\$81,932	\$81,932	\$81,932	\$81,932	\$81,932	\$81,932	\$81,932	\$81,932
Cumulative expenditures	\$6,035	\$11,330	\$229,160	\$245,585	\$481,095	\$486,390	\$710,255	\$715,550	\$944,510	\$967,485
Cumulative receipts	\$336,533	\$422,771	\$509,010	\$595,249	\$681,488	\$767,726	\$853,965	\$940,204	\$1,026,442	\$1,110,101
First Peak Year										
Year	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Minimum annual funding	\$83,659	\$83,659	\$83,659	\$83,659	\$83,659	\$83,659	\$83,659	\$83,659	\$83,659	\$83,659
Expenditures	\$5,295	\$5,295	\$11,330	\$237,175	\$22,975	\$74,265	\$5,295	\$74,265	\$69,260	\$91,945
Year end balance	\$220,980	\$299,344	\$371,673	\$218,157	\$278,841	\$288,234	\$366,598	\$375,992	\$390,391	\$382,105
Minimum recommended balance	\$81,932	\$81,932	\$81,932	\$81,932	\$81,932	\$81,932	\$81,932	\$81,932	\$81,932	\$81,932
Cumulative expenditures	\$972,780	\$978,075	\$989,405	\$1,226,580	\$1,249,555	\$1,323,820	\$1,329,115	\$1,403,380	\$1,472,640	\$1,564,585
Cumulative receipts	\$1,193,760	\$1,277,419	\$1,361,078	\$1,444,737	\$1,528,396	\$1,612,054	\$1,695,713	\$1,779,372	\$1,863,031	\$1,946,690
Second Peak Year										
Year	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
Minimum annual funding	\$83,659	\$83,659	\$83,659	\$83,659	\$83,659	\$83,659	\$83,659	\$83,659	\$83,659	\$54,138
Expenditures	\$64,388	\$5,295	\$207,170	\$109,305	\$230,885	\$5,295	\$207,170	\$5,295	\$218,300	\$22,975
Year end balance	\$401,376	\$479,740	\$356,229	\$330,583	\$183,357	\$261,721	\$138,210	\$216,573	\$81,932	\$113,096
Minimum recommended balance	\$81,932	\$81,932	\$81,932	\$81,932	\$81,932	\$81,932	\$81,932	\$81,932	\$81,932	\$81,932
Cumulative expenditures	\$1,628,973	\$1,634,268	\$1,841,438	\$1,950,743	\$2,181,628	\$2,186,923	\$2,394,093	\$2,399,388	\$2,617,688	\$2,640,663
Cumulative receipts	\$2,030,349	\$2,114,008	\$2,197,667	\$2,281,325	\$2,364,984	\$2,448,643	\$2,532,302	\$2,615,961	\$2,699,620	\$2,753,758

**CASH FLOW METHOD - INFLATION ADJUSTED FUNDING****The Miller + Dodson Model**

General. The Cash Flow Method funding recommendations shown on pages A4 and A5 have been calculated in today's dollars with no adjustment for inflation. Recent swings in construction costs demonstrate the risk facing an Association that does not consider the effects of inflation when funding Replacement Reserves.

Cash Flow Method - Inflation Adjusted Funding. Below is an outline of the proprietary model developed by Miller + Dodson Associates to forecast the short-term consequences of inflation on Replacement Reserves.

- **Study Year.** The Unit Replacement Costs in the Study Year (listed in Section B Inventory) reflect current construction costs. Appropriate adjustments to account for any time lag between when the Study is conducted and the Study Year have been made by the Reserve Analyst.
- **Year Two Inflation Adjusted Funding calculation.** The Year Two Starting Balance is calculated assuming Association compliance with the Study Year funding and replacement data listed on Page A7. Next, the Projected Replacement Costs are adjusted using the Construction Cost Inflation Rate (see detailed information below).  
The adjusted data is then evaluated using the Cash Flow Method, calculating the Year Two Inflation Adjusted Minimum Annual Funding of Replacement Reserves.
- **Year Three Inflation Adjusted Funding Calculation.** The same methodology has been used to develop the Inflation Adjusted Cash Flow Method Minimum Annual Funding of Replacement Reserves in Year Three. Simple compounding has been used to calculate the Year Three Projected Replacement Costs.
- **Year Four and Beyond.** We have not calculated adjusted funding recommendations beyond the third year of the Study nor do we believe it is appropriate to do so. Inflation adjusted funding recommendations are not intended to be a substitute for the periodic evaluation of the common elements by an experienced Reserve Analyst. We recommend the common elements of the community be evaluated by a Reserve Analyst every 3 to 5 years and at the completion of each major replacement project.

**Base Construction Cost Inflation Rate.** We have utilized a 4.50 percent base rate of inflation in our calculation of second and third year inflation adjusted funding. The rate of inflation is based upon our review of the Producer Price Indexes for Construction Materials, Structure Types & Subcontractors as published by the Bureau of Labor Statistics and our experience with recent pricing trends in your area."

**Assumptions.** Cash Flow Method, Inflation Adjusted Funding in Year Two and Year Three is calculated based upon three assumptions discussed below and quantified on Page A7. Prior to approving a budget based upon the calculations, the Association should review the accuracy of the assumptions. If discrepancies are noted, contact Miller + Dodson Associates to arrange for a Replacement Reserve Study Update.

- **Replacement Reserve Funding.** We have assumed the Association will fund Replacement Reserves as recommended in the Study.
- **Scheduled Replacements.** We have assumed the Association will make Scheduled Replacements as discussed in the Study (listed on Page C2) and that the cost of these replacements is in substantial compliance with the estimated replacement costs. We have further assumed that no Replacement Reserves will be used to fund replacements other than those specifically listed in the Replacement Reserve Inventory.
- **Construction Cost Inflation Rate evaluation.** Prior to approving a budget based upon the Year Two and Year Three Adjusted Replacement Reserve Funding calculations, the 4.50 percent base rate of inflation used in our should be compared to rates published by the Bureau of Labor Statistics. If a significant discrepancy (over 1 percent) is noted, contact Miller Dodson Associates prior to using the funding calculations.

**Interest.** The calculations do not account for interest earned on Replacement Reserves on Deposit. If earned interest is to be attributed to Replacement Reserves, our funding recommendation should be reduced by the actual amount of earned interest placed into Replacement Reserves.

**CASH FLOW METHOD  
 THREE-YEAR FUNDING RECOMMENDATIONS WITH INFLATION  
 ADJUSTMENT**

**2013 - STUDY YEAR**

**\$86,239 MINIMUM ANNUAL FUNDING**

\$99.81 Per unit (average), minimum monthly funding of Replacement Reserves

The \$86,239 funding of Replacement Reserves in the Study Year has been calculated using current construction costs (listed in Section B Inventory). The Analyst has adjusted the costs to account for any time lag between the preparation of the Study and the Study Year.

**2014 - YEAR TWO**

**\$91,978 INFLATION ADJUSTED MINIMUM ANNUAL FUNDING**

\$106.46 Per unit (average), minimum monthly funding of Replacement Reserves

The \$91,978 inflation adjusted funding of Replacement Reserves in 2014 represents a 6.66 percent increase over the non-inflation adjusted funding recommendation of \$86,239 in the Study Year.

The specific assumptions used to calculate the Year Two Inflation Adjusted Funding are listed below. If the assumptions are inaccurate, do not use the data and contact Miller Dodson Associates to arrange for a Replacement Reserve Study Update. The assumptions are:

- Replacement Reserves on Deposit totaling \$330,498 on January 1, 2014.
- All 2013 Projected Replacements scheduled in the Replacement Reserve Inventory and listed on Page C2, having been accomplished in 2013 at a cost of \$6,035.
- An average annual Construction Cost Inflation Rate of 4.50 percent over the previous 12 month period.

**2015 - YEAR THREE**

**\$98,798 INFLATION ADJUSTED MINIMUM ANNUAL FUNDING**

\$114.35 Per unit (average), minimum monthly funding of Replacement Reserves

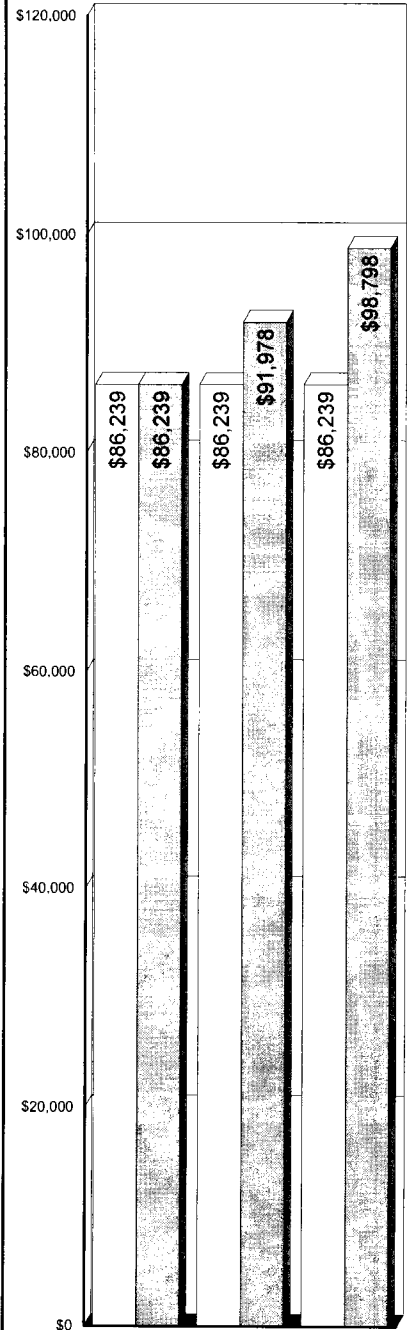
The \$98,798 inflation adjusted funding of Replacement Reserves in 2015 represents a 14.56 percent increase over the non-inflation adjusted funding recommendation of \$86,239 in the Study Year.

The specific assumptions used to calculate the Year Two Inflation Adjusted Funding are listed below. If the assumptions are inaccurate, do not use the data and contact Miller Dodson Associates to arrange for a Replacement Reserve Study Update. The assumptions are:

- Replacement Reserves on Deposit totaling \$411,441 on January 1, 2014.
- All 2014 Projected Replacements scheduled in the Replacement Reserve Inventory and listed on Page C2, having been accomplished in 2014 at a cost of \$5,533.
- An average annual Construction Cost Inflation Rate of 4.50 percent over the previous 24 month period.

**ANNUAL FUNDING GRAPH**

The bar graph below shows the Cash Flow Method Annual Funding calculated in today's dollars (lighter bars) and the Inflation Adjusted Cash Flow Method Annual Funding (dark bars)



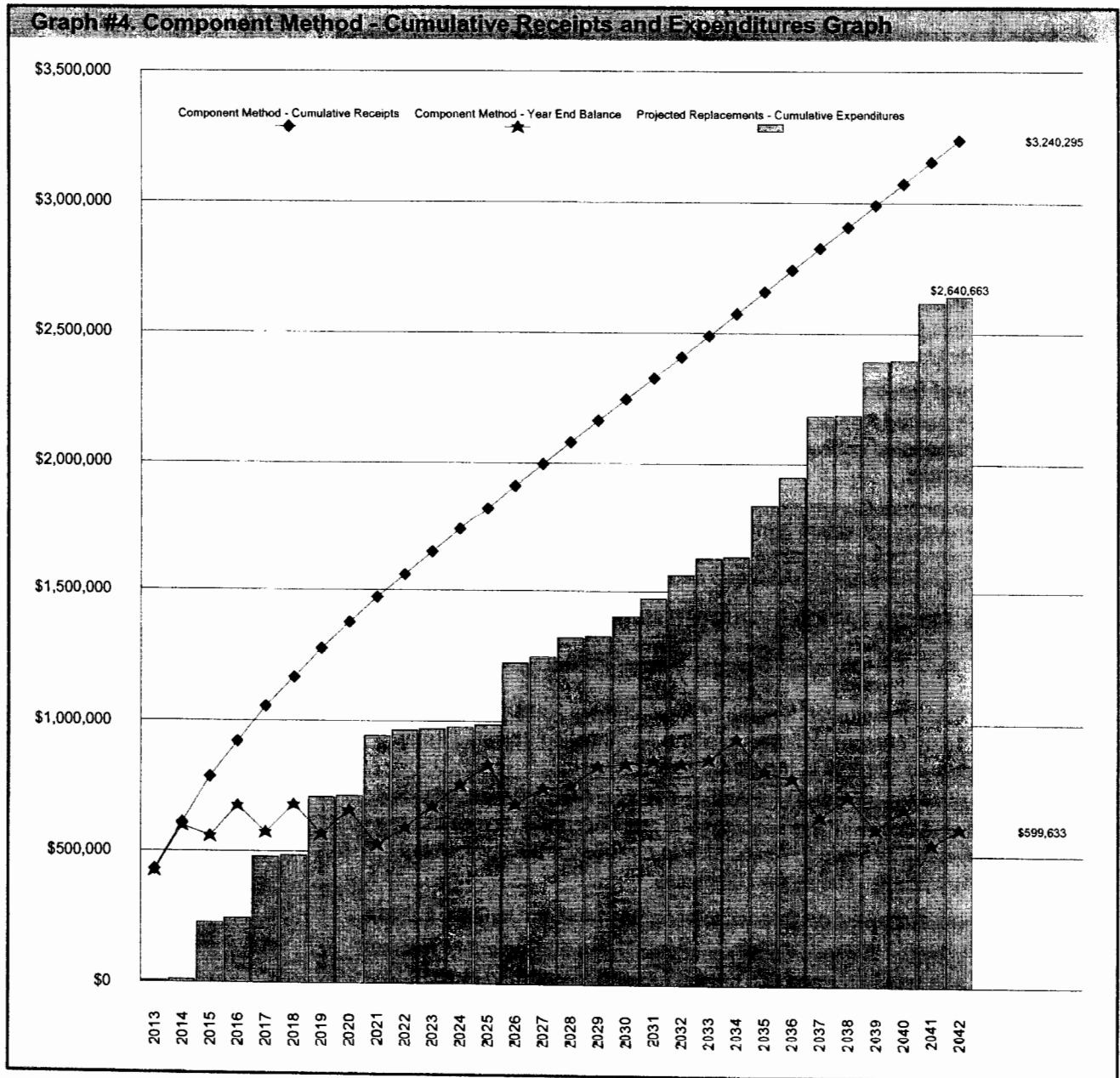
□ Cash Flow Method Annual Funding  
 □ Inflation Adjusted Cash Flow Method Annual Funding

**COMPONENT METHOD**

**\$182,063 COMPONENT METHOD RECOMMENDED ANNUAL FUNDING OF REPLACEMENT RESERVES IN THE STUDY YEAR, 2013.**

\$210.72 Per unit (average), recommended monthly funding of Replacement Reserves

General. The Component Method (also referred to as the Full Funded Method) is a very conservative mathematical model developed by HUD in the early 1980s. Each of the 43 Projected Replacements listed in the Replacement Reserve Inventory is treated as a separate account. The Beginning Balance is allocated to each of the individual accounts, as is all subsequent funding of Replacement Reserves. These funds are "locked" in these individual accounts and are not available to fund other Projected Replacements. The calculation of Recommended Annual Funding of Replacement Reserves is a multi-step process outlined in more detail on Page A9.



**COMPONENT METHOD (cont'd)**

- **Current Funding Objective.** A Current Funding Objective is calculated for each of the Projected Replacements listed in the Replacement Reserve Inventory. Replacement Cost is divided by the Normal Economic Life to determine the nominal annual contribution. The Remaining Economic Life is then subtracted from the Normal Economic Life to calculate the number of years that the nominal annual contribution should have been made. The two values are then multiplied to determine the Current Funding Objective. This is repeated for each of the 43 Projected Replacements. The total, \$822,288, is the Current Funding Objective.

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

- **Funding Percentage.** The Funding Percentage is calculated by dividing the Beginning Balance (\$250,294) by the Current Funding Objective (\$822,288). At Villas at Parkwood Estates the Funding Percentage is 30.4%
- **Allocation of the Beginning Balance.** The Beginning Balance is divided among the 43 Projected Replacements in the Replacement Reserve Inventory. The Current Funding Objective for each Projected Replacement is multiplied by the Funding Percentage and these funds are then "locked" into the account of each item.

If we relate this calculation back to our fence example, it means that the Association has not accumulated \$800 in Reserves (the Funding Objective), but rather at 30.4 percent funded, there is \$244 in the account for the fence.

- **Annual Funding.** The Recommended Annual Funding of Replacement Reserves is then calculated for each Projected Replacement. The funds allocated to the account of the Projected Replacement are subtracted from the Replacement Cost. The result is then divided by the number of years until replacement, and the result is the annual funding for each of the Projected Replacements. The sum of these is \$182,063, the Component Method Recommended Annual Funding of Replacement Reserves in the Study Year (2013).

In our fence example, the \$244 in the account is subtracted from the \$1,000 Total Replacement Cost and divided by the 2 years that remain before replacement, resulting in an annual deposit of \$378. Next year, the deposit remains \$378, but in the third year, the fence is replaced and the annual funding adjusts to \$100.

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

**Table #2. Component Method Data - Years 1 through 30**

Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Beginning balance	\$250,294									
Recommended annual funding	\$182,063	\$177,966	\$176,861	\$134,322	\$133,751	\$111,416	\$111,592	\$97,175	\$97,175	\$87,982
Expenditures	\$6,035	\$5,295	\$217,830	\$16,425	\$235,510	\$5,295	\$223,865	\$5,295	\$228,960	\$22,975
Year end balance	\$426,322	\$598,993	\$558,024	\$675,921	\$574,162	\$680,283	\$568,010	\$659,891	\$528,106	\$593,113
Cumulative Expenditures	\$6,035	\$11,330	\$229,160	\$245,585	\$481,095	\$486,390	\$710,255	\$715,550	\$944,510	\$967,485
Cumulative Receipts	\$432,357	\$610,323	\$787,184	\$921,506	\$1,055,257	\$1,166,673	\$1,278,265	\$1,375,441	\$1,472,616	\$1,560,598
Year	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Recommended annual funding	\$87,982	\$87,982	\$87,982	\$87,729	\$83,948	\$83,948	\$82,869	\$82,869	\$82,122	\$81,343
Expenditures	\$5,295	\$5,295	\$11,330	\$237,175	\$22,975	\$74,265	\$5,295	\$74,265	\$69,260	\$91,945
Year end balance	\$675,800	\$758,486	\$835,138	\$685,692	\$746,665	\$756,348	\$833,922	\$842,525	\$855,387	\$844,786
Cumulative Expenditures	\$972,780	\$978,075	\$989,405	\$1,226,580	\$1,249,555	\$1,323,820	\$1,329,115	\$1,403,380	\$1,472,640	\$1,564,585
Cumulative Receipts	\$1,648,580	\$1,736,561	\$1,824,543	\$1,912,272	\$1,996,220	\$2,080,168	\$2,163,037	\$2,245,905	\$2,328,027	\$2,409,371
Year	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
Recommended annual funding	\$80,863	\$83,959	\$83,959	\$83,959	\$83,113	\$83,015	\$83,015	\$83,015	\$83,015	\$83,015
Expenditures	\$64,388	\$5,295	\$207,170	\$109,305	\$230,885	\$5,295	\$207,170	\$5,295	\$218,300	\$22,975
Year end balance	\$861,261	\$939,925	\$816,714	\$791,367	\$643,595	\$721,314	\$597,159	\$674,879	\$539,593	\$599,633
Cumulative Expenditures	\$1,628,973	\$1,634,268	\$1,841,438	\$1,950,743	\$2,181,628	\$2,186,923	\$2,394,093	\$2,399,388	\$2,617,688	\$2,640,663
Cumulative Receipts	\$2,490,234	\$2,574,192	\$2,658,151	\$2,742,110	\$2,825,222	\$2,908,237	\$2,991,252	\$3,074,266	\$3,157,281	\$3,240,295

**CURRENT FUNDING**

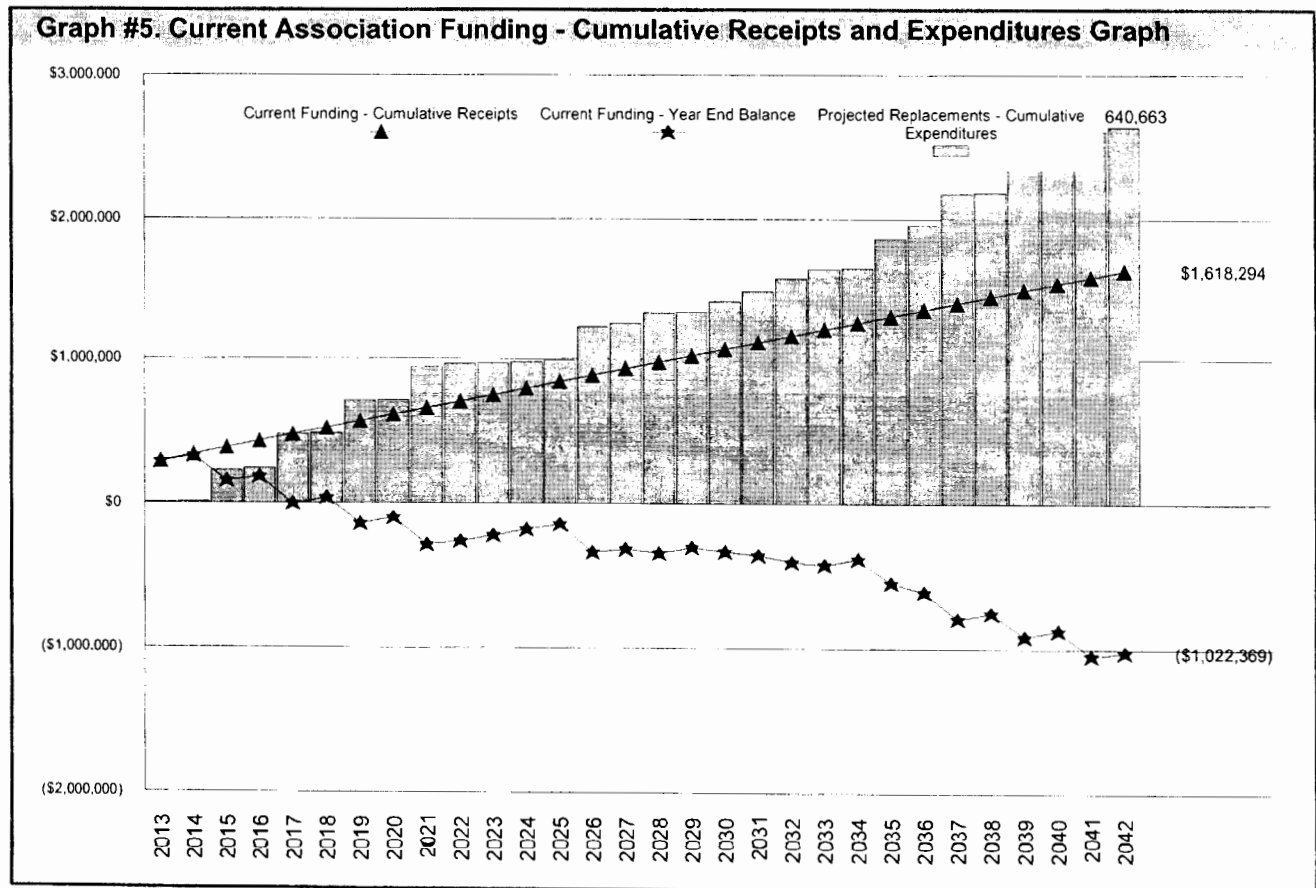
● **\$45,600 CURRENT ANNUAL FUNDING OF REPLACEMENT RESERVES**  
 (as reported by the Association).

\$52.78 Per unit (average), reported current monthly funding of Replacement Reserves

General. Our evaluation of the Current Association Funding assumes that the Association will continue to fund Replacement Reserves at the current level of \$45,600 per year in each of the 30 years of the Study Period.

Our evaluation is based upon this Replacement Reserve Funding Level, a \$250,294 Beginning Balance, the Projected Annual Replacement Expenditures shown in Graph #1 and listed in the Replacement Reserve Inventory, and any interest, inflation rate, or constant annual increase in annual contribution adjustments discussed below.

- Evaluation. Our calculations have determined that Current Annual Funding of Replacement Reserves, as reported by the Association, is inadequate to fund Projected Replacement beginning in 2017.  
 The Current Annual Funding of Replacement Reserves results in insufficient funds to make Projected Replacements in 25 years of the 30-year Study Period, and a maximum shortfall of \$-1,044,994 occurs in 2041.
- Adjustment to the Current Association Funding for interest and inflation. The Calculations in the Replacement Reserve Analysis do not account for interest earned on Replacement Reserves, the effects of inflation of the cost of Projected Replacements, or a constant annual increase in Annual Funding of Replacement Reserves.
- Comparison of Current Association Funding and Average Annual Expenditure. The average annual expenditure for Projected Replacements listed in the Reserve Inventory over the 30-year Study Period is \$88,022 (see Graph #1). Current Association annual funding of Replacement Reserves is \$45,600, or approximately 52 percent of the Average Annual Expenditure.





CURRENT FUNDING (cont'd)

Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Beginning balance	\$250,294									
Annual deposit	\$45,600	\$45,600	\$45,600	\$45,600	\$45,600	\$45,600	\$45,600	\$45,600	\$45,600	\$45,600
Expenditures	\$6,035	\$5,295	\$217,830	\$16,425	\$235,510	\$5,295	\$223,865	\$5,295	\$228,960	\$22,975
Year end balance	\$289,859	\$330,164	\$157,934	\$187,109	(\$2,801)	\$37,504	(\$140,761)	(\$100,456)	(\$283,816)	(\$261,191)
Cumulative Expenditures	\$6,035	\$11,330	\$229,160	\$245,585	\$481,095	\$486,390	\$710,255	\$715,550	\$944,510	\$967,485
Cumulative Receipts	\$295,894	\$341,494	\$387,094	\$432,694	\$478,294	\$523,894	\$569,494	\$615,094	\$660,694	\$706,294
Year	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Annual deposit	\$45,600	\$45,600	\$45,600	\$45,600	\$45,600	\$45,600	\$45,600	\$45,600	\$45,600	\$45,600
Expenditures	\$5,295	\$5,295	\$11,330	\$237,175	\$22,975	\$74,265	\$5,295	\$74,265	\$69,260	\$91,945
Year end balance	(\$220,886)	(\$180,581)	(\$146,311)	(\$337,886)	(\$315,261)	(\$343,926)	(\$303,621)	(\$332,286)	(\$355,946)	(\$402,291)
Cumulative expenditures	\$972,780	\$978,075	\$989,405	\$1,226,580	\$1,249,555	\$1,323,820	\$1,329,115	\$1,403,380	\$1,472,640	\$1,564,585
Cumulative receipts	\$751,894	\$797,494	\$843,094	\$888,694	\$934,294	\$979,894	\$1,025,494	\$1,071,094	\$1,116,694	\$1,162,294
Year	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
Annual deposit	\$45,600	\$45,600	\$45,600	\$45,600	\$45,600	\$45,600	\$45,600	\$45,600	\$45,600	\$45,600
Expenditures	\$64,388	\$5,295	\$207,170	\$109,305	\$230,885	\$5,295	\$207,170	\$5,295	\$218,300	\$22,975
Year end balance	(\$421,079)	(\$380,774)	(\$542,344)	(\$606,049)	(\$791,334)	(\$751,029)	(\$912,599)	(\$872,294)	(\$1,044,994)	(\$1,022,369)
Cumulative Expenditures	\$1,628,973	\$1,634,268	\$1,841,438	\$1,950,743	\$2,181,628	\$2,186,923	\$2,394,093	\$2,399,388	\$2,617,688	\$2,640,663
Cumulative Receipts	\$1,207,894	\$1,253,494	\$1,299,094	\$1,344,694	\$1,390,294	\$1,435,894	\$1,481,494	\$1,527,094	\$1,572,694	\$1,618,294

**COMMENTS ON THE REPLACEMENT RESERVE ANALYSIS**

- This Replacement Reserve Study has been developed in compliance with the Community Associations Institute, National Reserve Study Standards, for a Level Two - Update (with site visit and on-site review).
- Villas at Parkwood Estates has 72 units. The type of property is a condominium association.
- Our calculations assume that Replacement Reserves are not subject to tax.

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## REPLACEMENT RESERVE INVENTORY GENERAL INFORMATION

Villas at Parkwood Estates - Replacement Reserve Inventory identifies 73 items. Two types of items are identified, Projected Replacements and Excluded Items:

- **PROJECTED REPLACEMENTS.** 43 of the items are Projected Replacements and the periodic replacements of these items are scheduled for funding from Replacement Reserves. The Projected Replacements have an estimated one-time replacement cost of \$1,638,648. Replacements totaling \$2,640,663 are scheduled in the Replacement Reserve Inventory over the 30-year Study Period.

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

- **EXCLUDED ITEMS.** 30 of the items are Excluded Items, and expenditures for these items are NOT scheduled for funding from Replacement Reserves. The accuracy of the calculations made in the Replacement Reserve Analysis is dependent on expenditures NOT being made for Excluded Items. The Excluded Items are listed in the Replacement Reserve Inventory to identify specific items and categories of items that are not to be funded from Replacement Reserves. There are multiple categories of items that are typically excluded from funding by Replacement Reserves, including but not limited to:

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

**Value.** Items with a replacement cost of less than \$1,000 and/or a normal economic life of less than 3 years are typically excluded from funding from Replacement Reserves. This exclusion is made to accurately reflect how Replacement Reserves are administered. If the Association has selected an alternative level, it will be noted in the Replacement Reserve Inventory - General Comments on Page B2.

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

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

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

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

- **CATEGORIES.** The 73 items included in the Villas at Parkwood Estates Replacement Reserve Inventory are divided into 12 major categories. Each category is printed on a separate page, Pages B3 to B13.
- **LEVEL OF SERVICE.** This Replacement Reserve Inventory has been developed in compliance with the standards established for a Level Two - Update (with site visit and on-site review), as defined by the National Reserve Study Standards, established in 1998 by Community Associations Institute, which states:

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

## REPLACEMENT RESERVE INVENTORY - GENERAL INFORMATION (cont'd)

- **INVENTORY DATA.** Each of the 43 Projected Replacements listed in the Replacement Reserve Inventory includes the following data:

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

**Item Description.** We have named each item included in the Inventory. Where the name of the item and the category are not sufficient to specifically identify the item, we have included additional information in the Comments section at the bottom of the page.

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

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

**Unit Replacement Cost.** We use three sources to develop the unit cost data shown in the Inventory; actual replacement cost data provided by the client, industry standard estimating manuals, and a cost database that we have developed based upon our detailed interviews with contractors and service providers who are specialists in their respective lines of work. In addition, trends in the Producers Price Index (PPI), labor rates, and transportation costs are monitored and considered. This cost database is reviewed and updated regularly by Miller Dodson and biannually by an independent professional cost estimating firm.

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

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

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

Each of the 30 Excluded Items includes the Item Description, Units, and Number of Units. Many of the Excluded Items are listed as a 'Lump Sum' with a quantity of 1. For the Excluded Items, this indicates that all of the items identified by the 'Item Description' are excluded from funding by Replacement Reserves.

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

**SITE COMPONENT  
 PROJECTED REPLACEMENTS**

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST (\$)
1	Concrete flatwork (6%)	sf	710	\$8.50	60	none	\$6,035
2	Concrete flatwork (6%)	sf	710	\$8.50	60	6	\$6,035
3	Concrete flatwork (6%)	sf	710	\$8.50	60	12	\$6,035
4	Concrete flatwork (6%)	sf	710	\$8.50	60	18	\$6,035
5	Concrete flatwork (6%)	sf	710	\$8.50	60	24	\$6,035
6	Concrete flatwork (6%)	sf	710	\$8.50	60	30	\$6,035
7	Concrete flatwork (6%)	sf	710	\$8.50	60	36	\$6,035
8	Concrete flatwork (6%)	sf	710	\$8.50	60	42	\$6,035
9	Concrete flatwork (6%)	sf	710	\$8.50	60	48	\$6,035
10	Concrete flatwork (6%)	sf	710	\$8.50	60	54	\$6,035

SITE COMPONENT - Replacement Costs - Subtotal \$60,350

**SITE COMPONENT  
 COMMENTS**

- Concrete flatwork consists of lead walks, stoops, garage apron, mail box pads.
- Six concrete stoops and leadwalks and three concrete aprons were cracked.

**SITE IMPROVEMENTS**

**PROJECTED REPLACEMENTS**

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST (\$)
11	Asphalt, seal coating	sf	88,400	\$0.20	5	4	\$17,680
12	Asphalt pavement, mill/overlay	sf	88,400	\$1.70	20	13	\$150,280
13	Segmental conc. block retaining wall	sf	1,032	\$45.00	100	98	\$46,440
14	Reset segmental block walls (10%)	sf	103	\$35.00	10	20	\$3,605
15	Mailboxes	ea	6	\$1,800.00	35	23	\$10,800
16	Community sign - wood	ea	1	\$1,500.00	25	13	\$1,500
17	Building unit signs	ea	18	\$150.00	30	18	\$2,700

SITE IMPROVEMENTS - Replacement Costs - Subtotal \$233,005

**SITE IMPROVEMENTS**

**COMMENTS**

- We have assumed that the Association will replace the asphalt pavement by the installation of a 2 inch thick overlay. The pavement will need to be milled prior to the installation of the overlay. Milling and the cost of minor repairs (5 to 10 percent of the total area) to the base materials and bearing soils beneath the pavement is included in the cost shown above.

**SITE UTILITIES**

**PROJECTED REPLACEMENTS**

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST (\$)
18	Sanitary sewer laterals (10%) allow	ls	1	\$28,800.00	10	20	\$28,800
19	Domestic water laterals (10%) allow	ls	1	\$18,000.00	10	20	\$18,000
20	Storm water system (10%) allow	ls	1	\$3,780.00	10	20	\$3,780

SITE UTILITIES - Replacement Costs - Subtotal \$50,580

**SITE UTILITIES**

**COMMENTS**

- Comprehensive drawings detailing the components of the systems listed above were not available for our review. We have included the estimated cost of the systems based upon our experience with other similar communities. We have assumed that 10 percent of the system(s) will require replacement every 20 years. In the future, this assumption and the estimated costs should be adjusted based upon actual experience at the community.

**UNIT EXTERIORS**  
**PROJECTED REPLACEMENTS**

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST (\$)
21	Roof shingles asphalt (25%)	sf	47,500	\$4.25	20	2	\$201,875
22	Gutters & downspouts (25%)	lf	1,640	\$6.50	35	2	\$10,660
23	Roof shingles asphalt (25%)	sf	47,500	\$4.25	20	4	\$201,875
24	Gutters & downspouts (25%)	lf	1,640	\$6.50	35	4	\$10,660
25	Roof shingles asphalt (25%)	sf	47,500	\$4.25	20	6	\$201,875
26	Gutters & downspouts (25%)	lf	1,640	\$6.50	35	6	\$10,660
27	Roof shingles asphalt (25%)	sf	47,500	\$4.25	20	8	\$201,875
28	Gutters & downspouts (25%)	lf	1,640	\$6.50	35	8	\$10,660
29	Masonry veneer- tuckpointing (5%)	sf	1,510	\$3.25	10	20	\$4,908
30	Vinyl siding, 61/4" (25%)	sf	12,100	\$5.70	25	13	\$68,970
31	Vinyl siding, 61/4" (25%)	sf	12,100	\$5.70	25	15	\$68,970
32	Vinyl siding, 61/4" (25%)	sf	12,100	\$5.70	25	17	\$68,970
33	Vinyl siding, 61/4" (25%)	sf	12,100	\$5.70	25	19	\$68,970
34	Vinyl soffits, 12"	sf	14,400	\$5.70	35	23	\$82,080
35	Synthetic wood trim (5%)	lf	1,100	\$7.50	5	3	\$8,250
36	Aluminium coil covered fascia (5%)	lf	720	\$4.00	5	3	\$2,880
37	Wall mounted light fixtures	ea	108	\$175.00	30	18	\$18,900
38	Pole / light fixtures	ea	72	\$350.00	30	18	\$25,200
<b>UNIT EXTERIORS - Replacement Costs - Subtotal</b>							<b>\$1,268,238</b>

**UNIT EXTERIORS**  
**COMMENTS**

- MDA assumes the gutters and downspouts when the roofs are replaced. The roofs will be replaced with a 25-yr asphalt shingle roof.



**UNIT EXTERIORS (con't)**

**PROJECTED REPLACEMENTS**

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST (\$)
39	Painting, trim, garage doors (20%)	sf	3,530	\$1.50	5	1	\$5,295
40	Painting, trim, garage doors (20%)	sf	3,530	\$1.50	5	2	\$5,295
41	Painting, trim, garage doors (20%)	sf	3,530	\$1.50	5	3	\$5,295
42	Painting, trim, garage doors (20%)	sf	3,530	\$1.50	5	4	\$5,295
43	Painting, trim, garage doors (20%)	sf	3,530	\$1.50	5	5	\$5,295

UNIT EXTERIORS (con't) - Replacement Costs - Subtotal \$26,475

**UNIT EXTERIORS (con't)**

**COMMENTS**

- Association has requested exterior painting be included in this reserve study in a painting cycle.. We recommend that the Association confirms that this item is in compliance with IRS. The painting includes trim and garage doors.

**VALUATION EXCLUSIONS**

**EXCLUDED ITEMS**

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST (\$)
	Landscape lighting fixtures	ls	1				EXCLUDED
	Tuckpointing community stone wall	ls	1				EXCLUDED
	Miscellaneous signage	ls	1				EXCLUDED

**VALUATION EXCLUSIONS**

**COMMENTS**

- Valuation Exclusions. For ease of administration of the Replacement Reserves and to reflect accurately how Replacement Reserves are administered, items with a dollar value less than \$1,000.00 have not been scheduled for funding from Replacement Reserves. Examples of items excluded from funding by Replacement Reserves by this standard are listed above.
  
- The list above exemplifies exclusions by the cited standard(s) and is not intended to be comprehensive.

**LONG-LIFE EXCLUSIONS**

**EXCLUDED ITEMS**

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	REPLACEMENT COST (\$)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST (\$)
	Exterior stone veneer	ls	1				EXCLUDED
	Building foundation(s)	ls	1				EXCLUDED
	Concrete floor slabs (interior)	ls	1				EXCLUDED
	Wall, floor, & roof structure	ls	1				EXCLUDED
	Electrical wiring	ls	1				EXCLUDED

**LONG-LIFE EXCLUSIONS**

**COMMENTS**

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

**UNIT IMPROVEMENTS EXCLUSIONS**

**EXCLUDED ITEMS**

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST (\$)
	Domestic water pipes serving one unit	ls	1				EXCLUDED
	Sanitary sewers serving one unit	ls	1				EXCLUDED
	Electrical wiring serving one unit	ls	1				EXCLUDED
	Gas service serving one unit	ls	1				EXCLUDED
	Cable TV service serving one unit	ls	1				EXCLUDED
	Telephone service serving one unit	ls	1				EXCLUDED
	Unit interior	ls	1				EXCLUDED

**UNIT IMPROVEMENTS EXCLUSIONS**

**COMMENTS**

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

**UTILITY EXCLUSIONS**

**EXCLUDED ITEMS**

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST (\$)
	Primary electric feeds	ls	1				EXCLUDED
	Electric transformers	ls	1				EXCLUDED
	Sanitary sewer mains	ls	1				EXCLUDED
	Cable TV systems and structures	ls	1				EXCLUDED
	Telephone cables and structures	ls	1				EXCLUDED
	Gas mains and meters	ls	1				EXCLUDED
	Water mains and meters	ls	1				EXCLUDED

**UTILITY EXCLUSIONS**

**COMMENTS**

- Utility Exclusions. Many improvements owned by utility companies are on property owned by the Association. We have assumed that repair, maintenance, and replacements of these components will be done at the expense of the appropriate utility company. Examples of items excluded from funding Replacement Reserves by this standard are listed above.
- The list above exemplifies exclusions by the cited standard(s) and is not intended to be comprehensive.

**MAINTENANCE AND REPAIR EXCLUSIONS**

**EXCLUDED ITEMS**

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	REPLACEMENT COST (\$)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST (\$)
	Cleaning of asphalt pavement	ls	1				EXCLUDED
	Crack sealing of asphalt pavement	ls	1				EXCLUDED
	Landscaping and site grading	ls	1				EXCLUDED
	Interior painting	ls	1				EXCLUDED
	Repair services	ls	1				EXCLUDED
	Capitol improvements	ls	1				EXCLUDED

**MAINTENANCE AND REPAIR EXCLUSIONS**

**COMMENTS**

- Maintenance activities, one-time-only repairs, and capitol improvements. These activities are NOT appropriately funded from Replacement Reserves. The inclusion of such component in the Replacement Reserve Inventory could jeopardize the special tax status of ALL Replacement Reserves, exposing the Association to significant tax liabilities. We recommend that the Board of Directors discuss these exclusions and Revenue Ruling 75-370 with a Certified Public Accountant.
- Examples of items excluded from funding by Replacement Reserves by this standard are listed above.
- The list above exemplifies exclusions by the cited standard(s) and is not intended to be comprehensive.

**GOVERNMENT EXCLUSIONS**

**EXCLUDED ITEMS**

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST (\$)
	City maintained roads	ls	1				EXCLUDED
	Curb & gutter at State roads	ls	1				EXCLUDED

**GOVERNMENT EXCLUSIONS**

**COMMENTS**

- Government Exclusions. We have assumed that some of the improvements installed on property owned by the Association will be maintained by the local government. Examples of items excluded from funding by Replacement Reserves by this standard are listed above.
  
- The list above exemplifies exclusions by the cited standard(s) and is not intended to be comprehensive.

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## PROJECTED ANNUAL REPLACEMENTS GENERAL INFORMATION

CALENDAR OF ANNUAL REPLACEMENTS. The 43 Projected Replacements in the Villas at Parkwood Estates Replacement Reserve Inventory whose replacement is scheduled to be funded from Replacement Reserves are broken down on a year-by-year basis, beginning on Page C2.

## REPLACEMENT RESERVE ANALYSIS AND INVENTORY POLICIES, PROCEDURES, AND ADMINISTRATION

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

**PROJECTED REPLACEMENTS - YEARS ONE TO FIFTEEN**

Item	2013	\$	Item	2014	\$	Item	2015	\$
1	Concrete flatwork (6%)	\$6,035	39	Painting, trim, garage doors	\$5,295	21	Roof shingles asphalt (25%)	\$201,875
						22	Gutters & downspouts (25%)	\$10,660
						40	Painting, trim, garage doors	\$5,295
Total Scheduled Replacements		\$6,035	Total Scheduled Replacements		\$5,295	Total Scheduled Replacements		\$217,830
Item	2016	\$	Item	2017	\$	Item	2018	\$
35	Synthetic wood trim (5%)	\$8,250	11	Asphalt, seal coating	\$17,680	43	Painting, trim, garage doors	\$5,295
36	Aluminium coil covered fasc	\$2,880	23	Roof shingles asphalt (25%)	\$201,875			
41	Painting, trim, garage doors	\$5,295	24	Gutters & downspouts (25%)	\$10,660			
			42	Painting, trim, garage doors	\$5,295			
Total Scheduled Replacements		\$16,425	Total Scheduled Replacements		\$235,510	Total Scheduled Replacements		\$5,295
Item	2019	\$	Item	2020	\$	Item	2021	\$
2	Concrete flatwork (6%)	\$6,035	40	Painting, trim, garage doors	\$5,295	27	Roof shingles asphalt (25%)	\$201,875
25	Roof shingles asphalt (25%)	\$201,875				28	Gutters & downspouts (25%)	\$10,660
26	Gutters & downspouts (25%)	\$10,660				35	Synthetic wood trim (5%)	\$8,250
39	Painting, trim, garage doors	\$5,295				36	Aluminium coil covered fasc	\$2,880
						41	Painting, trim, garage doors	\$5,295
Total Scheduled Replacements		\$223,865	Total Scheduled Replacements		\$5,295	Total Scheduled Replacements		\$228,960
Item	2022	\$	Item	2023	\$	Item	2024	\$
11	Asphalt, seal coating	\$17,680	43	Painting, trim, garage doors	\$5,295	39	Painting, trim, garage doors	\$5,295
42	Painting, trim, garage doors	\$5,295						
Total Scheduled Replacements		\$22,975	Total Scheduled Replacements		\$5,295	Total Scheduled Replacements		\$5,295
Item	2025	\$	Item	2026	\$	Item	2027	\$
3	Concrete flatwork (6%)	\$6,035	12	Asphalt pavement, mill/overl	\$150,280	11	Asphalt, seal coating	\$17,680
40	Painting, trim, garage doors	\$5,295	16	Community sign - wood	\$1,500	42	Painting, trim, garage doors	\$5,295
			30	Vinyl siding, 61/4" (25%)	\$68,970			
			35	Synthetic wood trim (5%)	\$8,250			
			36	Aluminium coil covered fasc	\$2,880			
			41	Painting, trim, garage doors	\$5,295			
Total Scheduled Replacements		\$11,330	Total Scheduled Replacements		\$237,175	Total Scheduled Replacements		\$22,975

**PROJECTED REPLACEMENTS - YEARS SIXTEEN TO THIRTY**

Item	2028	\$	Item	2029	\$	Item	2030	\$
31	Vinyl siding, 6 1/4" (25%)	\$68,970	39	Painting, trim, garage doors	\$5,295	32	Vinyl siding, 6 1/4" (25%)	\$68,970
43	Painting, trim, garage doors	\$5,295				40	Painting, trim, garage doors	\$5,295

Total Scheduled Replacements	\$74,265	Total Scheduled Replacements	\$5,295	Total Scheduled Replacements	\$74,265
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Item	2031	\$	Item	2032	\$	Item	2033	\$
4	Concrete flatwork (6%)	\$6,035	11	Asphalt, seal coating	\$17,680	14	Reset segmental block walls	\$3,605
17	Building unit signs	\$2,700	33	Vinyl siding, 6 1/4" (25%)	\$68,970	18	Sanitary sewer laterals (10%)	\$28,800
35	Synthetic wood trim (5%)	\$8,250	42	Painting, trim, garage doors	\$5,295	19	Domestic water laterals (10%)	\$18,000
36	Aluminium coil covered fasc	\$2,880				20	Storm water system (10%)	\$3,780
37	Wall mounted light fixtures	\$18,900				29	Masonry veneer- tuckpointin	\$4,908
38	Pole / light fixtures	\$25,200				43	Painting, trim, garage doors	\$5,295
41	Painting, trim, garage doors	\$5,295						

Total Scheduled Replacements	\$69,260	Total Scheduled Replacements	\$91,945	Total Scheduled Replacements	\$64,388
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Item	2034	\$	Item	2035	\$	Item	2036	\$
39	Painting, trim, garage doors	\$5,295	21	Roof shingles asphalt (25%)	\$201,875	15	Mailboxes	\$10,800
			40	Painting, trim, garage doors	\$5,295	34	Vinyl soffits, 12"	\$82,080
						35	Synthetic wood trim (5%)	\$8,250
						36	Aluminium coil covered fasc	\$2,880
						41	Painting, trim, garage doors	\$5,295

Total Scheduled Replacements	\$5,295	Total Scheduled Replacements	\$207,170	Total Scheduled Replacements	\$109,305
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Item	2037	\$	Item	2038	\$	Item	2039	\$
5	Concrete flatwork (6%)	\$6,035	43	Painting, trim, garage doors	\$5,295	25	Roof shingles asphalt (25%)	\$201,875
11	Asphalt, seal coating	\$17,680				39	Painting, trim, garage doors	\$5,295
23	Roof shingles asphalt (25%)	\$201,875						
42	Painting, trim, garage doors	\$5,295						

Total Scheduled Replacements	\$230,885	Total Scheduled Replacements	\$5,295	Total Scheduled Replacements	\$207,170
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Item	2040	\$	Item	2041	\$	Item	2042	\$
40	Painting, trim, garage doors	\$5,295	27	Roof shingles asphalt (25%)	\$201,875	11	Asphalt, seal coating	\$17,680
			35	Synthetic wood trim (5%)	\$8,250	42	Painting, trim, garage doors	\$5,295
			36	Aluminium coil covered fasc	\$2,880			
			41	Painting, trim, garage doors	\$5,295			

Total Scheduled Replacements	\$5,295	Total Scheduled Replacements	\$218,300	Total Scheduled Replacements	\$22,975
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## CONDITION ASSESSMENT

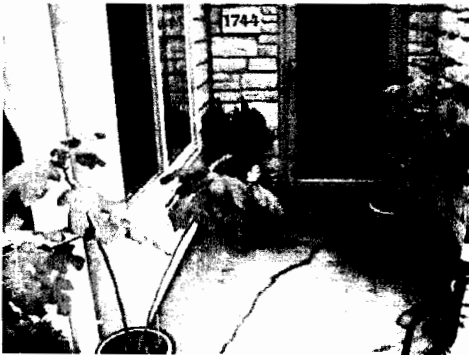
**General Comments.** Miller - Dodson Associates conducted a Reserve Study at the Villas at Parkwood Estates in May 2012. Villas at Parkwood Estates is in average condition for a condominium community constructed in 2000. A review of the Replacement Reserve Inventory will show that we are anticipating most of the components achieving their normal economic lives.

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

### SITE IMPROVEMENTS

**Concrete Flatwork.** The concrete flatwork includes the community unit leadwalks, stoops, garage aprons and mailbox pads. The Association maintains an inventory of approximately 13,000 square feet of concrete flatwork. The overall condition of the concrete flatwork is fair with multiple areas of defects. The defects noted include the following:

- **Cracking.** There are multiple sections of the concrete flatwork that have cracked creating trip hazards.

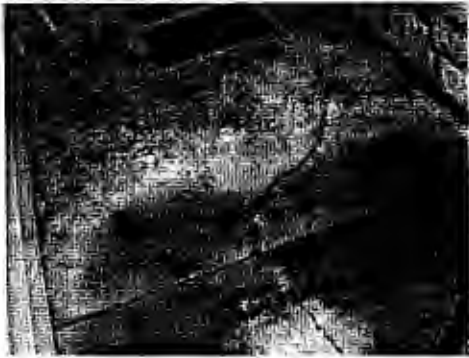


Concrete stoop cracking at unit entrance

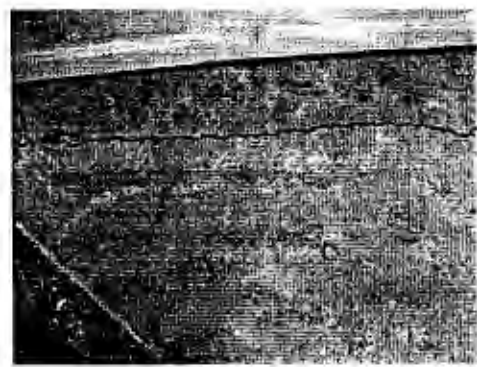


Stoop cracking

- **Heaving/Settlement.** Sections of the concrete flatwork have heaved or settled relative to their adjacent sections, creating trip hazards.
- **Poor Drainage.** There are several areas where water is ponding on the concrete flatwork due to settlement of the flatwork or poor drainage of the surrounding area.



Cracking at leadwalk near unit entrance



Typical cracking at garage apron

- The expansion joint material is not present in many of the joints between the concrete sidewalks and curbs. The expansion material that fills these joints is installed to allow movement and to serve as a gasket to prevent water from entering the pavement. If these joints are left open, soil will wash away underneath the pavement and will cause settlement of both the curb and gutter and the sidewalk. Additionally, water that is allowed to collect behind the curb and gutter will open up the joint between the asphalt and gutter pan, which will deteriorate the edges of the asphalt. The expansion joint material should be replaced with an impregnated homasote approximately every five years as a normal maintenance procedure.

The standards we used for recommending replacement are as follows:

1. Trip hazard, 0.5 inch height difference.
2. Severe cracking.
3. Severe spalling
4. Uneven riser heights on steps.
5. Steps with risers in excess of 8.25 inches.

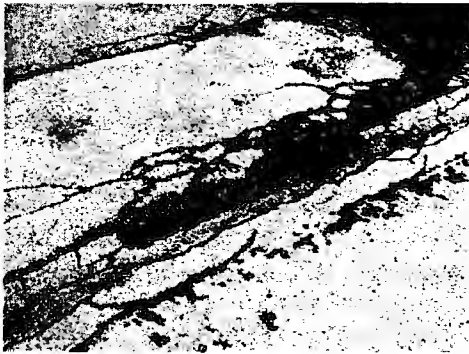
Because it is highly unlikely that all of the community's concrete components will fail and require replacement in the period of the study, we have programmed funds for the replacement of 60 percent of the inventory and spread those funds over a 60-year timeframe to reflect the incremental nature of this work. This approach assumes a failure rate of one percent per year.

**Asphalt Pavement.** The site includes asphalt pavement for vehicle access and parking. In general, the asphalt pavement is in fair condition with multiple areas of defects. The Association maintains an inventory of 88,400 square feet of asphalt pavement, including the following streets and parking areas:

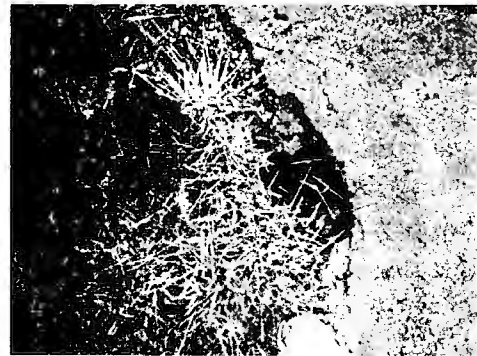
The defects noted include the following:

- **Open Cracks.** There are multiple locations where open cracks are allowing water to penetrate to the asphalt base and the bearing soils beneath the pavement. This water will erode the base accelerating the deterioration of the asphalt pavement. If the cracks have allowed the deterioration of the base materials and the bearing soil, the damaged areas should be removed and replaced. All other cracks should be cleaned and filled.
- **Improper Grading.** The asphalt pavement is not properly graded in a number of areas, resulting in the ponding of water on the pavement. Water ponding on asphalt pavement accelerates the deterioration of the pavement and will result in the formation of potholes. Proper grading of the asphalt pavement will require replacement of portions of the asphalt. It may also require replacement of some of the adjacent segments of curb and gutter that are not properly sloped to move water to the storm water management system.

- Alligatoring. There are multiple locations where the asphalt has developed a pattern of cracking known as alligatoring. Alligatoring is the result of an unstable base under the asphalt. Shifting in the base causes the asphalt to crack and shift, forming the cracks that resemble the skin of an alligator. Once these cracks extend through the asphalt, they will allow water to penetrate to the base, accelerating the rate of deterioration. The only solution is to remove the defective asphalt and compact the base before new asphalt is installed.
- Potholes. There are a number of locations where potholes have formed as the result of the failure of the underlying base material or the surface material. Repair will require removal of the asphalt and base material, installation and compaction of new base material, and resurfacing with asphalt.
- Depressions. There are areas where the asphalt surface is depressed due to deformation in the surface or underlying layers. These depressions may continue to grow with exposure to traffic. Water ponding was noted in several of these areas. Repair will require removal of the asphalt and base material, installation and compaction of new base material, and resurfacing with asphalt.
- Cracking Along Edges. Sections of the asphalt pavement have developed cracks along their edges as a result of a lack of curbing to hold it in place. The pavement will continue to deteriorate with time.
- Reflective Cracks. The asphalt pavement has a significant number of reflective cracks. Reflective cracks occur when an asphalt overlay is installed over pavement that has existing cracks. With time and movement of the asphalt surfaces, those cracks reappear in the new asphalt. Reflective cracks can be eliminated by the installation of a material, such as Petromat, over existing cracks at the time of overlay.



Depressed area, alligatoring and pothole  
in driveway



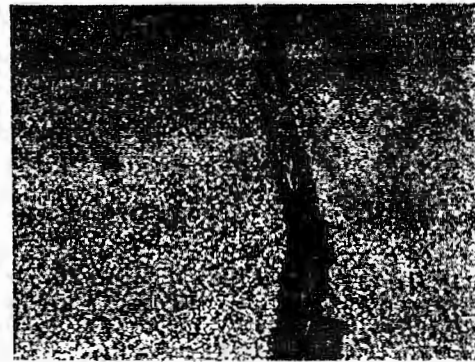
Edge cracking and base erosion

As a rule of thumb, asphalt should be overlaid when approximately five percent of the surface area has become cracked or has failed. The normal service life of asphalt pavement is typically 18 to 20 years.

In order to maintain the condition of the pavement throughout the community and to ensure the longest life of the asphalt, we recommend a systematic and comprehensive maintenance program that includes:

- Crack Sealing. All cracks should be sealed with an appropriate sealing compound to prevent water infiltration through the asphalt compound into the base. This repair should be done annually. This is an entirely different process from the seal coating discussed below. Crack sealing is normally considered a maintenance activity and is not funded from Reserves. Areas of extensive cracking or deterioration that cannot be made watertight by crack sealing should be cut out and patched.

- **Cleaning.** Long-term exposure to oil or gas breaks down asphalt. Because this asphalt pavement is generally not used for long term parking, it is unlikely that frequent cleaning will be necessary. When necessary, spill areas should be cleaned, or if deterioration has penetrated the asphalt, patched. This is a maintenance activity, and we have assumed that it will not be funded from Reserves.
- **Seal Coating.** The asphalt should be seal coated every three to five years. For this maintenance activity to be effective in extending the life of the asphalt, the crack sealing and cleaning of the asphalt as discussed above should be completed first.



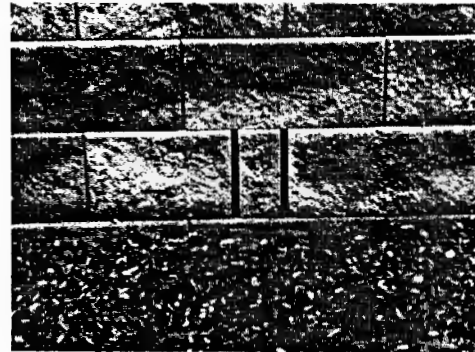
Large open crack in driveway - needs crack sealing and seal coating

Pricing used in the study is based on a recent contract for a two-inch overlay and reflects the current local market.

**Segmental Block Retaining Walls.** The community maintains an inventory of 1,032 square feet of segmental block retaining wall. The overall condition of these walls is good. A new retaining wall was installed in 2011 to correct a serious erosion issue.



Newly installed retaining wall to prevent erosion.

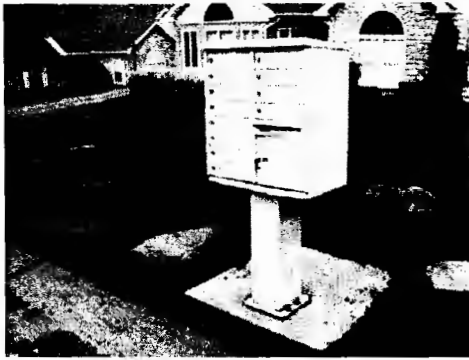


Drainage outlet through new segmental concrete block retaining wall indicates proper installation

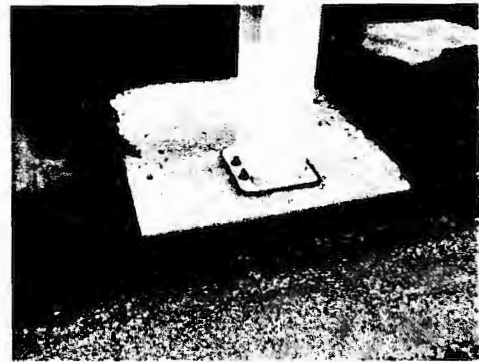
The industry considers this type of retaining wall to be maintenance-free for 50 years and have an estimated service life of 80-100 years. If this conclusion is accepted, there is no need to reserve for this very significant component. However, if major work must be performed on this wall at some point in time because of settlement, erosion, latent construction defects, etc., the cost will be very high. Therefore, we have included funding for resetting of 10% of this wall at 20 years in the future, which permits the association to accumulate slowly for this possibility.

**Mailboxes.** The cluster mailboxes located throughout the community are in fair condition, with moderate rust on some units. Concrete pads are in good condition.





Typical mailbox



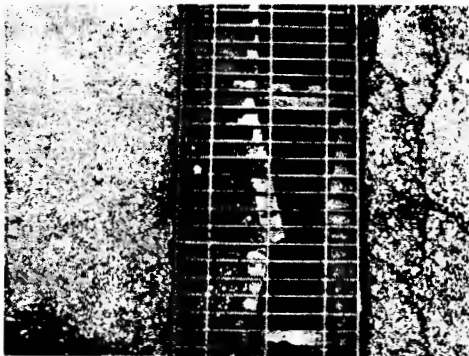
Concrete pad and mailbox base - some rusting at bottom of base

**Storm Water System.** The cost of replacing community storm water systems varies widely with the number of dwelling units in the community, the density of the housing, the local climate, and the total area of impervious surfaces. Costs for piping system replacement typically range between \$1,000 and \$3,000 per dwelling unit.

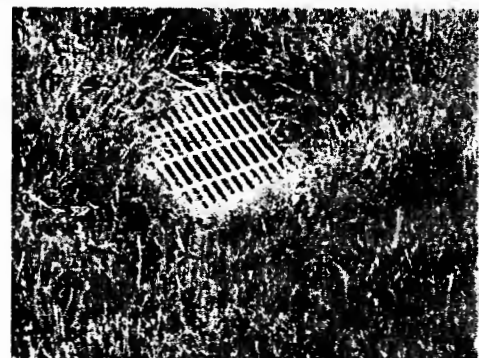
Due to the subsurface locations of the pipe, the condition of individual sections cannot be easily determined. Different types of pipe have drastically different life expectancies. Generally, both reinforced concrete pipe (RCP) and aluminized steel corrugated pipe (ASCP) have 75-year service lives. Corrugated metal pipe that has been fully coated with asphalt (FCCMP) has a service life of 32-38 years.

We have included the catch basins and underground piping portions of the storm water system in the Reserve Analysis. No engineering drawings were available to accurately determine distances, sizes of lines, and materials used for underground components of the system. Accordingly, we have provided an estimate of the approximate replacement cost based on our experience with other communities of similar size and on our inspection of the visible components while on site. Inspection of the underground lines and structures is beyond the scope of work of this study.

Because it is highly unlikely that all of the community's storm water piping will fail and require replacement in the period of the study, we have programmed funds for the replacement of ten percent of the inventory every twenty years to reflect the incremental nature of this work.



Deteriorating storm drains in front of some unit garages need replacement



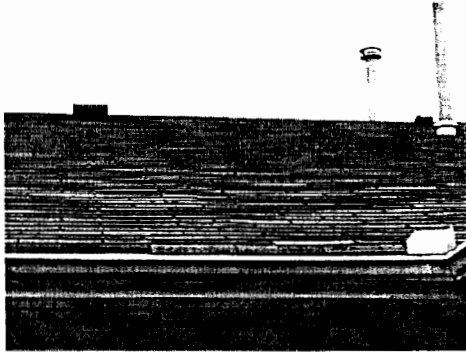
Typical small yard storm drains

**Water and Sewer Laterals.** The water and sewer laterals are those portions of the underground utility system that extend from the individual units to the water and sewer mains, typically located under or

along the street. In the absence of drawings, we have assumed 50 linear feet of each line is required to serve each unit. This is the approximate average distance from the face of the building to the curb line.

## UNIT EXTERIORS

**Asphalt Shingle Roofing.** All buildings have asphalt shingle roofs that vary in age and condition. We have estimated the remaining useful life of the roofs based on the conditions seen at the site as well as the age of the roofs. We have assumed that when the roofs eventually will require replacement, all roofs will be replaced with 25-year roofs. We have assumed that the gutters and downspouts will be replaced with 6" gutters and downspouts when the roofs are replaced.



Asphalt roof over garage with ridge vent and roof vent - shingle tabs turning down at gutter line



Typical unit roofline

Due to the large inventory and the varying rates at which the roofing materials will age and require replacement, we have divided the roof inventory into four equal components and spread their replacement over a six-year period.

**Vinyl Siding.** The vinyl siding on the unit buildings is in good overall condition. We have estimated the remaining useful life of the siding based on the conditions seen at the site as well as the age of the siding.

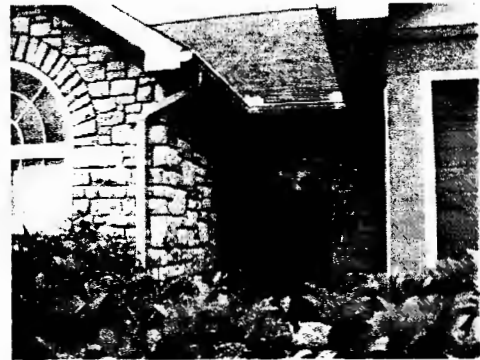
Due to the large inventory and the varying rates at which the siding materials will age and require replacement, we have divided the siding inventory into four equal components and spread their replacement over a six-year period.

**Synthetic Wood Trim.** In general, the fiber cement trim is in good condition. Synthetic wood trim is a low-maintenance item that typically has a service life of 40 years or more. We recommend that once a year the siding be inspected for proper attachment and sealing.

**Stone Tuckpointing.** The stonework on the buildings is in good condition. Stonework is usually considered to be a life of structure item and therefore excluded from reserve funding. Because weather and other conditions result in the slow deterioration of the mortar in the stone joints, we have included



Exterior stone veneer



Typical stone veneer at unit entrance

Tuckpointing is the process of raking and cutting out damaged sections of mortar and replacing it with new mortar. When mortar joints become damaged, they allow water to gain access to the stone joints. Repeated freeze-thaw cycles gradually increase the damage to the mortar joints, allowing even more moisture into the stone joints. If allowed to progress sufficiently, the stone surfaces can spall or entire stone pieces can be loosened.

Periodic tuckpointing limits the damage done by moisture penetration, maximizing the life of both the mortar and the stone. For the Reserve Analysis, we have assumed that five percent of the stone will require tuckpointing every ten years.

**Unit Exterior Painting.** Quad units' exterior garage doors and building trim will be painted in a five-year painting cycle, 20% of inventory per year, starting in 2013. The Association needs to review with an accountant this item to assure it is compliance with IRS guidelines. MDA has included funds in this reserve study for this item in the painting cycle as requested by property manager.



Typical painted synthetic wood window trim

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

End of Condition Assessment

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## CASH FLOW METHOD ACCOUNTING SUMMARY

This Villas at Parkwood Estates - Cash Flow Method Accounting Summary is an attachment to the Villas at Parkwood Estates - Replacement Reserve Study dated May 14, 2012 and is for use by accounting and reserve professionals experienced in Association funding and accounting principles. This Summary consists of four reports, the 2013, 2014, and 2015 Cash Flow Method Category Funding Reports (3) and a Three-Year Replacement Funding Report.

- CASH FLOW METHOD CATEGORY FUNDING REPORT, 2013, 2014, and 2015. Each of the 43 Projected Replacements listed in the Villas at Parkwood Estates Replacement Reserve Inventory has been assigned to one of 5 categories. The following information is summarized by category in each report:
  - Normal Economic Life and Remaining Economic Life of the Projected Replacements.
  - Cost of all Scheduled Replacements in each category.
  - Replacement Reserves on Deposit allocated to the category at the beginning and end of the report period.
  - Cost of Projected Replacements in the report period.
  - Recommended Replacement Reserve Funding allocated to the category during the report period as calculated by the Cash Flow Method.
- THREE-YEAR REPLACEMENT FUNDING REPORT. This report details the allocation of the \$250,294 Beginning Balance (at the start of the Study Year) and the \$258,716 of additional Replacement Reserve Funding in 2013 through 2015 (as calculated in the Replacement Reserve Analysis) to each of the 43 Projected Replacements listed in the Replacement Reserve Inventory. These allocations have been made using Chronological Allocation, a method developed by Miller Dodson Associates, Inc., and discussed below. The calculated data includes:
  - Identification and estimated cost of each Projected Replacement schedule in years 2013 through 2015.
  - Allocation of the \$250,294 Beginning Balance to the Projected Replacements by Chronological Allocation.
  - Allocation of the \$258,716 of additional Replacement Reserve Funding recommended in the Replacement Reserve Analysis in years 2013 through 2015, by Chronological Allocation.
- CHRONOLOGICAL ALLOCATION. Chronological Allocation assigns Replacement Reserves to Projected Replacements on a "first come, first serve" basis in keeping with the basic philosophy of the Cash Flow Method. The Chronological Allocation methodology is outlined below.
  - The first step is the allocation of the \$250,294 Beginning Balance to the Projected Replacements in the Study Year. Remaining unallocated funds are next allocated to the Projected Replacements in subsequent years in chronological order until the total of Projected Replacements in the next year is greater than the unallocated funds. Projected Replacements in this year are partially funded with each replacement receiving percentage funding. The percentage of funding is calculated by dividing the unallocated funds by the total of Projected Replacements in the partially funded year.

At Villas at Parkwood Estates the Beginning Balance funds all Scheduled Replacements in the Study Year through 2016 and provides partial funding (2%) of replacements scheduled in 2017.
  - The next step is the allocation of the \$86,239 of 2013 Cash Flow Method Reserve Funding calculated in the Replacement Reserve Analysis. These funds are first allocated to fund the partially funded Projected Replacements and then to subsequent years in chronological order as outlined above.

At Villas at Parkwood Estates the Beginning Balance and the 2013 Replacement Reserve Funding, funds replacements through 2016 and partial funds (38.6%) replacements in 2017.
  - Allocations of the 2014 and 2015 Reserve Funding are done using the same methodology.
  - The Three-Year Replacement Funding Report details component by component allocations made by Chronological Allocation.

### 2013 - CASH FLOW METHOD CATEGORY FUNDING REPORT

Each of the 43 Projected Replacements included in the Villas at Parkwood Estates Replacement Reserve Inventory has been assigned to one of the 5 categories listed in TABLE CF-1 below. This calculated data is a summary of data provided in the Three-Year Replacement Funding Report and Replacement Reserve Inventory. The accuracy of this data is dependent upon many factors including the following critical financial data:

- A Beginning Balance of \$250,294 as of the first day of the Study Year, January 1, 2013.
- Total reserve funding (including the Beginning Balance) of \$336,533 in the Study Year.
- No expenditures from Replacement Reserves other than those specifically listed in the Replacement Reserve Inventory.
- All Projected Replacements scheduled in the Replacement Reserve Inventory in 2013 being accomplished in 2013 at a cost of \$6,035.

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

2013 - CASH FLOW METHOD CATEGORY FUNDING - TABLE CF-1							
CATEGORY	NORMAL ECONOMIC LIFE	REMAINING ECONOMIC LIFE	ESTIMATED REPLACEMENT COST	2013 BEGINNING BALANCE	2013 RESERVE FUNDING	2013 PROJECTED REPLACEMENTS	2013 END OF YEAR BALANCE
SITE COMPONENT	60 years	0 to 54 years	\$60,350	\$6,035		(\$6,035)	
SITE IMPROVEMENTS	5 to 100 years	4 to 98 years	\$233,005	\$354	\$6,474		\$6,828
SITE UTILITIES	10 years	20 years	\$50,580				
UNIT EXTERIORS	5 to 35 years	2 to 23 years	\$1,268,238	\$227,915	\$77,826		\$305,740
UNIT EXTERIORS (con't)	5 years	1 to 5 years	\$26,475	\$15,991	\$1,939		\$17,930

**2014 - CASH FLOW METHOD CATEGORY FUNDING REPORT**

Each of the 43 Projected Replacements included in the Villas at Parkwood Estates Replacement Reserve Inventory has been assigned to one of the 5 categories listed in TABLE CF-2 below. This calculated data is a summary of data provided in the Three-Year Replacement Funding Report and Replacement Reserve Inventory. The accuracy of this data is dependent upon many factors including the following critical financial data:

- Replacement Reserves on Deposit totaling \$330,498 on January 1, 2014.
- Total reserve funding (including the Beginning Balance) of \$422,771 in 2013 through 2014.
- No expenditures from Replacement Reserves other than those specifically listed in the Replacement Reserve Inventory.
- All Projected Replacements scheduled in the Replacement Reserve Inventory in 2014 being  
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If any of these critical factors are inaccurate, do not use the data and please contact Miller Dodson Associates to arrange for an update of the Replacement Reserve Study.

<b>2014 - CASH FLOW METHOD CATEGORY FUNDING - TABLE CF-2</b>								
CATEGORY	NORMAL ECONOMIC LIFE	REMAINING ECONOMIC LIFE	ESTIMATED REPLACEMENT COST	2014 BEGINNING BALANCE	2014 RESERVE FUNDING	2014 PROJECTED REPLACEMENTS		2014 END OF YEAR BALANCE
SITE COMPONENT	60 years	5 to 59 years	\$60,350					
SITE IMPROVEMENTS	5 to 100 years	3 to 97 years	\$233,005	\$6,828	\$6,474			\$13,302
SITE UTILITIES	10 years	19 years	\$50,580					
UNIT EXTERIORS	5 to 35 years	1 to 22 years	\$1,268,238	\$305,740	\$77,826			\$383,566
UNIT EXTERIORS (cont)	5 years	0 to 4 years	\$26,475	\$17,930	\$1,939	(\$5,295)		\$14,574

**2015 - CASH FLOW METHOD CATEGORY FUNDING REPORT**

Each of the 43 Projected Replacements included in the Villas at Parkwood Estates Replacement Reserve Inventory has been assigned to one of the 5 categories listed in TABLE CF-3 below. This calculated data is a summary of data provided in the Three-Year Replacement Funding Report and Replacement Reserve Inventory. The accuracy of this data is dependent upon many factors including the following critical financial data:

- Replacement Reserves on Deposit totaling \$411,441 on January 1, 2015.
- Total Replacement Reserve funding (including the Beginning Balance) of \$509,010 in 2013 to 2015.
- No expenditures from Replacement Reserves other than those specifically listed in the Replacement Reserve Inventory.
- All Projected Replacements scheduled in the Replacement Reserve Inventory in 2015 being accomplished in 2015 at a cost of \$217,830.

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

<b>2015 - CASH FLOW METHOD CATEGORY FUNDING - TABLE CF-3</b>							
CATEGORY	NORMAL ECONOMIC LIFE	REMAINING ECONOMIC LIFE	ESTIMATED REPLACEMENT COST	2015 BEGINNING BALANCE	2015 RESERVE FUNDING	2015 PROJECTED REPLACEMENTS	2015 END OF YEAR BALANCE
SITE COMPONENT	60 years	4 to 58 years	\$60.350		\$610		\$610
SITE IMPROVEMENTS	5 to 100 years	2 to 96 years	\$233.005	\$13.302	\$4.378		\$17.680
SITE UTILITIES	10 years	18 years	\$50.580				
UNIT EXTERIORS	5 to 35 years	0 to 21 years	\$1,268.238	\$383.566	\$74.109	(\$212.535)	\$245.140
UNIT EXTERIORS (con't)	5 years	0 to 4 years	\$26.475	\$14.574	\$7.141	(\$5.295)	\$16.420



**CASH FLOW METHOD - THREE-YEAR REPLACEMENT FUNDING REPORT**

TABLE 4 below details the allocation of the \$250,294 Beginning Balance, as reported by the Association and the \$258,716 of Replacement Reserve Funding calculated by the Cash Flow Method in 2013 to 2015, to the 43 Projected Replacements listed in the Replacement Reserve Inventory. These allocations have been made by Chronological Allocation, a method developed by Miller Dodson Associates, Inc., and outlined on Page CF-1. The accuracy of the allocations is dependent upon many factors including the following critical financial data:

- Replacement Reserves on Deposit totaling \$250,294 on January 1, 2013.
- Replacement Reserves on Deposit totaling \$330,498 on January 1, 2014.
- Replacement Reserves on Deposit totaling \$411,441 on January 1, 2015.
- Total Replacement Reserve funding (including the Beginning Balance) of \$509,010 in 2013 to 2015.
- No expenditures from Replacement Reserves other than those specifically listed in the Replacement Reserve Inventory.
- All Projected Replacements scheduled in the Replacement Reserve Inventory in 2013 to 2015 being accomplished as scheduled in the Replacement Reserve Inventory at a cost of \$229,160.

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

CASH FLOW METHOD - THREE-YEAR REPLACEMENT FUNDING - TABLE CF-4												
Item #	Description of Projected Replacement	Estimated Replacement Costs	Allocation of Beginning Balance	2013 Reserve Funding	2013 Projected Replacements	2013 End of Year Balance	2014 Reserve Funding	2014 Projected Replacements	2014 End of Year Balance	2015 Reserve Funding	2015 Projected Replacements	2015 End of Year Balance
SITE COMPONENT												
1	Concrete flatwork (6%)	6.035	6.035		(6.035)							
2	Concrete flatwork (6%)	6.035										
3	Concrete flatwork (6%)	6.035										
4	Concrete flatwork (6%)	6.035										
5	Concrete flatwork (6%)	6.035										
6	Concrete flatwork (6%)	6.035										
7	Concrete flatwork (6%)	6.035										
8	Concrete flatwork (6%)	6.035										
9	Concrete flatwork (6%)	6.035										
10	Concrete flatwork (6%)	6.035										
SITE IMPROVEMENTS												
11	Asphalt, seal coating	17,680	354	6,474		6,828	6,474		13,302	4,378		17,680
12	Asphalt pavement, mill/overlay	150,280										
13	Segmental conc. block retaining wall	46,440										
14	Reset segmental block walls (10%)	3,605										
15	Mailboxes	10,800										
16	Community sign - wood	1,500										
17	Building unit signs	2,700										
SITE UTILITIES												
18	Sanitary sewer laterals (10%) allow	28,800										
19	Domestic water laterals (10%) allow	18,000										
20	Storm water system (10%) allow	3,780										
UNIT EXTERIORS												
21	Roof shingles asphalt (25%)	201,875	201,875			201,875			201,875		(201,875)	
22	Gutters & downspouts (25%)	10,660	10,660			10,660			10,660		(10,660)	
23	Roof shingles asphalt (25%)	201,875	4,036	73,922		77,959	73,922	151,881	49,994			201,875
24	Gutters & downspouts (25%)	10,660	213	3,903		4,117	3,903	8,020	2,640			10,660
25	Roof shingles asphalt (25%)	201,875							20,398			20,398
26	Gutters & downspouts (25%)	10,660							1,077			1,077
27	Roof shingles asphalt (25%)	201,875										
28	Gutters & downspouts (25%)	10,660										
29	Masonry veneer- tuckpointing (5%)	4,908										
30	Vinyl siding, 61/4" (25%)	68,970										
31	Vinyl siding, 61/4" (25%)	68,970										
32	Vinyl siding, 61/4" (25%)	68,970										
33	Vinyl siding, 61/4" (25%)	68,970										
34	Vinyl soffits, 12"	82,080										
35	Synthetic wood trim (5%)	8,250	8,250			8,250			8,250			8,250
36	Aluminium coil covered fascia (5%)	2,880	2,880			2,880			2,880			2,880

**CASH FLOW METHOD - THREE-YEAR REPLACEMENT FUNDING - TABLE 4 cont'd**

Item #	Description of Projected Replacement	Estimated Replacement Costs	Allocation of Beginning Balance	2013			2014			2015		
				Reserve Funding	Projected Replacements	End of Year Balance	Reserve Funding	Projected Replacements	End of Year Balance	Reserve Funding	Projected Replacements	End of Year Balance
37	Wall mounted light fixtures	18,900										
38	Pole light fixtures	25,200										
UNIT EXTERIORS (con't)												
39	Painting, trim, garage doors (20%)	5,295	5,295			5,295		(5,295)			535	
40	Painting, trim, garage doors (20%)	5,295	5,295			5,295				5,295		(5,295)
41	Painting, trim, garage doors (20%)	5,295	5,295			5,295						5,295
42	Painting, trim, garage doors (20%)	5,295	106	1,939		2,045	1,939		3,984	1,311		5,295
43	Painting, trim, garage doors (20%)	5,295								5,295		5,295

## COMPONENT METHOD ACCOUNTING SUMMARY

This Villas at Parkwood Estates - Component Method Accounting Summary is an attachment to the Villas at Parkwood Estates - Replacement Reserve Study dated May 14, 2012 and is for use by accounting and reserve professionals experienced in Association funding and accounting principals. This Summary consists of four reports, the 2013, 2014, and 2015 Cash Flow Method Category Funding Reports (3) and a Three-Year Replacement Funding Report.

- **COMPONENT METHOD CATEGORY FUNDING REPORT, 2013, 2014, and 2015.** Each of the 43 Projected Replacements listed in the Villas at Parkwood Estates Replacement Reserve Inventory has been assigned to one of 5 categories. The following information is summarized by category in each report:
  - Normal Economic Life and Remaining Economic Life of the Projected Replacements.
  - Cost of all Scheduled Replacements in each category.
  - Replacement Reserves on Deposit allocated to the category at the beginning and end of the report period.
  - Cost of Projected Replacements in the report period.
  - Recommended Replacement Reserve Funding allocated to the category during the report period as calculated by the Component Method.
- **THREE-YEAR REPLACEMENT FUNDING REPORT.** This report details the allocation of the \$250,294 Beginning Balance (at the start of the Study Year) and the \$536,890 of additional Replacement Reserve funding in 2013 through 2015 (as calculated in the Replacement Reserve Analysis) to each of the 43 Projected Replacements listed in the Replacement Reserve Inventory. These allocations have been made using the Component Method as outlined in the Replacement Reserve Analysis. The calculated data includes:
  - Identification and estimated cost of each Projected Replacement schedule in years 2013 through 2015.
  - Allocation of the \$250,294 Beginning Balance to the Projected Replacements by the Component Method.
  - Allocation of the \$536,890 of additional Replacement Reserve Funding recommended in the Replacement Reserve Analysis in years 2013 through 2015, by the Component Method.

### 2013 - COMPONENT METHOD CATEGORY FUNDING REPORT

Each of the 43 Projected Replacements included in the Villas at Parkwood Estates Replacement Reserve Inventory has been assigned to one of the 5 categories listed in TABLE CM-1 below. This calculated data is a summary of data provided in the Three-Year Replacement Funding Report and Replacement Reserve Inventory. The accuracy of this data is dependent upon many factors including the following critical financial data:

- A Beginning Balance of \$250,294 as of the first day of the Study Year, January 1, 2013.
- Total reserve funding (including the Beginning Balance) of \$432,357 in the Study Year.
- No expenditures from Replacement Reserves other than those specifically listed in the Replacement Reserve Inventory.
- All Projected Replacements scheduled in the Replacement Reserve Inventory in 2013 being accomplished in 2013 at a cost of \$6,035.

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

2013 - COMPONENT METHOD CATEGORY FUNDING - TABLE CM-1							
CATEGORY	NORMAL ECONOMIC LIFE	REMAINING ECONOMIC LIFE	ESTIMATED REPLACEMENT COST	2013 BEGINNING BALANCE	2013 RESERVE FUNDING	2013 PROJECTED REPLACEMENTS	2013 END OF YEAR BALANCE
SITE COMPONENT	60 years	0 to 54 years	\$60,350	\$9,828	\$6,294	\$6,035	\$10,086
SITE IMPROVEMENTS	5 to 100 years	4 to 98 years	\$233,005	\$15,400	\$14,555		\$29,955
SITE UTILITIES	10 years	20 years	\$50,580		\$2,409		\$2,409
UNIT EXTERIORS	5 to 35 years	2 to 23 years	\$1,268,238	\$223,132	\$151,907		\$375,039
UNIT EXTERIORS (con't)	5 years	1 to 5 years	\$26,475	\$1,934	\$6,899		\$8,833

**2014 - COMPONENT METHOD CATEGORY FUNDING REPORT**

Each of the 43 Projected Replacements included in the Villas at Parkwood Estates Replacement Reserve Inventory has been assigned to one of the 5 categories listed in TABLE CM-2 below. This calculated data is a summary of data provided in the Three-Year Replacement Funding Report and Replacement Reserve Inventory. The accuracy of this data is dependent upon many factors including the following critical financial data:

- Replacement Reserves on Deposit totaling \$426,322 on January 1, 2014.
- Total reserve funding (including the Beginning Balance) of \$610,323 in 2013 through 2014.
- No expenditures from Replacement Reserves other than those specifically listed in the Replacement Reserve Inventory.
- All Projected Replacements scheduled in the Replacement Reserve Inventory in 2014 being  
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If any of these critical factors are inaccurate, do not use the data and please contact Miller Dodson Associates to arrange for an update of the Replacement Reserve Study.

<b>2014 - COMPONENT METHOD CATEGORY FUNDING - TABLE CM-2</b>							
CATEGORY	NORMAL ECONOMIC LIFE	REMAINING ECONOMIC LIFE	ESTIMATED REPLACEMENT COST	2014 BEGINNING BALANCE	2014 RESERVE FUNDING	2014 PROJECTED REPLACEMENTS	2014 END OF YEAR BALANCE
SITE COMPONENT	60 years	5 to 59 years	\$60,350	\$10,086	\$2,196		\$12,283
SITE IMPROVEMENTS	5 to 100 years	3 to 97 years	\$233,005	\$29,955	\$14,555		\$44,511
SITE UTILITIES	10 years	19 years	\$50,580	\$2,409	\$2,409		\$4,817
UNIT EXTERIORS	5 to 35 years	1 to 22 years	\$1,268,238	\$375,039	\$151,907		\$526,946
UNIT EXTERIORS (con't)	5 years	0 to 4 years	\$26,475	\$8,833	\$6,899	\$5,295	\$10,437

### 2015 - COMPONENT METHOD CATEGORY FUNDING REPORT

Each of the 43 Projected Replacements included in the Villas at Parkwood Estates Replacement Reserve Inventory has been assigned to one of the 5 categories listed in TABLE CM-3 below. This calculated data is a summary of data provided in the Three-Year Replacement Funding Report and Replacement Reserve Inventory. The accuracy of this data is dependent upon many factors including the following critical financial data:

- Replacement Reserves on Deposit totaling \$598,993 on January 1, 2015.
- Total Replacement Reserve funding (including the Beginning Balance) of \$787,184 in 2013 to 2015.
- No expenditures from Replacement Reserves other than those specifically listed in the Replacement Reserve Inventory.
- All Projected Replacements scheduled in the Replacement Reserve Inventory in 2015 being accomplished in 2015 at a cost of \$217,830.

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

2015 - COMPONENT METHOD CATEGORY FUNDING - TABLE CM-3							
CATEGORY	NORMAL ECONOMIC LIFE	REMAINING ECONOMIC LIFE	ESTIMATED REPLACEMENT COST	2015 BEGINNING BALANCE	2015 RESERVE FUNDING	2015 PROJECTED REPLACEMENTS	2015 END OF YEAR BALANCE
SITE COMPONENT	60 years	4 to 58 years	\$60,350	\$12,283	\$2,196		\$14,479
SITE IMPROVEMENTS	5 to 100 years	2 to 96 years	\$233,005	\$44,511	\$14,555		\$59,066
SITE UTILITIES	10 years	18 years	\$50,580	\$4,817	\$2,409		\$7,226
UNIT EXTERIORS	5 to 35 years	0 to 21 years	\$1,268,238	\$526,946	\$151,907	\$212,535	\$466,318
UNIT EXTERIORS (con't)	5 years	0 to 4 years	\$26,475	\$10,437	\$5,794	\$5,295	\$10,935

### COMPONENT METHOD - THREE-YEAR REPLACEMENT FUNDING REPORT

TABLE CM-4 below details the allocation of the \$250,294 Beginning Balance, as reported by the Association and the \$536,890 of Replacement Reserve Funding calculated by the Cash Flow Method in 2013 to 2015, to the 43 Projected Replacements listed in the Replacement Reserve Inventory. These allocations have been made by Chronological Allocation, a method developed by Miller Dodson Associates, Inc., and outlined on Page CF-1. The accuracy of the allocations is dependent upon many factors including the following critical financial data:

- Replacement Reserves on Deposit totaling \$250,294 on January 1, 2013.
- Replacement Reserves on Deposit totaling \$426,322 on January 1, 2014.
- Replacement Reserves on Deposit totaling \$598,993 on January 1, 2015.
- Total Replacement Reserve funding (including the Beginning Balance) of \$787,184 in 2013 to 2015.
- No expenditures from Replacement Reserves other than those specifically listed in the Replacement Reserve Inventory.
- All Projected Replacements scheduled in the Replacement Reserve Inventory in 2013 to 2015 being accomplished as scheduled in the Replacement Reserve Inventory at a cost of \$229,160.

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

COMPONENT METHOD - THREE-YEAR REPLACEMENT FUNDING - TABLE CM-4													
Item #	Description of Projected Replacement	Estimated Replacement Costs	Allocation of Beginning Balance	2013 Reserve Funding	2013 Projected Replacements	2013 End of Year Balance	2014 Reserve Funding	2014 Projected Replacements	2014 End of Year Balance	2015 Reserve Funding	2015 Projected Replacements	2015 End of Year Balance	
SITE COMPONENT													
1	Concrete flatwork (6%)	6.035	1.837	4.198	(6.035)		101		101	101		201	
2	Concrete flatwork (6%)	6.035	1.623	630		2,253	630		2,883	630		3,514	
3	Concrete flatwork (6%)	6.035	1.439	354		1,793	354		2,146	354		2,500	
4	Concrete flatwork (6%)	6.035	1.255	252		1,507	252		1,758	252		2,010	
5	Concrete flatwork (6%)	6.035	1.072	199		1,270	199		1,469	199		1,667	
6	Concrete flatwork (6%)	6.035	888	166		1,054	166		1,220	166		1,386	
7	Concrete flatwork (6%)	6.035	704	144		848	144		992	144		1,136	
8	Concrete flatwork (6%)	6.035	520	128		649	128		777	128		905	
9	Concrete flatwork (6%)	6.035	337	116		453	116		569	116		686	
10	Concrete flatwork (6%)	6.035	153	107		260	107		367	107		474	
SITE IMPROVEMENTS													
11	Asphalt. seal coating	17.680		3,536		3,536	3,536		7,072	3,536		10,608	
12	Asphalt pavement. mill/overlay	150.280	13,723	9,754		23,477	9,754		33,231	9,754		42,985	
13	Segmental conc. block retaining wall	46.440	141	468		609	468		1,077	468		1,544	
14	Reset segmental block walls (10%)	3.605		172		172	172		343	172		515	
15	Mailboxes	10.800	1,033	407		1,440	407		1,847	407		2,254	
16	Community sign - wood	1.500	201	93		294	93		386	93		479	
17	Building unit signs	2.700	301	126		428	126		554	126		680	
SITE UTILITIES													
18	Sanitary sewer laterals (10%) allow	28.800		1,371		1,371	1,371		2,743	1,371		4,114	
19	Domestic water laterals (10%) allow	18.000		857		857	857		1,714	857		2,571	
20	Storm water system (10%) allow	3.780		180		180	180		360	180		540	
UNIT EXTERIORS													
21	Roof shingles asphalt (25%)	201.875	52,231	49,881		102,112	49,881		151,994	49,881	(201,875)		
22	Gutters & downspouts (25%)	10.660	2,967	2,564		5,531	2,564		8,096	2,564	(10,660)		
23	Roof shingles asphalt (25%)	201.875	46,086	31,158		77,244	31,158		108,402	31,158		139,559	
24	Gutters & downspouts (25%)	10.660	2,781	1,576		4,357	1,576		5,933	1,576		7,508	
25	Roof shingles asphalt (25%)	201.875	39,941	23,133		63,075	23,133		86,208	23,133		109,341	
26	Gutters & downspouts (25%)	10.660	2,596	1,152		3,748	1,152		4,900	1,152		6,052	
27	Roof shingles asphalt (25%)	201.875	33,796	18,675		52,472	18,675		71,147	18,675		89,823	
28	Gutters & downspouts (25%)	10.660	2,410	917		3,327	917		4,244	917		5,160	
29	Masonry veneer- tuckpointing (5%)	4.908		234		234	234		467	234		701	
30	Vinyl siding. 61/4" (25%)	68.970	9,237	4,267		13,504	4,267		17,770	4,267		22,037	
31	Vinyl siding. 61/4" (25%)	68.970	7,558	3,838		11,396	3,838		15,234	3,838		19,072	
32	Vinyl siding. 61/4" (25%)	68.970	5,878	3,505		9,383	3,505		12,888	3,505		16,394	
33	Vinyl siding. 61/4" (25%)	68.970	4,199	3,239		7,437	3,239		10,676	3,239		13,914	
34	Vinyl soffits. 12"	82.080	7,852	3,093		10,945	3,093		14,038	3,093		17,131	
35	Synthetic wood trim (5%)	8.250	502	1,937		2,439	1,937		4,376	1,937		6,313	
36	Aluminium coil covered fascia (5%)	2.880	175	676		851	676		1,528	676		2,204	

**COMPONENT METHOD - THREE-YEAR REPLACEMENT FUNDING - TABLE CM-4 cont'd**

Item #	Description of Projected Replacement	Estimated Replacement Costs	Allocation of Beginning Balance	2013			2014			2015		
				Reserve Funding	Projected Replacements	End of Year Balance	Reserve Funding	Projected Replacements	End of Year Balance	Reserve Funding	Projected Replacements	End of Year Balance
37	Wall mounted light fixtures	18,900	2,109	884		2,993	884		3,877	884		4,761
38	Pole light fixtures	25,200	2,813	1,178		3,991	1,178		5,169	1,178		6,347
UNIT EXTERIORS (con't)												
39	Painting, trim, garage doors (20%)	5,295	967	2,164		3,131	2,164	(5,295)		1,059		1,059
40	Painting, trim, garage doors (20%)	5,295	645	1,550		2,195	1,550		3,745	1,550	(5,295)	
41	Painting, trim, garage doors (20%)	5,295	322	1,243		1,566	1,243		2,809	1,243		4,052
42	Painting, trim, garage doors (20%)	5,295		1,059		1,059	1,059		2,118	1,059		3,177
43	Painting, trim, garage doors (20%)	5,295		883		883	883		1,765	883		2,648



## Appendix

## 1. COMMON INTEREST DEVELOPMENTS - AN OVERVIEW

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

The growth of Community Associations has been explosive. In 1965 there were only 500 Community Associations in the United States. According to the U.S. Census, there were 130,000 Community Associations in 1990. Community Associations Institute (CAI), a national trade association, estimates there were more than 200,000 Community Associations in the year 2000, and that the number of Community Associations will continue to multiply.

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

## 2. REPLACEMENT RESERVE STUDY

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

- Replacement Reserve Study Introduction. The introduction provides a description of the property, reviews the intent of the Replacement Reserve Study, and lists documents and site evaluations upon which the Replacement Reserve Study is based.
- Section A Replacement Reserve Analysis. Many components owned by the Association have a limited life and require periodic replacement. Therefore it is essential the Association have a financial plan that provides funding for the timely replacement of these components in order to protect the safety, appearance, and value of the community. In conformance with American Institute of Certified Public Accountant guidelines, Section A Replacement Reserve Analysis evaluates the current funding of Replacement Reserves as reported by the Association and recommends annual funding of Replacement Reserves by two generally accepted accounting methods; the Cash Flow Method and the Component Method. Section A Replacement Reserve Analysis includes graphic and tabular presentations of these methods and current Association funding.
- Section B Replacement Reserve Inventory. The Replacement Reserve Inventory lists the commonly-owned components within the community that require periodic replacement using funding from Replacement Reserves. The Replacement Reserve Inventory also provides information about components excluded from the Replacement Reserve Inventory whose replacement is not scheduled for funding from Replacement Reserves.

Replacement Reserve Inventory includes estimates of the normal economic life and the remaining economic life for those components whose replacement is scheduled for funding from Replacement Reserves.

- Section C Projected Annual Replacements. The Calendar of Projected Annual Replacements provides a year-by-year listing of the Projected Replacements based on the data in the Replacement Reserve Inventory.
- Section D Condition Assessment. Several of the items listed in the Replacement Reserve Inventory are discussed in more detail. The Condition Assessment includes a narrative and photographs that document conditions at the property observed during our visual evaluation.
- Section E Attachments. The Appendix is provided as an attachment to the Replacement Reserve Study. Additional attachments may include supplemental photographs to document conditions at the property and additional information specific to the property cited in the Conditions Assessment (i.e. Consumer Product Safety Commission, Handbook for Public Playground Safety, information on segmental retaining walls, manufacturer recommendations for asphalt shingles or siding, etc).

### 3. METHODS OF ANALYSIS

The Replacement Reserve industry generally recognizes two different methods of accounting for Replacement Reserve Analysis. Due to the difference in accounting methodologies, these methods lead to different calculated values for the Minimum Annual Contribution to the Reserves. The results of both methods are presented in this report. The Association should obtain the advice of its accounting professional as to which method is more appropriate for the Association. The two methods are:

- **Component Method.** This method is a time tested mathematical model developed by HUD in the early 1980s. It treats each item in the replacement schedule as an individual line item budget. Generally, the Minimum Annual Contribution to Reserves is higher when calculated by the Component Method. The mathematical model for this method works as follows:

First, the total Current Objective is calculated, which is the reserve amount that would have accumulated had all of the items on the schedule been funded from initial construction at their current replacement costs. Next, the Reserves Currently on Deposit (as reported by the Association) are distributed to the components in the schedule in proportion to the Current Objective. The Minimum Annual Deposit for each component is equal to the Estimated Replacement Cost, minus the Reserves on Hand, divided by the years of life remaining.

- **Cash Flow Method.** The Cash Flow Method is sometimes referred to as the "Pooling Method." It calculates the minimum constant annual contribution to reserves (Minimum Annual Deposit) required to meet projected expenditures without allowing total reserves on hand to fall below the specified minimum level in any year. This method usually results in a calculated requirement for annual contribution somewhat less than that arrived at by the Component Method of analysis.

First, the Minimum Recommended Reserve Level to be Held on Account is determined based on the age, condition, and replacement cost of the individual components. The mathematical model then allocates the estimated replacement costs to the future years in which they are projected to occur. Based on these expenditures, it then calculates the minimum constant yearly contribution (Minimum Annual Deposit) to the reserves necessary to keep the reserve balance at the end of each year above the Minimum Recommended Reserve Level to be Held on Account. The Cash Flow Analysis assumes that the Association will have authority to use all of the reserves on hand for replacements as the need occurs. This method usually results in a Minimum Annual Deposit which is less than that arrived at by the Component Method.

- **Adjusted Cash Flow Analysis.** This program has the ability to modify the Cash Flow Method to take into account forecasted inflation and interest rates, thereby producing an Adjusted Cash Flow Analysis. Attempting to forecast future inflation and interest rates and the impact of changing technology is highly tenuous. Therefore, in most cases it is preferable to make a new schedule periodically rather than attempt to project far into the future. We will provide more information on this type of analysis upon request.

### 4. REPLACEMENT RESERVE STUDY DATA

- **Identification of Reserve Components.** The Reserve Analyst has only two methods of identifying Reserve Components; 1) information provided by the Association and 2) observations made at the site. It is important that the Reserve Analyst be provided with all available information detailing the components owned by the Association. It is our policy to request such information prior to bidding on a project and to meet with the individuals responsible for maintaining the community after acceptance of our proposal. After completion of the Study, the Study should be reviewed by the Board of Directors, individuals responsible for maintaining the community, and the Association's accounting professionals. We are dependent upon the Association for correct information, documentation, and drawings.

- **Unit Costs.** Unit costs are developed using nationally published standards and estimating guides and are adjusted by state or region. In some instances, recent data received in the course of our work is used to modify these figures.

Contractor proposals or actual cost experience may be available as part of the Association records. This is useful information which should be incorporated into your report. Please bring any such available data to our attention, preferably before the report is commenced.

- **Replacement vs. Repair and Maintenance.** A Replacement Reserve Study addresses the required funding for Capital Replacement Expenditures. This should not be confused with operational costs or cost of repairs or maintenance.

5. DEFINITIONS

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

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

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

**Component Analysis.** See Component Method, above.

**Contingency.** An allowance for unexpected requirements. Roughly the same as the Minimum Recommended Reserve Level to be Held on Account used in the Cash Flow Method of analysis.

**Critical Year.** In the Cash Flow Method, a year in which the reserves on hand are projected to fall to the established minimum level. See Minimum Recommended Reserve Level to be Held on Account.

**Current Objective.** This is the reserve amount that would have accumulated had the item been funded from initial construction at its current replacement cost. It is equal to the estimated replacement cost divided by the estimated economic life, times the number of years expended (the difference between the Estimated Economic Life and the Estimated Life Left). The Total Current Objective can be thought of as the amount of reserves the Association should now have on hand based on the sum of all of the Current Objectives.

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

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

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

**Estimated Initial Replacement.** For a Cyclic Replacement Item (see above), the number of years until the replacement cycle is expected to begin.

**Estimated Replacement Cycle.** For a Cyclic Replacement Item, the number of years over which the remainder of the component's replacement occurs.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

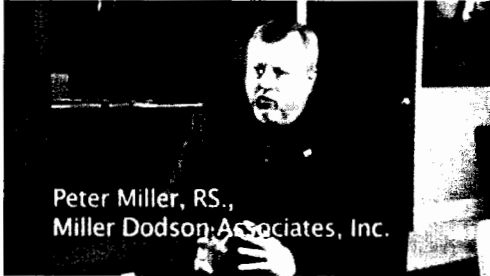
#### 6. LIST OF RECOMMENDED REPAIRS - PROCEDURES

A List of Recommended Repairs is offered as a supplemental report to the Replacement Reserve Study (at an additional fee) to assist the Association in understanding the financial implications of all items owned by the Association, not just the items included for funding by Replacement Reserves listed in the Replacement Reserve Inventory. The following information relates to the List of Recommended Repairs:

- Repair costs. Cost range estimates given in the repair list assume that all work by a given trade will be done together as a single project. If repairs are done piece-meal, the costs would be significantly higher. The costs of any repairs to be funded out of the Reserve Fund should be subtracted from the Reserves Currently on Deposit figure. The Board or Property Manager should coordinate this decision with the Reserve Analyst as part of the revision process.
- Completion of repairs. The Replacement Reserve Analysis assumes that all repairs cited in the Repair List will be completed within a twelve-month period of time. Estimated Life Left in the Replacement Reserve Study has been factored under this assumption. Any deletions or delays of the projects included in the List of Recommended Repairs may result in major inaccuracies in the Replacement Reserve Analysis.
- Safety issues. If safety issues have been cited, they should be given the highest priority and should be done immediately upon receipt of this report. The Board must recognize that from a liability standpoint, they have been made aware of the existence of these unsafe conditions, if any, once the report is delivered for their review.
- Unit costs. Nationally published standards and standard estimating manuals have been used in the development of this report. Contractor proposals or actual cost experience may be available as part of the Association records. We will adjust our figures to conform to your experience if the material or information is disclosed to us and/or made available for our use.

## Capital Replacement Reserve Study Video Answers to Frequently Asked Questions

What is a Reserve Study?  
Who are we?



<http://bcove.me/nc0o69t7>

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



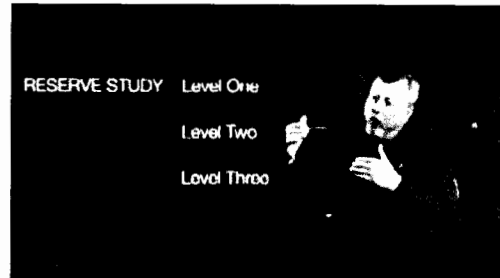
<http://bcove.me/stt373hj>

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



<http://bcove.me/81ch7kjt>

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



<http://bcove.me/ixis1yxm>

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



<http://bcove.me/81ch7kjt>

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



<http://bcove.me/fazwdk3h>

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



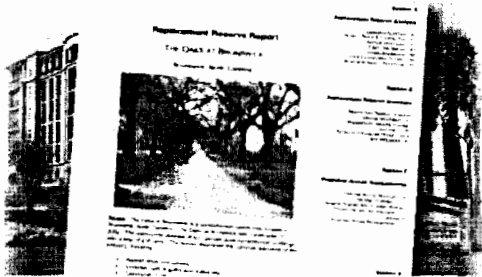
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Community dues, how can a Reserve Study help?  
Will a study help keep my property competitive?



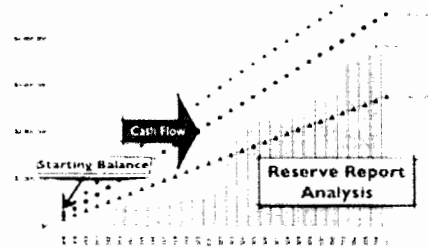
<http://bcove.me/2vfih1tz>

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



<http://bcove.me/wb2fugb1>

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



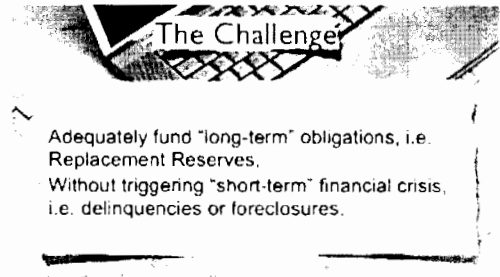
<http://bcove.me/7buer3n8>

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



<http://bcove.me/s2tmtj9b>

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



<http://bcove.me/iqul31vq>