REPLACEMENT RESERVE REPORT FY 2016
MORRIS SQUARE TOWNHOMES

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REPLACEMENT RESERVE REPORT

MORRIS SQUARE TOWNHOMES

CHARLESTON, SOUTH CAROLINA

Description. Morris Square Townhomes is a homeowners association located in Charleston, South Carolina. Constructed from 2005 to 2006, the community consists of four buildings containing 16 units. The survey examined the common elements of the property, including:

- Building exteriors and common interior areas.

Level of Service. This study has been performed as a Level 1 Full Service Reserve Study as defined under the National Reserve Study Standards that have been adopted by the Community Associations Institute. As such, a complete inventory of components was established for the commonly owned elements of this facility based on information provided by the Community Manager or by quantities that were developed from field measurement or takeoffs from to-scale drawings as performed by the Analyst. The condition of each inventory component was established by the Analyst, based on a visual inspection or review of provided historical data with a major repair or replacement cost for each also set. The included fund status and funding plan have been derived from analysis of this inventory.

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

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

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

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

- **Financial Plan.** The Association has a fiduciary responsibility to protect the appearance, value, and safety of the property and it is therefore essential the Association have a financial plan that provides funding for the projected replacements. In conformance with American Institute of Certified Public Accountant guidelines, Section A, Replacement Reserve Analysis evaluates the current funding of Replacement Reserves as reported by the Association and recommends annual funding of Replacement Reserves by the Cash Flow Method. Section A, Replacement Reserve Analysis includes graphic and tabular presentations of the Association's current funding and the recommended funding based on the Cash Flow Method. An Executive Summary of these calculations is provided on Page A1. The alternative Component Method of funding is provided in the Appendix.

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

- The Request for Proposal submitted and executed by the Association.

- Miller - Dodson performed a visual evaluation on November 25, 2015 to determine a remaining useful life and replacement cost for the commonly owned elements of this facility.

- This study contains additional recommendations to address inflation for the Cash Flow Method only. For this recommendation, Miller - Dodson uses the Producers Price Index (PPI), which gauges inflation in manufacturing and construction. Please see page A5 for further details.

To-Scale Drawings. Site and building plans were used in the development of this study. We recommend the Association assemble and maintain a library of site and building plans of the entire facility. Record drawings should be scanned into an electronic format for safe storage and ease of distribution. Upon request for a nominal fee, Miller - Dodson can provide scanning services.

Current Funding. This reserve study has been prepared for Fiscal Year 2016 covering the period from January 1, 2016 to December 31, 2016. The Replacement Reserves on deposit as of January 1, 2016 are reported to be $4,300.00. The planned contribution for the fiscal year is $8,000.00. The balance and contribution figures have been supplied by the managing agent and confirmation or audit of these figures is beyond the scope of the study. For the purposes of this study, it is assumed that the annual contribution will be deposited at the end of each month.

Acknowledgement. Miller - Dodson Associates would like to acknowledge the assistance and input of the Community Manager, Ms. Megan Howard who provided very helpful insight into the current operations of the property.

Analyst's Credentials. Mr. Gary D. Freeman, AIA, CCS, NCARB holds a Bachelor's Degree in Architecture from Mississippi State University. Mr. Freeman is a registered Architect in the states of South Carolina and Mississippi. He has over 30 years of experience as a practicing architect with a strong focus in the last 15 years in the area of forensics in buildings and assessments. He is President of Gary Freeman Architect Inc. and a reserve analyst for Miller - Dodson Associates.

Respectfully submitted,

millerdodson ASSOCIATES | Capital Reserve Consultants

Gary D. Freeman, AIA, CCS, NCARB
Reserve Analyst

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EXECUTIVE SUMMARY

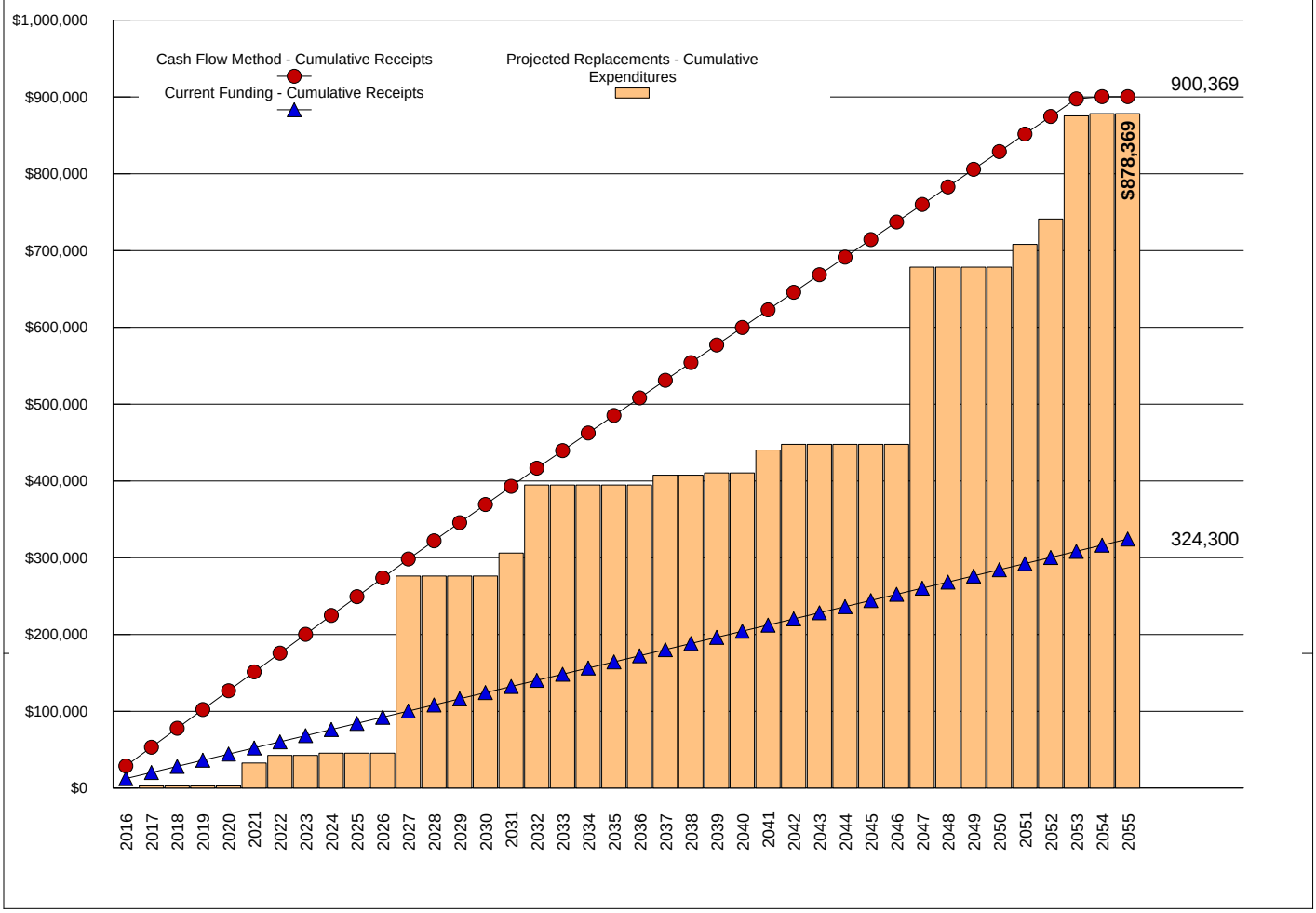
The Morris Square Townhomes Replacement Reserve Analysis uses the Cash Flow Method (CFM) to calculate Replacement Reserve funding for the periodic replacement of the 44 Projected Replacements identified in the Replacement Reserve Inventory.

$24,495 **RECOMMENDED REPLACEMENT RESERVE FUNDING FOR THE STUDY YEAR, 2016**
$127.58 Per unit (average), minimum monthly funding of Replacement Reserves

We recommend the Association adopt a Replacement Reserve Funding Plan based on the annual funding recommendation above. Inflation adjusted funding for subsequent years is shown on Page A5.

Morris Square Townhomes reports a Starting Balance of $4,300 and Annual Funding totaling $8,000. Current funding is inadequate to fund the $878,369 of Projected Replacements scheduled in the Replacement Reserve Inventory over the 40-year Study Period. See Page A3 for a more detailed evaluation.

#1 - Cumulative Replacement Reserve Funding and Expenditures Graph



The Current Funding Objective as calculated by the Component Method (Fully Funded) is $156,026 making the reserve account 2.8% funded. See the Appendix for more information on this method.

REPLACEMENT RESERVE ANALYSIS - GENERAL INFORMATION

The Morris Square Townhomes Replacement Reserve Analysis calculations of recommended funding of Replacement Reserves by the Cash Flow Method and the evaluation of the Current Funding are based upon the same Study Year, Study Period, Beginning Balance, Replacement Reserve Inventory and Level of Service.

2016 | **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, 2016.

40 Years | **STUDY PERIOD**

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

$4,300 | **STARTING BALANCE**

The Association reports Replacement Reserves on Deposit totaling $4,300 at the start of the Study Year.

Level One | **LEVEL OF SERVICE**

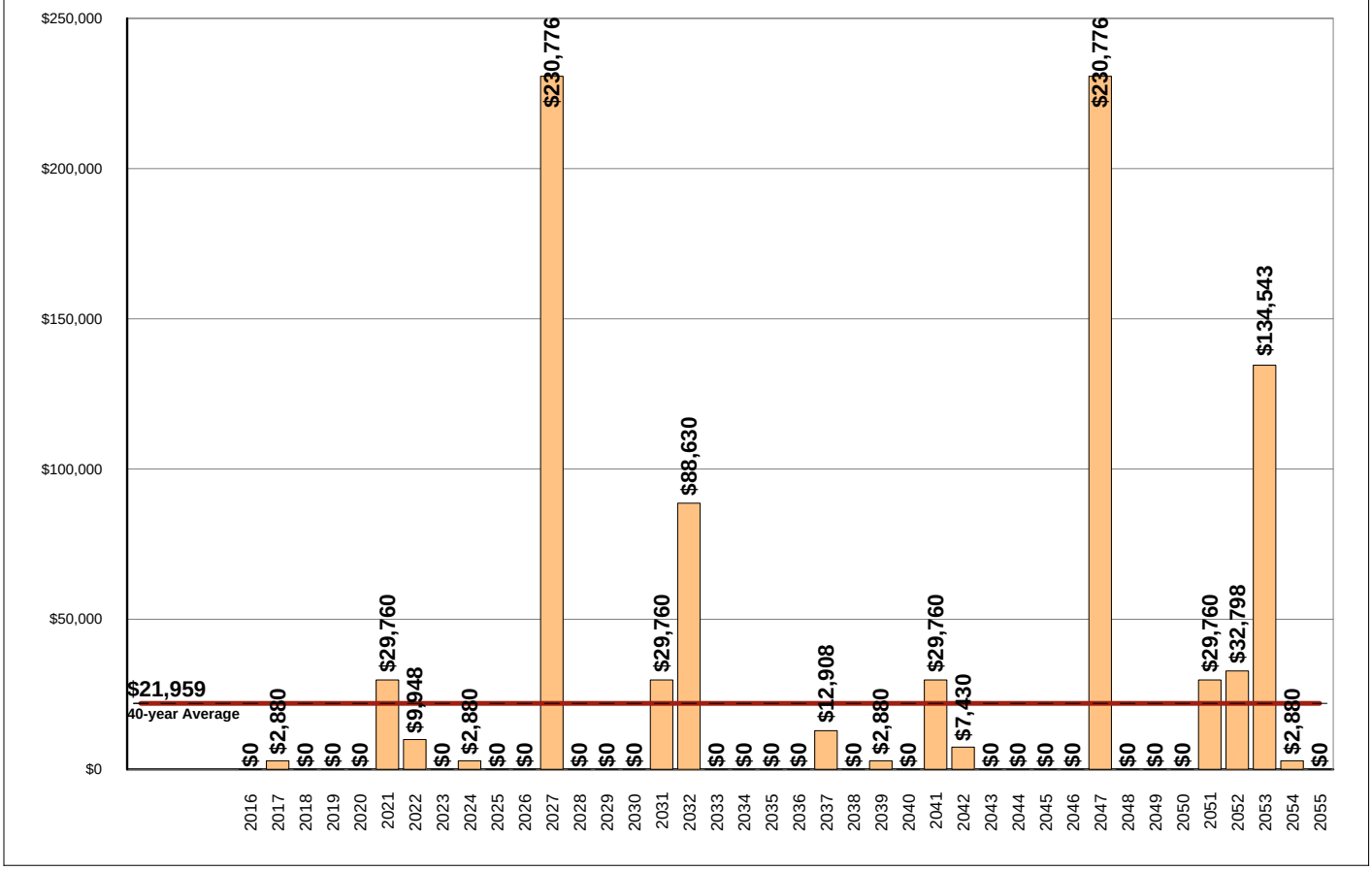
The Replacement Reserve Inventory has been developed in compliance with the National Reserve Study Standards for a Level One Study, as defined by the Community Associations Institute (CAI).

$878,369 | **REPLACEMENT RESERVE INVENTORY - PROJECTED REPLACEMENTS**

The Morris Square Townhomes Replacement Reserve Inventory identifies 44 items that will require periodic replacement, that are to be funded from Replacement Reserves. We estimate the cost of these replacements will be $878,369 over the 40-year Study Period. The Projected Replacements are divided into 13 major categories starting on Page B3. Pages B1-B2 provide detailed information on the Replacement Reserve Inventory.

#2 - Annual Expenditures for Projected Replacements Graph

This graph shows annual expenditures for Projected Replacements over the 40-year Study Period. The red line shows the average annual expenditure of $21,959. Section C provides a year by year Calender of these expenditures.



UPDATING

UPDATING OF THE FUNDING PLAN

The Association has a responsibility to review the Funding Plan annually. The review should include a comparison and evaluation of actual reserve funding with recommended levels shown on Page A4 and A5. The Projected Replacements listed on Page C2 should be compared with any replacements accomplished and funded from Replacement Reserves. Discrepancies should be evaluated and if necessary, the Reserve Study should be updated or a new study commissioned. We recommend annual increases in replacement reserve funding to account for the impact of inflation. Inflation Adjusted Funding is discussed on Page A5.

UPDATING OF THE REPLACEMENT RESERVE STUDY

At a minimum, the Replacement Reserve Study should be professionally updated every three to five years or after completion of a major replacement project. Updating should also be considered if during the annual review of the Funding Plan, discrepancies are noted between projected and actual reserve funding or replacement costs. Updating may also be necessary if there is a meaningful discrepancy between the actual inflation rate and the inflation rate used for the Inflation Adjusted Funding of Replacement Reserves on Page A5.

ANNUAL EXPENDITURES AND CURRENT FUNDING

The annual expenditures that comprise the $878,369 of Projected Expenditures over the 40-year Study Period and the impact of the Association continuing to fund Replacement Reserves at the current level are detailed in Table 3.

#3 - Table of Annual Expenditures and Current Funding Data - Years 1 through 40

Year	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Starting Balance	$4,300									
Projected Replacements		($2,880)				($29,760)	($9,948)		($2,880)	
Annual Deposit	$8,000	$8,000	$8,000	$8,000	$8,000	$8,000	$8,000	$8,000	$8,000	$8,000
End of Year Balance	$12,300	$17,420	$25,420	$33,420	$41,420	$19,660	$17,712	$25,712	$30,832	$38,832
Cumulative Expenditures		($2,880)	($2,880)	($2,880)	($2,880)	($32,640)	($42,588)	($42,588)	($45,468)	($45,468)
Cumulative Receipts	$12,300	$20,300	$28,300	$36,300	$44,300	$52,300	$60,300	$68,300	$76,300	$84,300

Year	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Projected Replacements		($230,776)				($29,760)	($88,630)			
Annual Deposit	$8,000	$8,000	$8,000	$8,000	$8,000	$8,000	$8,000	$8,000	$8,000	$8,000
End of Year Balance	$46,832	($175,944)	($167,944)	($159,944)	($151,944)	($173,704)	($254,334)	($246,334)	($238,334)	($230,334)
Cumulative Expenditures	($45,468)	($276,244)	($276,244)	($276,244)	($276,244)	($306,004)	($394,634)	($394,634)	($394,634)	($394,634)
Cumulative Receipts	$92,300	$100,300	$108,300	$116,300	$124,300	$132,300	$140,300	$148,300	$156,300	$164,300

Year	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045
Projected Replacements		($12,908)		($2,880)		($29,760)	($7,430)			
Annual Deposit	$8,000	$8,000	$8,000	$8,000	$8,000	$8,000	$8,000	$8,000	$8,000	$8,000
End of Year Balance	($222,334)	($227,242)	($219,242)	($214,122)	($206,122)	($227,882)	($227,312)	($219,312)	($211,312)	($203,312)
Cumulative Expenditures	($394,634)	($407,542)	($407,542)	($410,422)	($410,422)	($440,182)	($447,612)	($447,612)	($447,612)	($447,612)
Cumulative Receipts	$172,300	$180,300	$188,300	$196,300	$204,300	$212,300	$220,300	$228,300	$236,300	$244,300

Year	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055
Projected Replacements		($230,776)				($29,760)	($32,798)	($134,543)	($2,880)	
Annual Deposit	$8,000	$8,000	$8,000	$8,000	$8,000	$8,000	$8,000	$8,000	$8,000	$8,000
End of Year Balance	($195,312)	($418,088)	($410,088)	($402,088)	($394,088)	($415,848)	($440,646)	($567,189)	($562,069)	($554,069)
Cumulative Expenditures	($447,612)	($678,388)	($678,388)	($678,388)	($678,388)	($708,148)	($740,946)	($875,489)	($878,369)	($878,369)
Cumulative Receipts	$252,300	$260,300	$268,300	$276,300	$284,300	$292,300	$300,300	$308,300	$316,300	$324,300

EVALUATION OF CURRENT FUNDING

The evaluation of Current Funding (Starting Balance of $4,300 & annual funding of $8,000), is done in today's dollars with no adjustments for inflation or interest earned on Replacement Reserves. The evaluation assumes Replacement Reserves will only be used for the 44 Projected Replacements identified in the Replacement Reserve Inventory and that the Association will continue Annual Funding of $8,000 throughout the 40-year Study Period.

Annual Funding of $8,000 is approximately 33 percent of the $24,495 recommended Annual Funding calculated by the Cash Flow Method for 2016, the Study Year.
Evaluation of the 44 Projected Replacements calculates an average annual expenditure over the next 40 years of $21,959. Annual funding of $8,000 is 36 percent of the average annual expenditure.
Our calculations identify funding shortfalls in 29 years of the Study Period with the initial shortfall in 2027. The largest shortfall, $-567,189, occurs in 2032. All shortfalls can be seen and evaluated in Table 3 above.

In summary, Current Funding as reported by the Association and shown above, does not provide adequate funding for the $878,369 of Projected Replacements scheduled in the Replacement Reserve Inventory over the Study Period.

CASH FLOW METHOD FUNDING

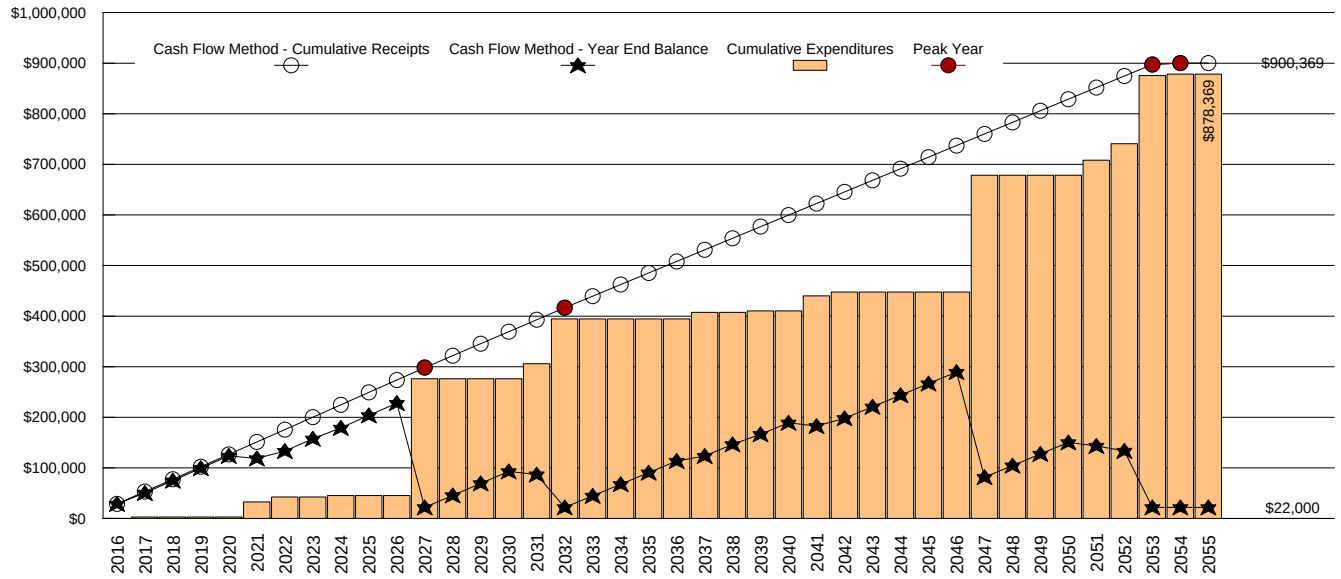
$24,495 **RECOMMENDED REPLACEMENT RESERVE FUNDING FOR 2016**

$127.58 Per unit (average), minimum monthly funding of Replacement Reserves

Recommended Replacement Reserve Funding has been calculated using the Cash Flow Method (also called the Straight Line or Threshold Method). This method calculates a constant annual funding between peaks in cumulative expenditures, while maintaining a Minimum Balance (threshold) in the Peak Years.

- Peak Years. The First Peak Year occurs in 2027 with Replacement Reserves on Deposit dropping to the Minimum Balance after the completion of $276,244 of replacements from 2016 to 2027. Recommended funding declines from $24,495 in 2027 to $23,678 in 2028. Peak Years are identified in Chart 4 and Table 5.
- Minimum Balance. The calculations assume a Minimum Balance of $22,000 in Replacement Reserves. This is approx. 12 months of average expenditures based on the $21,959, 40-year average annual expenditure.
- Cash Flow Method Study Period. Cash Flow Method calculates funding for $878,369 of expenditures over the 40-year Study Period. It does not include funding for any projects beyond 2055 and in 2055, the end of year balance will always be the Minimum Balance.

#4 - Cash Flow Method - Graph of Cumulative Receipts and Expenditures - Years 1 through 40



#5 - Cash Flow Method - Table of Receipts & Expenditures - Years 1 through 40

Year	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Starting Balance	$4,300									
Projected Replacements		($2,880)				($29,760)	($9,948)		($2,880)	
Annual Deposit	$24,495	$24,495	$24,495	$24,495	$24,495	$24,495	$24,495	$24,495	$24,495	$24,495
End of Year Balance	$28,795	$50,411	$74,906	$99,401	$123,897	$118,632	$133,179	$157,675	$179,290	$203,785
Cumulative Expenditures		$2,880	$2,880	$2,880	$2,880	$32,640	$42,588	$42,588	$45,468	$45,468
Cumulative Receipts	$28,795	$53,291	$77,786	$102,281	$126,777	$151,272	$175,767	$200,263	$224,758	$249,253

Year	2026	1st Peak - 2027	2028	2029	2030	2031	2nd Peak - 2032	2033	2034	2035
Projected Replacements		($230,776)				($29,760)	($88,630)			
Annual Deposit	$24,495	$24,495	$23,678	$23,678	$23,678	$23,678	$23,678	$22,895	$22,895	$22,895
End of Year Balance	$228,281	$22,000	$45,678	$69,356	$93,034	$86,952	$22,000	$44,895	$67,790	$90,686
Cumulative Expenditures	($45,468)	($276,244)	($276,244)	($276,244)	($276,244)	($306,004)	($394,634)	($394,634)	($394,634)	($394,634)
Cumulative Receipts	$273,749	$298,244	$321,922	$345,600	$369,278	$392,956	$416,634	$439,529	$462,424	$485,320

Year	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045
Projected Replacements		($12,908)		($2,880)		($29,760)	($7,430)			
Annual Deposit	$22,896	$22,896	$22,896	$22,897	$22,897	$22,897	$22,898	$22,898	$22,898	$22,899
End of Year Balance	$113,581	$123,569	$146,465	$166,482	$189,379	$182,516	$197,984	$220,882	$243,780	$266,679
Cumulative Expenditures	($394,634)	($407,542)	($407,542)	($410,422)	($410,422)	($440,182)	($447,612)	($447,612)	($447,612)	($447,612)
Cumulative Receipts	$508,215	$531,111	$554,007	$576,904	$599,801	$622,698	$645,596	$668,494	$691,392	$714,291

Year	2046	2047	2048	2049	2050	2051	2052	3rd Peak - 2053	4th Peak - 2054	2055
Projected Replacements		($230,776)				($29,760)	($32,798)	($134,543)	($2,880)	
Annual Deposit	$22,899	$22,899	$22,900	$22,900	$22,900	$22,900	$22,900	$22,900	$2,880	
End of Year Balance	$289,578	$81,701	$104,601	$127,501	$150,401	$143,541	$133,643	$22,000	$22,000	$22,000
Cumulative Expenditures	($447,612)	($678,388)	($678,388)	($678,388)	($678,388)	($708,148)	($740,946)	($875,489)	($878,369)	($878,369)
Cumulative Receipts	$737,190	$760,089	$782,989	$805,889	$828,789	$851,689	$874,589	$897,489	$900,369	$900,369

INFLATION ADJUSTED FUNDING

The Cash Flow Method calculations on Page A4 have been done in today's dollars with no adjustment for inflation. At Miller + Dodson, we belive that long-term inflation forecasting is effective at demonstrating the power of compounding, not at calculating appropriate funding levels for Replacement Reserves. We have developed this proprietary model to estimate the short-term impact of inflation on Replacement Reserve funding.

$24,495 2016 - CASH FLOW METHOD RECOMMENDED FUNDING

The 2016 Study Year calculations have been made using current replacement costs (see Page B2), modified by the Analyst for any project specific conditions.

$25,807 2017 - INFLATION ADJUSTED FUNDING

A new analysis calculates 2017 funding based on three assumptions;

- Replacement Reserves on Deposit totaling $28,795 on January 1, 2017.
- No Expenditures from Replacement Reserves in 2016.
- Construction Cost Inflation of 4.50 percent in 2016.

The $25,807 inflation adjusted funding in 2017 is a 5.36 percent increase over the non-inflation adjusted 2017 funding of $24,495.

$27,193 2018 - INFLATION ADJUSTED FUNDING

A new analysis calculates 2018 funding based on three assumptions;

- Replacement Reserves on Deposit totaling $51,593 on January 1, 2018.
- All 2017 Projected Replacements listed on Page C2 accomplished at a cost to Replacement Reserves less than $3,010.
- Construction Cost Inflation of 4.50 percent in 2017.

The $27,193 inflation adjusted funding in 2018 is a 11.01 percent increase over the non-inflation adjusted 2018 funding of $24,495.

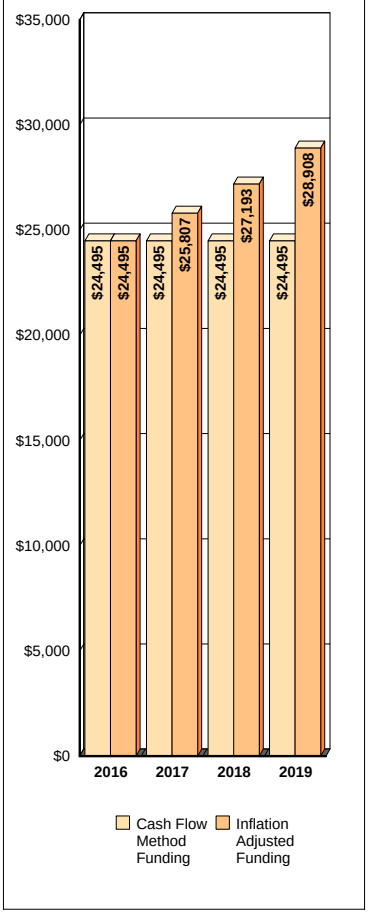
$28,908 2019 - INFLATION ADJUSTED FUNDING

A new analysis calculates 2019 funding based on three assumptions;

- Replacement Reserves on Deposit totaling $78,786 on January 1, 2019.
- No Expenditures from Replacement Reserves in 2018.
- Construction Cost Inflation of 4.50 percent in 2018.

The $28,908 inflation adjusted funding in 2019 is a 18.01 percent increase over the non-inflation adjusted funding of $24,495.

#6 - Inflation Adjusted Funding



YEAR FIVE & BEYOND

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

INFLATION ADJUSTMENT

Prior to approving a budget based upon the 2017, 2018 and 2019 inflation adjusted funding calculations above, the 4.50 percent base rate of inflation used in our calculations should be compared to rates published by the Bureau of Labor Statistics. If there is a significant discrepancy (over 1 percent), contact Miller Dodson + Associates prior to using the Inflation Adjusted Funding.

INTEREST ON RESERVES

The recommended funding calculations do not account for interest earned on Replacement Reserves.
In 2016, based on a 1.00 percent interest rate, we estimate the Association may earn $165 on an average balance of $16,548, $402 on an average balance of $40,194 in 2017, and $652 on $65,189 in 2018. The Association may elect to attribute 100 percent of the earned interest to Reserves, resulting in a reduction in the 2016 funding from $24,495 to $24,330 (a 0.68 percent reduction), $25,807 to $25,405 in 2017 (a 1.56 percent reduction), and $27,193 to $26,541 in 2018 (a 2.40 percent reduction).

REPLACEMENT RESERVE STUDY - SUPPLEMENTAL COMMENTS

- Morris Square Townhomes has 16 units. The type of property is a homeowners association.
- The Cash Flow Method calculates the minimum annual funding necessary to prevent Replacement Reserves from dropping below the Minimum Balance. Failure to fund at least the recommended levels may result in funding not being available for the Projected Replacements listed in the Replacement Reserve Inventory.
- The accuracy of the Replacement Reserve Analysis is dependent upon expenditures from Replacement Reserves being made ONLY for the 44 Projected Replacements specifically listed in the Replacement Reserve Inventory. The inclusion/exclusion of items from the Replacement Reserve Inventory is discussed on Page B1.

REPLACEMENT RESERVE INVENTORY
GENERAL INFORMATION

Morris Square Townhomes - Replacement Reserve Inventory identifies 107 items. Two types of items are identified, Projected Replacements and Excluded Items:

- PROJECTED REPLACEMENTS. 44 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 $498,287. Replacements totaling $878,369 are scheduled in the Replacement Reserve Inventory over the 40-year Study Period.

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

- EXCLUDED ITEMS. 63 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 that $1,000 and/or a normal economic life of less than 3 years are typically excluded from funding from Replacement Reserves. This exclusion should reflect Association policy on the administration of Replacement Reserves. If the Association has selected an alternative level, it will be noted in the Replacement Reserve Inventory - General Comments on Page 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 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 107 items included in the Morris Square Townhomes Replacement Reserve Inventory are divided into 13 major categories. Each category is printed on a separate page, Pages B3 to B14.

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

  A Level I - Full Service Reserve Study includes the computation of complete component inventory information regarding commonly owned components provided by the Association, quantities derived from field measurements and/or quantity takeoffs from to-scale engineering drawings that may be made available. The condition of all components is ascertained from a visual inspection of each component by the analyst. The remaining economic life and the value of the components are provided based on these observations and the funding status and funding plan are then derived from analysis of this data.

REPLACEMENT RESERVE INVENTORY - GENERAL INFORMATION (cont'd)

- INVENTORY DATA. Each of the 44 Projected Replacements listed in the Replacement Reserve Inventory includes the following data:

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

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

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

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

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

  Normal Economic Life (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 63 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 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 COMPONENTS
PROJECTED REPLACEMENTS

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST ($)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST ($)
1	Storm water management (allowance)	ls	1	$5,000.00	10	5	$5,000
2	Domestic water main (allowance)	ls	1	$5,000.00	20	11	$5,000
3	Sanitary main	ls	1	$5,000.00	20	11	$5,000

SITE COMPONENTS - Replacement Costs - Subtotal $15,000

SITE COMPONENTS
COMMENTS

BUILDING EXTERIORS - BUILDING III (BIII)
PROJECTED REPLACEMENTS

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST ($)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST ($)
4	III Roofing, steel standing seam	sf	1,100	$13.00	45	37	$14,300
5	III Gutter & downspouts, copper	ft	130	$23.00	45	37	$2,990
6	III Siding & trim, fiber cement	sf	3,869	$10.50	45	37	$40,625
7	III Stucco, recoating (10%)	sf	150	$8.00	10	5	$1,200
8	III Window shutters (wood)	pr	20	$350.00	20	16	$7,000
9	III Mechanical platform	sf	48	$60.00	15	8	$2,880
10	III Garage door	ea	1	$3,500.00	25	16	$3,500
11	III Service door	ea	2	$1,350.00	25	16	$2,700

BUILDING EXTERIORS - BUILDING III (BIII) - Replacement Costs - Subtotal $75,195

BUILDING EXTERIORS - BUILDING III (BIII)
COMMENTS

BUILDING EXTERIORS - BUILDING IV (IV)
PROJECTED REPLACEMENTS

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST ($)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST ($)
12	IV Roofing, steel standing seam	sf	208	$13.00	45	37	$2,704
13	IV Single ply membrane, EPDM	sf	3,432	$22.00	20	11	$75,504
14	IV Decking at roof, PTL	sf	634	$14.00	20	11	$8,876
15	IV Siding & trim, fiber cement	sf	3,869	$10.50	45	37	$40,625
16	IV Stucco, recoating (10%)	sf	1,236	$8.00	10	5	$9,888
17	IV Window shutters (wood)	pr	8	$350.00	20	16	$2,800
18	IV Balcony decking (PTL)	sf	420	$14.00	20	11	$5,880
19	IV Balcony rails (PTL)	lf	28	$28.50	15	6	$798
20	IV Balcony structure (PTL)	sf	80	$32.50	20	11	$2,600
21	IV Balcony roof, steel standing seam	sf	80	$13.00	45	37	$1,040
22	IV Stair rails (iron)	lf	20	$53.00	45	37	$1,060
23	IV Garage door	ea	5	$3,500.00	25	16	$17,500

BUILDING EXTERIORS - BUILDING IV (IV) - Replacement Costs - Subtotal $169,275

BUILDING EXTERIORS - BUILDING IV (IV)
COMMENTS

BUILDING EXTERIORS - BUILDING V (V)

PROJECTED REPLACEMENTS

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST ($)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST ($)
24	V Roofing, steel standing seam	sf	1,750	$13.00	45	37	$22,750
25	V Single ply membrane, EPDM	sf	500	$22.00	20	11	$11,000
26	V Deck waterproofing, recoat	sf	384	$7.50	5	1	$2,880
27	V Stucco, recoating (10%)	sf	696	$8.00	10	5	$5,568
28	V Window shutters (wood)	pr	22	$350.00	20	16	$7,700
29	V Door shutters (wood)	pr	5	$650.00	20	16	$3,250
30	V Balcony decking (PTL)	sf	720	$14.00	20	11	$10,080
31	V Balcony rails (PTL)	lf	220	$28.50	15	6	$6,270
32	V Balcony structure (PTL)	sf	720	$32.50	20	11	$23,400
33	V Balcony columns (PTL)	ea	32	$350.00	25	16	$11,200
34	V Balcony roof, steel standing seam	sf	360	$13.00	45	37	$4,680
35	V Garage door	ea	3	$3,500.00	25	16	$10,500

BUILDING EXTERIORS - BUILDING V (V) - Replacement Costs - Subtotal $119,278

BUILDING EXTERIORS - BUILDING V (V)

COMMENTS

BUILDING EXTERIORS - BUILDING XIV (XIV)
PROJECTED REPLACEMENTS

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST ($)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST ($)
36	XIV Roofing, steel standing seam	sf	290	$13.00	45	37	$3,770
37	XIV Single ply membrane, EPDM	sf	3,101	$22.00	20	11	$68,222
38	XIV Decking at roof, PTL	sf	641	$14.00	20	11	$8,974
39	XIV Stucco, recoating (10%)	sf	1,013	$8.00	10	5	$8,104
40	XIV Window shutters (wood)	pr	6	$350.00	20	16	$2,100
41	XIV Balcony decking (PTL)	sf	240	$14.00	20	11	$3,360
42	XIV Columns (fiberglass)	ea	7	$650.00	35	26	$4,550
43	XIV Garage door	ea	5	$3,500.00	25	16	$17,500

BUILDING EXTERIORS - BUILDING XIV (XIV) - Replacement Costs - Subtotal $116,580

BUILDING EXTERIORS - BUILDING XIV (XIV)
COMMENTS

BUILDING SYSTEMS
PROJECTED REPLACEMENTS

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST ($)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST ($)
44	Fire annunciator sys, basic	ea	4	$740.00	30	21	$2,960

BUILDING SYSTEMS - Replacement Costs - Subtotal $2,960

BUILDING SYSTEMS
COMMENTS

VALUATION EXCLUSIONS
EXCLUDED ITEMS

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST ($)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST ($)
	Site lighting fixtures	ls	1				EXCLUDED
	Property identification signage	ls	1				EXCLUDED
	Miscellaneous signage	ls	1				EXCLUDED
	Mailboxes	ls	1				EXCLUDED
	Sprinkler head	ls	1				EXCLUDED
	Emergency lighting, exit light, etc.	ls	1				EXCLUDED
	Signage	ls	1				EXCLUDED
	Interior doors	ls	1				EXCLUDED
	Window unit	ls	1				EXCLUDED
	Electric heaters	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	UNIT REPLACEMENT COST ($)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST ($)
	Masonry features	ls	1				EXCLUDED
	Miscellaneous culverts	ls	1				EXCLUDED
	Building foundation(s)	ls	1				EXCLUDED
	Concrete floor slabs (interior)	ls	1				EXCLUDED
	Wall, floor, & roof structure	ls	1				EXCLUDED
	Fire protection/security systems	ls	1				EXCLUDED
	Common element electrical services	ls	1				EXCLUDED
	Electrical wiring	ls	1				EXCLUDED
	Water piping at common facilities	ls	1				EXCLUDED
	Waste piping at common facilities	ls	1				EXCLUDED
	Gas services at common facilities	ls	1				EXCLUDED
	III Juliet balcony rails (iron)	lf	40				EXCLUDED
	IV Juliet balcony rails (iron)	lf	24				EXCLUDED
	IV Balcony rails (iron)	lf	132				EXCLUDED
	IV Iron gates	ea	5				EXCLUDED
	XIV Juliet balcony rails (iron)	lf	24				EXCLUDED
	XIV Balcony rails (iron)	lf	160				EXCLUDED
	XIV Iron gates	pr	5				EXCLUDED

LONG-LIFE EXCLUSIONS
COMMENTS

- Long Life Exclusions. Components that when properly maintained, can be assumed to have a life equal to the property as a whole, are normally excluded from the Replacement Reserve Inventory. Examples of items excluded from funding by Replacement Reserves by this standard are listed above.

- Exterior masonry is generally assumed to have an unlimited economic life but periodic repointing is required and we have included this for funding in the Replacement Reserve Inventory.

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

UNIT IMPROVEMENTS EXCLUSIONS

EXCLUDED ITEMS

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST ($)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST ($)
	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
	Cable TV service serving one unit	ls	1				EXCLUDED
	Telephone service serving one unit	ls	1				EXCLUDED
	Gas service serving one unit	ls	1				EXCLUDED
	Driveway on an individual lot	ls	1				EXCLUDED
	Apron on an individual lot	ls	1				EXCLUDED
	Sidewalk on an individual lot	ls	1				EXCLUDED
	Stairs on an individual lot	ls	1				EXCLUDED
	Curb & gutter on an individual lot	ls	1				EXCLUDED
	Retaining wall on an individual lot	ls	1				EXCLUDED
	Unit windows	ls	1				EXCLUDED
	Unit doors	ls	1				EXCLUDED
	Unit skylights	ls	1				EXCLUDED
	Unit deck, patio, and/or balcony	ls	1				EXCLUDED
	Unit mailbox	ls	1				EXCLUDED
	Unit interior	ls	1				EXCLUDED
	Unit HVAC system	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
	Cable TV systems and structures	ls	1				EXCLUDED
	Telephone cables and structures	ls	1				EXCLUDED
	Site lighting	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	UNIT REPLACEMENT COST ($)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST ($)
	Exterior painting	ls	1				EXCLUDED
	Interior painting	ls	1				EXCLUDED
	Janitorial service	ls	1				EXCLUDED
	Repair services	ls	1				EXCLUDED
	Partial replacements	ls	1				EXCLUDED
	Capital improvements	ls	1				EXCLUDED

MAINTENANCE AND REPAIR EXCLUSIONS

COMMENTS

- Maintenance activities, one-time-only repairs, and capital improvements. These activities are NOT appropriately funded from Replacement Reserves. The inclusion of such component in the Replacement Reserve Inventory could jeopardize the special tax status of ALL Replacement Reserves, exposing the Association to significant tax liabilities. We recommend that the Board of Directors discuss these exclusions and Revenue Ruling 75-370 with a Certified Public Accountant.
- Examples of items excluded from funding by Replacement Reserves 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 ($)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST ($)
	Government, roadways & parking	ls	1				EXCLUDED
	Government, sidewalks & curbs	ls	1				EXCLUDED
	Government, lighting	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 state, county, or local government, or other association or other responsible entity. Examples of items excluded from funding by Replacement Reserves by this standard are listed above.

- Excluded right-of-ways, including LIST ROADS, and adjacent properties.

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

PROJECTED ANNUAL REPLACEMENTS
GENERAL INFORMATION

CALENDAR OF ANNUAL REPLACEMENTS. The 44 Projected Replacements in the Morris Square Townhomes Replacement Reserve Inventory whose replacement is scheduled to be funded from Replacement Reserves are broken down on a year-by-year basis, beginning on Page 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 co-mingle planning for maintenance activities with capital replacement activities in the Reserves (Revenue Ruling 75-370). Funds for maintenance activities and capital replacements activities must be held in separate accounts. If a CID files taxes as an "Exempt Homeowners Association" using Form 1120H (IRC Section 528), the CID does not have to segregate these activities. However, because the CID may elect to change their method of filing from year to year within the Study Period, we advise using the more restrictive approach. We further recommend that the CID consult with their Accountant and consider creating separate and independent accounts and reserves for large maintenance items, such as painting.
- CONFLICT OF INTEREST. Neither Miller - Dodson Associates nor the Reserve Analyst has any prior or existing relationship with this Association which would represent a real or perceived conflict of interest.
- RELIANCE ON DATA PROVIDED BY THE CLIENT. Information provided by an official representative of the Association regarding financial, physical conditions, quality, or historical issues is deemed reliable.
- INTENT. This Replacement Reserve Study is a reflection of the information provided by the Association and the visual evaluations of the Analyst. It has been prepared for the sole use of the Association and is not for the purpose of performing an audit, quality/forensic analyses, or background checks of historical records.
- PREVIOUS REPLACEMENTS. Information provided to Miller - Dodson Associates regarding prior replacements is considered to be accurate and reliable. Our visual evaluation is not a project audit or quality inspection.
- EXPERIENCE WITH FUTURE REPLACEMENTS. The Calendar of Annual Projected Replacements, lists replacements we have projected to occur over the 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 Morris Square Townhomes Board of Directors, those responsible for the management of the items included in the Replacement Reserve Inventory, and the accounting professionals employed by the Association.

PROJECTED REPLACEMENTS - YEARS 1 TO 6

Item	2016 - STUDY YEAR	$
No Scheduled Replacements		

Item	2017 - YEAR 2	$
26	V Deck waterproofing, recoa	$2,880
Total Scheduled Replacements		$2,880

Item	2018 - YEAR 3	$
No Scheduled Replacements		

Item	2019 - YEAR 4	$
No Scheduled Replacements		

Item	2020 - YEAR 5	$
No Scheduled Replacements		

Item	2021 - YEAR 6	$
1	Storm water management (a	$5,000
7	III Stucco, recoating (10%)	$1,200
16	IV Stucco, recoating (10%)	$9,888
27	V Stucco, recoating (10%)	$5,568
39	XIV Stucco, recoating (10%)	$8,104
Total Scheduled Replacements		$29,760

PROJECTED REPLACEMENTS - YEARS 7 TO 12

Item	2022 - YEAR 7	$
19	IV Balcony rails (PTL)	$798
26	V Deck waterproofing, recoa	$2,880
31	V Balcony rails (PTL)	$6,270
	Total Scheduled Replacements	$9,948

Item	2023 - YEAR 8	$
	No Scheduled Replacements	

Item	2024 - YEAR 9	$
9	III Mechanical platform	$2,880
	Total Scheduled Replacements	$2,880

Item	2025 - YEAR 10	$
	No Scheduled Replacements	

Item	2026 - YEAR 11	$
	No Scheduled Replacements	

Item	2027 - YEAR 12	$
2	Domestic water main (allowa	$5,000
3	Sanitary main	$5,000
13	IV Single ply membrane, EP	$75,504
14	IV Decking at roof, PTL	$8,876
18	IV Balcony decking (PTL)	$5,880
20	IV Balcony structure (PTL)	$2,600
25	V Single ply membrane, EPI	$11,000
26	V Deck waterproofing, recoa	$2,880
30	V Balcony decking (PTL)	$10,080
32	V Balcony structure (PTL)	$23,400
37	XIV Single ply membrane, E	$68,222
38	XIV Decking at roof, PTL	$8,974
41	XIV Balcony decking (PTL)	$3,360
	All Replacements not listed	$230,776

PROJECTED REPLACEMENTS - YEARS 13 TO 18

Item	2028 - YEAR 13	$
No Scheduled Replacements		

Item	2029 - YEAR 14	$
No Scheduled Replacements		

Item	2030 - YEAR 15	$
No Scheduled Replacements		

Item	2031 - YEAR 16	$
1	Storm water management (a	$5,000
7	III Stucco, recoating (10%)	$1,200
16	IV Stucco, recoating (10%)	$9,888
27	V Stucco, recoating (10%)	$5,568
39	XIV Stucco, recoating (10%)	$8,104
Total Scheduled Replacements		$29,760

Item	2032 - YEAR 17	$
8	III Window shutters (wood)	$7,000
10	III Garage door	$3,500
11	III Service door	$2,700
17	IV Window shutters (wood)	$2,800
23	IV Garage door	$17,500
26	V Deck waterproofing, recoa	$2,880
28	V Window shutters (wood)	$7,700
29	V Door shutters (wood)	$3,250
33	V Balcony columns (PTL)	$11,200
35	V Garage door	$10,500
40	XIV Window shutters (wood)	$2,100
43	XIV Garage door	$17,500
Total Scheduled Replacements		$88,630

Item	2033 - YEAR 18	$
No Scheduled Replacements		

PROJECTED REPLACEMENTS - YEARS 19 TO 24

Item	2034 - YEAR 19	$
No Scheduled Replacements		

Item	2035 - YEAR 20	$
No Scheduled Replacements		

Item	2036 - YEAR 21	$
No Scheduled Replacements		

Item	2037 - YEAR 22	$
19	IV Balcony rails (PTL)	$798
26	V Deck waterproofing, recoa	$2,880
31	V Balcony rails (PTL)	$6,270
44	Fire annunciator sys, basic	$2,960
Total Scheduled Replacements		$12,908

Item	2038 - YEAR 23	$
No Scheduled Replacements		

Item	2039 - YEAR 24	$
9	III Mechanical platform	$2,880
Total Scheduled Replacements		$2,880

PROJECTED REPLACEMENTS - YEARS 25 TO 30

Item	2040 - YEAR 25	$

No Scheduled Replacements

Item	2041 - YEAR 26	$
1	Storm water management (a	$5,000
7	III Stucco, recoating (10%)	$1,200
16	IV Stucco, recoating (10%)	$9,888
27	V Stucco, recoating (10%)	$5,568
39	XIV Stucco, recoating (10%)	$8,104
	Total Scheduled Replacements	$29,760

Item	2042 - YEAR 27	$
26	V Deck waterproofing, recoa	$2,880
42	XIV Columns (fiberglass)	$4,550
	Total Scheduled Replacements	$7,430

Item	2043 - YEAR 28	$

No Scheduled Replacements

Item	2044 - YEAR 29	$

No Scheduled Replacements

Item	2045 - YEAR 30	$

No Scheduled Replacements

PROJECTED REPLACEMENTS - YEARS 31 TO 36

Item	2046 - YEAR 31	$
No Scheduled Replacements		

Item	2047 - YEAR 32	$
2	Domestic water main (allowa	$5,000
3	Sanitary main	$5,000
13	IV Single ply membrane, EP	$75,504
14	IV Decking at roof, PTL	$8,876
18	IV Balcony decking (PTL)	$5,880
20	IV Balcony structure (PTL)	$2,600
25	V Single ply membrane, EPI	$11,000
26	V Deck waterproofing, recoa	$2,880
30	V Balcony decking (PTL)	$10,080
32	V Balcony structure (PTL)	$23,400
37	XIV Single ply membrane, E	$68,222
38	XIV Decking at roof, PTL	$8,974
41	XIV Balcony decking (PTL)	$3,360
Total Scheduled Replacements		$230,776

Item	2048 - YEAR 33	$
No Scheduled Replacements		

Item	2049 - YEAR 34	$
No Scheduled Replacements		

Item	2050 - YEAR 35	$
No Scheduled Replacements		

Item	2051 - YEAR 36	$
1	Storm water management (a	$5,000
7	III Stucco, recoating (10%)	$1,200
16	IV Stucco, recoating (10%)	$9,888
27	V Stucco, recoating (10%)	$5,568
39	XIV Stucco, recoating (10%)	$8,104
Total Scheduled Replacements		$29,760

PROJECTED REPLACEMENTS - YEARS 37 TO 42

Item	2052 - YEAR 37	$
8	III Window shutters (wood)	$7,000
17	IV Window shutters (wood)	$2,800
19	IV Balcony rails (PTL)	$798
26	V Deck waterproofing, recoa	$2,880
28	V Window shutters (wood)	$7,700
29	V Door shutters (wood)	$3,250
31	V Balcony rails (PTL)	$6,270
40	XIV Window shutters (wood)	$2,100
	Total Scheduled Replacements	$32,798

Item	2053 - YEAR 38	$
4	III Roofing, steel standing se	$14,300
5	III Gutter & downspouts, cop	$2,990
6	III Siding & trim, fiber cemen	$40,625
12	IV Roofing, steel standing se	$2,704
15	IV Siding & trim, fiber cemer	$40,625
21	IV Balcony roof, steel standi	$1,040
22	IV Stair rails (iron)	$1,060
24	V Roofing, steel standing se	$22,750
34	V Balcony roof, steel standir	$4,680
36	XIV Roofing, steel standing s	$3,770
	Total Scheduled Replacements	$134,543

Item	2054 - YEAR 39	$
9	III Mechanical platform	$2,880
	Total Scheduled Replacements	$2,880

Item	2055 - YEAR 40	$
	No Scheduled Replacements	

Item	2056 (beyond Study Period)	$
	No Scheduled Replacements	

Item	2057 (beyond Study Period)	$
10	III Garage door	$3,500
11	III Service door	$2,700
23	IV Garage door	$17,500
26	V Deck waterproofing, recoa	$2,880
33	V Balcony columns (PTL)	$11,200
35	V Garage door	$10,500
43	XIV Garage door	$17,500
	Total Scheduled Replacements	$65,780

CONDITION ASSESSMENT

General Comments. Miller - Dodson Associates conducted a Reserve Study at Morris Square Townhomes in November 2015. Morris Square Townhomes is in generally good condition for a community constructed from 2005 to 2006. A review of the Replacement Reserve Inventory will show that we are anticipating most of the components achieving their normal economic lives.

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

General Condition Statements.

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

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

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

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

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

BUILDING EXTERIORS

Building Roofing. The buildings are roofed in standing seam metal or EPDM singly ply roofing systems that are believed to be in generally good condition.

Metal roofing can be standing seam, rolled seam, or shingle with a normal economic life of 50 to 100 years. In some cases, recoating or repainting can extend the useful life of a metal roof.

Flat roofing systems can have a variety of configurations that will greatly affect the cost of replacement including insulation, ballast, the height of the building, and the density of installed mechanical equipment. Flat roofing systems typically have a useful life of 15 to 25 years.

Access to the roof was not provided at the time of inspection.

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

For additional information on roofs and roof maintenance, please see the appropriate links on our web site at http://mdareserves.com/resources/links/building-exterior.

Gutters and Downspouts. The buildings with sloped metal roofing have copper gutters and downspouts. The gutters and downspouts are in good condition.

A gutter and downspout system will remove rainwater from the area of the building roof, siding, and foundation. This will protect building's exterior surfaces from water damage. Gutters should run the full length of all drip edges of the building roof. Even with full gutters, it is important to inspection the function of the gutters during heavy rain to identify any deficiencies. It may be necessary to periodically adjust the slope of sections, repair connections, replace hangers, and install shrouds to the gutters. Downspouts should be securely attached to the side of the structure. Any broken straps should be replaced. The area of the outlet should be inspected to promote run-off in the desired direction. Long straight runs should have an elbow at the bottom. Splash blocks should be installed to fray the water out-letting from the downspout.

It is recommended that all gutters be cleaned at least twice each year. If there are a large number of trees located close to a building, consider installing a gutter debris shield that will let water into the gutters but will filter out leaves, twigs, and other debris.

Siding and Trim. The exteriors of the buildings are clad in fiber cement lap siding or stucco siding and trim. The fiber cement and stucco materials are in generally good condition.

Fiber cement materials typically have an extended useful life and require repainting and recaulking every 10 to 15 years. Following the manufacturer's recommendations for cleaning, painting, and caulking, we expect cementitious products to have a useful life of 40 years or more.

Stucco finishes are installed on the facility's exterior. Most stucco deterioration is the result of water infiltration. This is generally first evident near the roof and around chimneys, windows, doors, and other wall penetrations. Moisture can also gain access through materials that are in contact with ground by a process called wicking. Moisture will cause the supporting lath for the stucco to rot or corrode, resulting in the stucco pulling away from the substrate. Significant deterioration of wooden and metal structural elements can occur. Similar to Exterior Insulation Finishing Systems (EIFS) a "water-managed system" is the approach for new construction. However, many older installations assume a water barrier system. It is recommended for all stucco surfaces be inspected at least once each year.

In this study, we provide for an allowance for incremental stucco repairs every 10 years with a recoating every 30 years. Further inspection of the stucco and repair of any latent and concealed damage are not accounted for in this study. See http://mdareserves.com/resources/links/building-exterior for additional information.

Wood Decks/Balconies. The wooden deck surfaces and balconies are maintained by the Association. The wood and steel deck structures are in good condition, with the wooden decking in good condition also. The railings are either wrought iron or wood and they are in good condition.

We recommend for the Association implement an annual inspection program. We also recommend power washing and the application of a wood sealer with UV protection every two to three years. Installation of carpet or other water trapping coverings should be prohibited and potted plants should be placed on raised feet to allow for proper air circulation and drying of wooden components.

When installing new decking, installation of a self-healing flashing membrane is recommended along the top and ends of all wooden horizontal structural members. Synthetic decking and railing systems should also be considered.

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

CASH FLOW METHOD ACCOUNTING SUMMARY

This Morris Square Townhomes - Cash Flow Method Accounting Summary is an attachment to the Morris Square Townhomes - Replacement Reserve Study dated November 25, 2015 and is for use by accounting and reserve professionals experienced in Association funding and accounting principles. This Summary consists of four reports, the 2016, 2017, and 2018 Cash Flow Method Category Funding Reports (3) and a Three-Year Replacement Funding Report.

- CASH FLOW METHOD CATEGORY FUNDING REPORT, 2016, 2017, and 2018. Each of the 44 Projected Replacements listed in the Morris Square Townhomes Replacement Reserve Inventory has been assigned to one of 6 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 $4,300 Beginning Balance (at the start of the Study Year) and the $73,486 of additional Replacement Reserve Funding in 2016 through 2018 (as calculated in the Replacement Reserve Analysis) to each of the 44 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 scheduled in years 2016 through 2018.
  - Allocation of the $4,300 Beginning Balance to the Projected Replacements by Chronological Allocation.
  - Allocation of the $73,486 of additional Replacement Reserve Funding recommended in the Replacement Reserve Analysis in years 2016 through 2018, 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 $4,300 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 Morris Square Townhomes the Beginning Balance funds all Scheduled Replacements in the Study Year through 2020 and provides partial funding (5%) of replacements scheduled in 2021.
  - The next step is the allocation of the $24,495 of 2016 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 Morris Square Townhomes the Beginning Balance and the 2016 Replacement Reserve Funding, funds replacements through 2020 and partial funds (87.1%) replacements in 2021.
  - Allocations of the 2017 and 2018 Reserve Funding are done using the same methodology.
  - The Three-Year Replacement Funding Report details component by component allocations made by Chronological Allocation.

2016 - CASH FLOW METHOD CATEGORY FUNDING REPORT

Each of the 44 Projected Replacements included in the Morris Square Townhomes Replacement Reserve Inventory has been assigned to one of the 6 categories listed in TABLE CF1 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 $4,300 as of the first day of the Study Year, January 1, 2016.
- Total reserve funding (including the Beginning Balance) of $28,795 in the Study Year.
- No expenditures from Replacement Reserves other than those specifically listed in the Replacement Reserve Inventory.

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.

2016 - CASH FLOW METHOD CATEGORY FUNDING - TABLE CF1

CATEGORY	NORMAL ECONOMIC LIFE	REMAINING ECONOMIC LIFE	ESTIMATED REPLACEMENT COST	2016 BEGINNING BALANCE	2016 RESERVE FUNDING	2016 PROJECTED REPLACEMENTS	2016 END OF YEAR BALANCE
SITE COMPONENTS	10 to 20 years	5 to 11 years	$15,000	$239	$4,115		$4,354
BUILDING EXTERIORS - BUILDING III (BIII)	10 to 45 years	5 to 37 years	$75,195	$57	$988		$1,045
BUILDING EXTERIORS - BUILDING IV (IV)	10 to 45 years	5 to 37 years	$169,275	$472	$8,139		$8,611
BUILDING EXTERIORS - BUILDING V (V)	5 to 45 years	1 to 37 years	$119,278	$3,146	$4,583		$7,729
BUILDING EXTERIORS - BUILDING XIV (XIV	10 to 45 years	5 to 37 years	$116,580	$387	$6,670		$7,057
BUILDING SYSTEMS	30 years	21 years	$2,960				

2017 - CASH FLOW METHOD CATEGORY FUNDING REPORT

Each of the 44 Projected Replacements included in the Morris Square Townhomes Replacement Reserve Inventory has been assigned to one of the 6 categories listed in TABLE CF2 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 $28,795 on January 1, 2017.
- Total reserve funding (including the Beginning Balance) of $53,291 from 2016 through 2017.
- 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 2017 being accomplished in 2017 at a cost of $2,880.

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.

2017 - CASH FLOW METHOD CATEGORY FUNDING - TABLE CF2

CATEGORY	NORMAL ECONOMIC LIFE	REMAINING ECONOMIC LIFE	ESTIMATED REPLACEMENT COST	2017 BEGINNING BALANCE	2017 RESERVE FUNDING	2017 PROJECTED REPLACEMENTS	2017 END OF YEAR BALANCE
SITE COMPONENTS	10 to 20 years	4 to 10 years	$15,000	$4,354	$985		$5,339
BUILDING EXTERIORS - BUILDING III (BIII)	10 to 45 years	4 to 36 years	$75,195	$1,045	$3,035		$4,080
BUILDING EXTERIORS - BUILDING IV (IV)	10 to 45 years	4 to 36 years	$169,275	$8,611	$5,223		$13,834
BUILDING EXTERIORS - BUILDING V (V)	5 to 45 years	0 to 36 years	$119,278	$7,729	$11,475	($2,880)	$16,323
BUILDING EXTERIORS - BUILDING XIV (XIV	10 to 45 years	4 to 36 years	$116,580	$7,057	$3,778		$10,835
BUILDING SYSTEMS	30 years	20 years	$2,960				

2018 - CASH FLOW METHOD CATEGORY FUNDING REPORT

Each of the 44 Projected Replacements included in the Morris Square Townhomes Replacement Reserve Inventory has been assigned to one of the 6 categories listed in TABLE CF3 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 $50,411 on January 1, 2018.
- Total Replacement Reserve funding (including the Beginning Balance) of $77,786 from 2016 to 2018.
- No expenditures from Replacement Reserves other than those specifically listed in the Replacement Reserve Inventory.

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.

2018 - CASH FLOW METHOD CATEGORY FUNDING - TABLE CF3

CATEGORY	NORMAL ECONOMIC LIFE	REMAINING ECONOMIC LIFE	ESTIMATED REPLACEMENT COST	2018 BEGINNING BALANCE	2018 RESERVE FUNDING	2018 PROJECTED REPLACEMENTS	2018 END OF YEAR BALANCE
SITE COMPONENTS	10 to 20 years	3 to 9 years	$15,000	$5,339	$1,061		$6,400
BUILDING EXTERIORS - BUILDING III (BIII)	10 to 45 years	3 to 35 years	$75,195	$4,080	($0)		$4,080
BUILDING EXTERIORS - BUILDING IV (IV)	10 to 45 years	3 to 35 years	$169,275	$13,834	$9,856		$23,690
BUILDING EXTERIORS - BUILDING V (V)	5 to 45 years	3 to 35 years	$119,278	$16,323	$5,027		$21,350
BUILDING EXTERIORS - BUILDING XIV (XIV	10 to 45 years	3 to 35 years	$116,580	$10,835	$8,550		$19,385
BUILDING SYSTEMS	30 years	19 years	$2,960				

CASH FLOW METHOD - THREE-YEAR REPLACEMENT FUNDING REPORT

TABLE CF4 below details the allocation of the $4,300 Beginning Balance, as reported by the Association and the $73,486 of Replacement Reserve Funding calculated by the Cash Flow Method from 2016 to 2018, to the 44 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 CF1. The accuracy of the allocations is dependent upon many factors including the following critical financial data:

- Replacement Reserves on Deposit totaling $4,300 on January 1, 2016.
- Replacement Reserves on Deposit totaling $28,795 on January 1, 2017.
- Replacement Reserves on Deposit totaling $50,411 on January 1, 2018.
- Total Replacement Reserve funding (including the Beginning Balance) of $77,786 from 2016 to 2018.
- No expenditures from Replacement Reserves other than those specifically listed in the Replacement Reserve Inventory.
- All Projected Replacements scheduled in the Replacement Reserve Inventory from 2016 to 2018 being accomplished as scheduled in the Replacement Reserve Inventory at a cost of $2,880.

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 CF4

Item #	Description of Projected Replacement	Estimated Replacement Costs	Allocation of Beginning Balance	2016 Reserve Funding	2016 Projected Replacements	2016 End of Year Balance	2017 Reserve Funding	2017 Projected Replacements	2017 End of Year Balance	2018 Reserve Funding	2018 Projected Replacements	2018 End of Year Balance
	SITE COMPONENTS											
1	Storm water management (allowance)	5,000	239	4,115		4,354	646		5,000			5,000
2	Domestic water main (allowance)	5,000					169		169	531		700
3	Sanitary main	5,000					169		169	531		700
	BUILDING EXTERIORS - BUILDIN											
4	III Roofing, steel standing seam	14,300										
5	III Gutter & downspouts, copper	2,990										
6	III Siding & trim, fiber cement	40,625										
7	III Stucco, recoating (10%)	1,200	57	988		1,045	155		1,200			1,200
8	III Window shutters (wood)	7,000										
9	III Mechanical platform	2,880					2,880		2,880			2,880
10	III Garage door	3,500										
11	III Service door	2,700										
	BUILDING EXTERIORS - BUILDIN											
12	IV Roofing, steel standing seam	2,704										
13	IV Single ply membrane, EPDM	75,504					2,559		2,559	8,014		10,574
14	IV Decking at roof, PTL	8,876					301		301	942		1,243
15	IV Siding & trim, fiber cement	40,625										
16	IV Stucco, recoating (10%)	9,888	472	8,139		8,611	1,277		9,888			9,888
17	IV Window shutters (wood)	2,800										
18	IV Balcony decking (PTL)	5,880					199		199	624		823
19	IV Balcony rails (PTL)	798					798		798			798
20	IV Balcony structure (PTL)	2,600					88		88	276		364
21	IV Balcony roof, steel standing seam	1,040										
22	IV Stair rails (iron)	1,060										
23	IV Garage door	17,500										
	BUILDING EXTERIORS - BUILDIN											
24	V Roofing, steel standing seam	22,750										
25	V Single ply membrane, EPDM	11,000					373		373	1,168		1,540
26	V Deck waterproofing, recoat	2,880	2,880			2,880	2,978	(2,880)	2,978	306		3,283
27	V Stucco, recoating (10%)	5,568	266	4,583		4,849	719		5,568			5,568
28	V Window shutters (wood)	7,700										
29	V Door shutters (wood)	3,250										
30	V Balcony decking (PTL)	10,080					342		342	1,070		1,412
31	V Balcony rails (PTL)	6,270					6,270		6,270			6,270
32	V Balcony structure (PTL)	23,400					793		793	2,484		3,277
33	V Balcony columns (PTL)	11,200										
34	V Balcony roof, steel standing seam	4,680										
35	V Garage door	10,500										

CASH FLOW METHOD - THREE-YEAR REPLACEMENT FUNDING - TABLE CF4 cont'd

Item #	Description of Projected Replacement	Estimated Replacement Costs	Allocation of Beginning Balance	2016 Reserve Funding	2016 Projected Replacements	2016 End of Year Balance	2017 Reserve Funding	2017 Projected Replacements	2017 End of Year Balance	2018 Reserve Funding	2018 Projected Replacements	2018 End of Year Balance
	BUILDING EXTERIORS - BUILDIN											
36	XIV Roofing, steel standing seam	3,770										
37	XIV Single ply membrane, EPDM	68,222					2,313		2,313	7,241		9,554
38	XIV Decking at roof, PTL	8,974					304		304	953		1,257
39	XIV Stucco, recoating (10%)	8,104	387	6,670		7,057	1,047		8,104			8,104
40	XIV Window shutters (wood)	2,100										
41	XIV Balcony decking (PTL)	3,360					114		114	357		471
42	XIV Columns (fiberglass)	4,550										
43	XIV Garage door	17,500										
	BUILDING SYSTEMS											
44	Fire annunciator sys, basic	2,960										

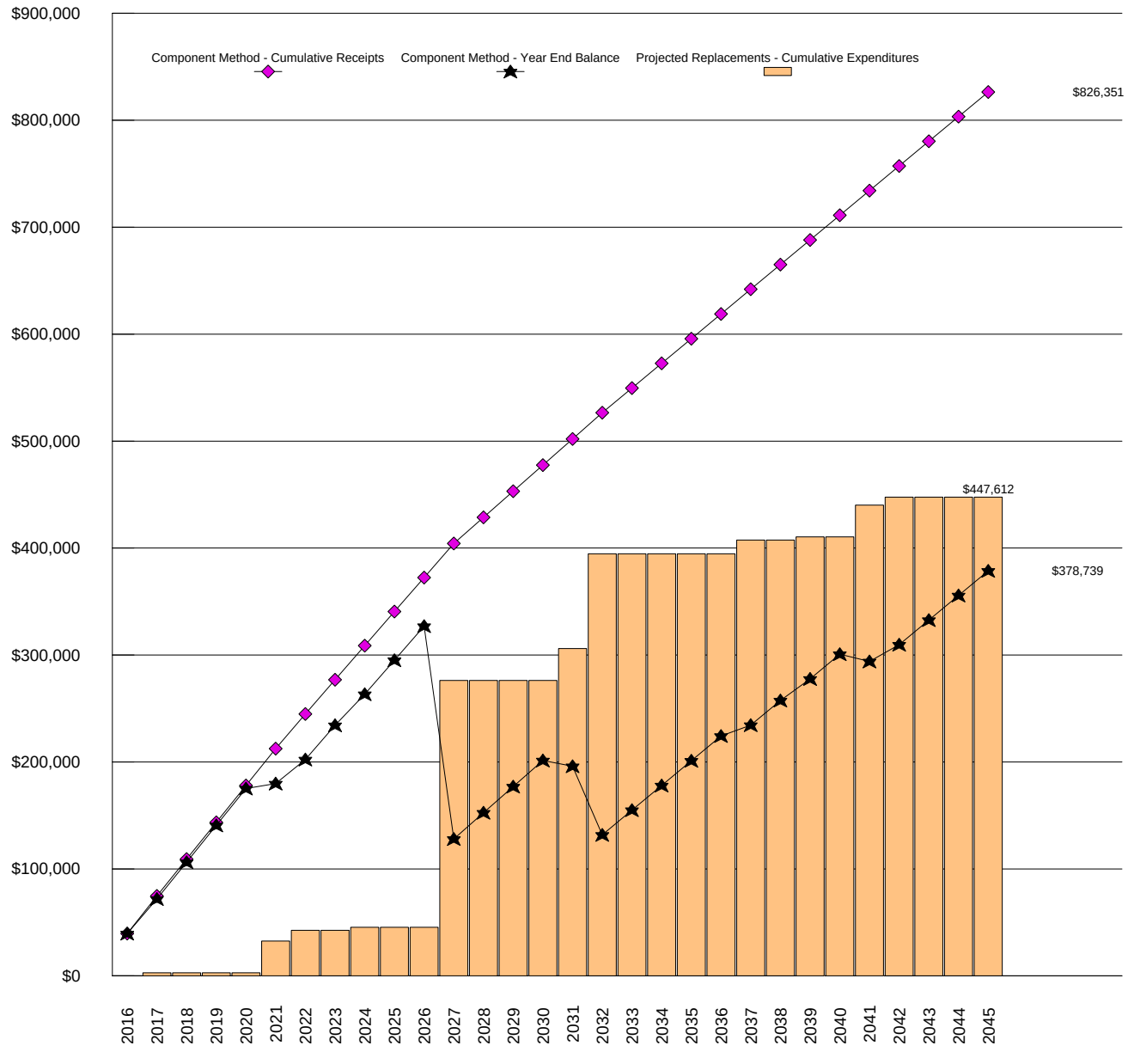
COMPONENT METHOD

$35,247 **COMPONENT METHOD RECOMMENDED ANNUAL FUNDING OF REPLACEMENT RESERVES IN THE STUDY YEAR, 2016.**

$183.58 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 44 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 CM2.

Component Method - Cumulative Receipts and Expenditures Graph



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 44 Projected Replacements. The total, $156,026, 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 ($4,300) by the Current Funding Objective ($156,026). At Morris Square Townhomes the Funding Percentage is 2.8%

- Allocation of the Beginning Balance. The Beginning Balance is divided among the 44 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 2.8 percent funded, there is $22 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 $35,247, the Component Method Recommended Annual Funding of Replacement Reserves in the Study Year (2016).

  In our fence example, the $22 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 $489. Next year, the deposit remains $489, but in the third year, the fence is replaced and the annual funding adjusts to $100.

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

Component Method Data - Years 1 through 30

Year	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Beginning balance	$4,300									
Recommended annual funding	$35,247	$35,247	$34,407	$34,407	$34,407	$34,407	$32,478	$31,954	$31,954	$31,830
Interest on reserves										
Expenditures		$2,880				$29,760	$9,948		$2,880	
Year end balance	$39,547	$71,914	$106,321	$140,728	$175,135	$179,782	$202,312	$234,266	$263,340	$295,170
Cumulative Expenditures		$2,880	$2,880	$2,880	$2,880	$32,640	$42,588	$42,588	$45,468	$45,468
Cumulative Receipts	$39,547	$74,794	$109,201	$143,608	$178,015	$212,422	$244,900	$276,854	$308,808	$340,638

Year	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Recommended annual funding	$31,830	$31,830	$24,442	$24,442	$24,442	$24,442	$24,442	$23,095	$23,095	$23,095
Interest on reserves										
Expenditures		$230,776				$29,760	$88,630			
Year end balance	$326,999	$128,053	$152,495	$176,938	$201,380	$196,062	$131,875	$154,970	$178,065	$201,160
Cumulative Expenditures	$45,468	$276,244	$276,244	$276,244	$276,244	$306,004	$394,634	$394,634	$394,634	$394,634
Cumulative Receipts	$372,467	$404,297	$428,739	$453,182	$477,624	$502,066	$526,509	$549,604	$572,699	$595,794

Year	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045
Recommended annual funding	$23,095	$23,095	$23,060	$23,060	$23,060	$23,060	$23,060	$23,023	$23,023	$23,023
Interest on reserves										
Expenditures		$12,908		$2,880		$29,760	$7,430			
Year end balance	$224,254	$234,441	$257,501	$277,681	$300,742	$294,042	$309,672	$332,694	$355,717	$378,739
Cumulative Expenditures	$394,634	$407,542	$407,542	$410,422	$410,422	$440,182	$447,612	$447,612	$447,612	$447,612
Cumulative Receipts	$618,888	$641,983	$665,043	$688,103	$711,164	$734,224	$757,284	$780,306	$803,329	$826,351

COMPONENT METHOD ACCOUNTING SUMMARY

This Morris Square Townhomes - Component Method Accounting Summary is an attachment to the Morris Square Townhomes - Replacement Reserve Study dated November 25, 2015 and is for use by accounting and reserve professionals experienced in Association funding and accounting principles. This Summary consists of four reports, the 2016, 2017, and 2018 Component Method Category Funding Reports (3) and a Three-Year Replacement Funding Report.

- COMPONENT METHOD CATEGORY FUNDING REPORT, 2016, 2017, and 2018. Each of the 44 Projected Replacements listed in the Morris Square Townhomes Replacement Reserve Inventory has been assigned to one of 6 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 $4,300 Beginning Balance (at the start of the Study Year) and the $104,901 of additional Replacement Reserve funding from 2016 to 2018 (as calculated in the Replacement Reserve Analysis) to each of the 44 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 2016 through 2018.
  - Allocation of the $4,300 Beginning Balance to the Projected Replacements by the Component Method.
  - Allocation of the $104,901 of additional Replacement Reserve Funding recommended in the Replacement Reserve Analysis in years 2016 through 2018, by the Component Method.

2016 - COMPONENT METHOD CATEGORY FUNDING REPORT

Each of the 44 Projected Replacements included in the Morris Square Townhomes Replacement Reserve Inventory has been assigned to one of the 6 categories listed in TABLE CM1 below. This calculated data is a summary of data provided in the Three-Year Replacement Funding Report and Replacement Reserve Inventory. The accuracy of this data is dependent upon many factors including the following critical financial data:

- A Beginning Balance of $4,300 as of the first day of the Study Year, January 1, 2016.
- Total reserve funding (including the Beginning Balance) of $39,547 in the Study Year.
- No expenditures from Replacement Reserves other than those specifically listed in the Replacement Reserve Inventory.

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.

2016 - COMPONENT METHOD CATEGORY FUNDING - TABLE CM1

CATEGORY	NORMAL ECONOMIC LIFE	REMAINING ECONOMIC LIFE	ESTIMATED REPLACEMENT COST	2016 BEGINNING BALANCE	2016 RESERVE FUNDING	2016 PROJECTED REPLACEMENTS	2016 END OF YEAR BALANCE
SITE COMPONENTS	10 to 20 years	5 to 11 years	$15,000	$165	$1,648		$1,814
BUILDING EXTERIORS - BUILDING III (BIII)	10 to 45 years	5 to 37 years	$75,195	$377	$2,803		$3,180
BUILDING EXTERIORS - BUILDING IV (IV)	10 to 45 years	5 to 37 years	$169,275	$1,505	$11,770		$13,275
BUILDING EXTERIORS - BUILDING V (V)	5 to 45 years	1 to 37 years	$119,278	$1,046	$9,508		$10,553
BUILDING EXTERIORS - BUILDING XIV (XIV	10 to 45 years	5 to 37 years	$116,580	$1,185	$9,384		$10,570
BUILDING SYSTEMS	30 years	21 years	$2,960	$22	$134		$155

2017 - COMPONENT METHOD CATEGORY FUNDING REPORT

Each of the 44 Projected Replacements included in the Morris Square Townhomes Replacement Reserve Inventory has been assigned to one of the 6 categories listed in TABLE CM2 below. This calculated data is a summary of data provided in the Three-Year Replacement Funding Report and Replacement Reserve Inventory. The accuracy of this data is dependent upon many factors including the following critical financial data:

- Replacement Reserves on Deposit totaling $39,547 on January 1, 2017.
- Total reserve funding (including the Beginning Balance) of $74,794 from 2016 through 2017.
- 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 2017 being accomplished in 2017 at a cost of $2,880.

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.

2017 - COMPONENT METHOD CATEGORY FUNDING - TABLE CM2

CATEGORY	NORMAL ECONOMIC LIFE	REMAINING ECONOMIC LIFE	ESTIMATED REPLACEMENT COST	2017 BEGINNING BALANCE	2017 RESERVE FUNDING	2017 PROJECTED REPLACEMENTS	2017 END OF YEAR BALANCE
SITE COMPONENTS	10 to 20 years	4 to 10 years	$15,000	$1,814	$1,648		$3,462
BUILDING EXTERIORS - BUILDING III (BIII)	10 to 45 years	4 to 36 years	$75,195	$3,180	$2,803		$5,984
BUILDING EXTERIORS - BUILDING IV (IV)	10 to 45 years	4 to 36 years	$169,275	$13,275	$11,770		$25,045
BUILDING EXTERIORS - BUILDING V (V)	5 to 45 years	0 to 36 years	$119,278	$10,553	$9,508	$2,880	$17,181
BUILDING EXTERIORS - BUILDING XIV (XIV	10 to 45 years	4 to 36 years	$116,580	$10,570	$9,384		$19,954
BUILDING SYSTEMS	30 years	20 years	$2,960	$155	$134		$289

2018 - COMPONENT METHOD CATEGORY FUNDING REPORT

Each of the 44 Projected Replacements included in the Morris Square Townhomes Replacement Reserve Inventory has been assigned to one of the 6 categories listed in TABLE CM3 below. This calculated data is a summary of data provided in the Three-Year Replacement Funding Report and Replacement Reserve Inventory. The accuracy of this data is dependent upon many factors including the following critical financial data:

- Replacement Reserves on Deposit totaling $71,914 on January 1, 2018.
- Total Replacement Reserve funding (including the Beginning Balance) of $109,201 from 2016 to 2018.
- No expenditures from Replacement Reserves other than those specifically listed in the Replacement Reserve Inventory.

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.

2018 - COMPONENT METHOD CATEGORY FUNDING - TABLE CM3

CATEGORY	NORMAL ECONOMIC LIFE	REMAINING ECONOMIC LIFE	ESTIMATED REPLACEMENT COST	2018 BEGINNING BALANCE	2018 RESERVE FUNDING	2018 PROJECTED REPLACEMENTS	2018 END OF YEAR BALANCE
SITE COMPONENTS	10 to 20 years	3 to 9 years	$15,000	$3,462	$1,648		$5,110
BUILDING EXTERIORS - BUILDING III (BIII)	10 to 45 years	3 to 35 years	$75,195	$5,984	$2,803		$8,787
BUILDING EXTERIORS - BUILDING IV (IV)	10 to 45 years	3 to 35 years	$169,275	$25,045	$11,770		$36,815
BUILDING EXTERIORS - BUILDING V (V)	5 to 45 years	3 to 35 years	$119,278	$17,181	$8,668		$25,849
BUILDING EXTERIORS - BUILDING XIV (XIV	10 to 45 years	3 to 35 years	$116,580	$19,954	$9,384		$29,338
BUILDING SYSTEMS	30 years	19 years	$2,960	$289	$134		$422

COMPONENT METHOD - THREE-YEAR REPLACEMENT FUNDING REPORT

TABLE CM4 below details the allocation of the $4,300 Beginning Balance, as reported by the Association and the $104,901 of Replacement Reserve Funding calculated by the Cash Flow Method from 2016 to 2018, to the 44 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 CF1. The accuracy of the allocations is dependent upon many factors including the following critical financial data:

- Replacement Reserves on Deposit totaling $4,300 on January 1, 2016.
- Replacement Reserves on Deposit totaling $39,547 on January 1, 2017.
- Replacement Reserves on Deposit totaling $71,914 on January 1, 2018.
- Total Replacement Reserve funding (including the Beginning Balance) of $109,201 from 2016 to 2018.
- No expenditures from Replacement Reserves other than those specifically listed in the Replacement Reserve Inventory.
- All Projected Replacements scheduled in the Replacement Reserve Inventory from 2016 to 2018 being accomplished as scheduled in the Replacement Reserve Inventory at a cost of $2,880.

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

COMPONENT METHOD - THREE-YEAR REPLACEMENT FUNDING - TABLE CM4

Item #	Description of Projected Replacement	Estimated Replacement Costs	Allocation of Beginning Balance	2016 Reserve Funding	2016 Projected Replacements	2016 End of Year Balance	2017 Reserve Funding	2017 Projected Replacements	2017 End of Year Balance	2018 Reserve Funding	2018 Projected Replacements	2018 End of Year Balance
	SITE COMPONENTS											
1	Storm water management (allowance)	5,000	55	824		879	824		1,703	824		2,528
2	Domestic water main (allowance)	5,000	55	412		467	412		879	412		1,291
3	Sanitary main	5,000	55	412		467	412		879	412		1,291
	BUILDING EXTERIORS - BUILDIN											
4	III Roofing, steel standing seam	14,300	61	375		436	375		811	375		1,185
5	III Gutter & downspouts, copper	2,990	13	78		91	78		170	78		248
6	III Siding & trim, fiber cement	40,625	174	1,064		1,239	1,064		2,303	1,064		3,368
7	III Stucco, recoating (10%)	1,200	13	198		211	198		409	198		607
8	III Window shutters (wood)	7,000	29	410		439	410		849	410		1,259
9	III Mechanical platform	2,880	32	316		348	316		665	316		981
10	III Garage door	3,500	31	204		235	204		439	204		643
11	III Service door	2,700	24	157		181	157		339	157		496
	BUILDING EXTERIORS - BUILDIN											
12	IV Roofing, steel standing seam	2,704	12	71		82	71		153	71		224
13	IV Single ply membrane, EPDM	75,504	832	6,223		7,055	6,223		13,278	6,223		19,500
14	IV Decking at roof, PTL	8,876	98	732		829	732		1,561	732		2,292
15	IV Siding & trim, fiber cement	40,625	174	1,064		1,239	1,064		2,303	1,064		3,368
16	IV Stucco, recoating (10%)	9,888	109	1,630		1,739	1,630		3,369	1,630		4,999
17	IV Window shutters (wood)	2,800	12	164		176	164		340	164		504
18	IV Balcony decking (PTL)	5,880	65	485		549	485		1,034	485		1,519
19	IV Balcony rails (PTL)	798	12	112		124	112		236	112		349
20	IV Balcony structure (PTL)	2,600	29	214		243	214		457	214		671
21	IV Balcony roof, steel standing seam	1,040	4	27		32	27		59	27		86
22	IV Stair rails (iron)	1,060	5	28		32	28		60	28		88
23	IV Garage door	17,500	154	1,020		1,175	1,020		2,195	1,020		3,215
	BUILDING EXTERIORS - BUILDIN											
24	V Roofing, steel standing seam	22,750	98	596		694	596		1,290	596		1,886
25	V Single ply membrane, EPDM	11,000	121	907		1,028	907		1,934	907		2,841
26	V Deck waterproofing, recoat	2,880	48	1,416		1,464	1,416	(2,880)		576		576
27	V Stucco, recoating (10%)	5,568	61	918		979	918		1,897	918		2,815
28	V Window shutters (wood)	7,700	32	451		483	451		934	451		1,385
29	V Door shutters (wood)	3,250	13	190		204	190		394	190		585
30	V Balcony decking (PTL)	10,080	111	831		942	831		1,773	831		2,603
31	V Balcony rails (PTL)	6,270	92	883		975	883		1,857	883		2,740
32	V Balcony structure (PTL)	23,400	258	1,929		2,186	1,929		4,115	1,929		6,043
33	V Balcony columns (PTL)	11,200	99	653		752	653		1,405	653		2,058
34	V Balcony roof, steel standing seam	4,680	20	123		143	123		265	123		388
35	V Garage door	10,500	93	612		705	612		1,317	612		1,929

COMPONENT METHOD - THREE-YEAR REPLACEMENT FUNDING - TABLE CM4 cont'd

Item #	Description of Projected Replacement	Estimated Replacement Costs	Allocation of Beginning Balance	2016 Reserve Funding	2016 Projected Replacements	2016 End of Year Balance	2017 Reserve Funding	2017 Projected Replacements	2017 End of Year Balance	2018 Reserve Funding	2018 Projected Replacements	2018 End of Year Balance
	BUILDING EXTERIORS - BUILDIN											
36	XIV Roofing, steel standing seam	3,770	16	99		115	99		214	99		313
37	XIV Single ply membrane, EPDM	68,222	752	5,622		6,375	5,622		11,997	5,622		17,620
38	XIV Decking at roof, PTL	8,974	99	740		839	740		1,578	740		2,318
39	XIV Stucco, recoating (10%)	8,104	89	1,336		1,425	1,336		2,761	1,336		4,097
40	XIV Window shutters (wood)	2,100	9	123		132	123		255	123		378
41	XIV Balcony decking (PTL)	3,360	37	277		314	277		591	277		868
42	XIV Columns (fiberglass)	4,550	29	167		196	167		364	167		531
43	XIV Garage door	17,500	154	1,020		1,175	1,020		2,195	1,020		3,215
	BUILDING SYSTEMS											
44	Fire annunciator sys, basic	2,960	22	134		155	134		289	134		422

1. COMMON INTEREST DEVELOPMENTS - AN OVERVIEW

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

The growth of Community Associations has been explosive. In 1965, there were only 500 Community Associations in the United States. According to the 1990 U.S. Census, there were 130,000 Community Associations. 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, a Replacement Reserve Analysis evaluates the current funding of Replacement Reserves as reported by the Association and recommends annual funding of Replacement Reserves by two generally accepted accounting methods; the Cash Flow Method and the Component Method. Miller - Dodson provides a replacement reserve recommendation based on the Cash Flow Method in Section A, and the Component Method in the Appendix of the report.

- Section B Replacement Reserve Inventory. The Replacement Reserve Inventory lists the commonly owned components within the community that require periodic replacement using funding from Replacement Reserves. The Replacement Reserve Inventory also provides information about components excluded from the Replacement Reserve Inventory whose replacement is not scheduled for funding from Replacement Reserves.

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

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

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

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

3. METHODS OF ANALYSIS

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

- Cash Flow Method. The Cash Flow Method is sometimes referred to as the "Pooling Method." It calculates the minimum constant annual contribution to reserves (Minimum Annual Deposit) required to meet projected expenditures without allowing total reserves on hand to fall below the specified minimum level in any year.

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

- Component Method. This method is a time tested mathematical model developed by HUD in the early 1980s, but has been generally relegated to a few States that require it by law. For the vast majority of Miller - Dodson's clients, this method is not used.

  The Component Method treats each item in the replacement schedule as an individual line item budget. Generally, the Minimum Annual Contribution to Reserves is higher when calculated by the Component Method. The mathematical model for this method works as follows:

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

4. REPLACEMENT RESERVE STUDY DATA

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

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

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

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

5. DEFINITIONS

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

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

Cash Flow Analysis. See Cash Flow Method, above.

Component Analysis. See Component Method, above.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

http://bcove.me/fazwdk3h

clients?

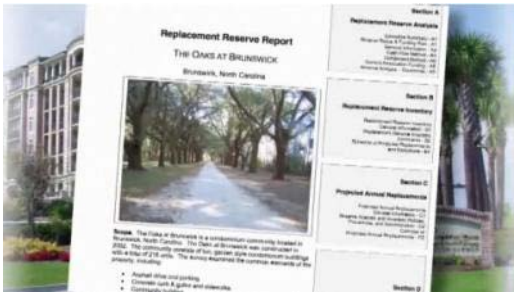
What is my role as a Board Member?
Will a Reserve Study meet my community's needs?

http://bcove.me/n6nwnktv

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

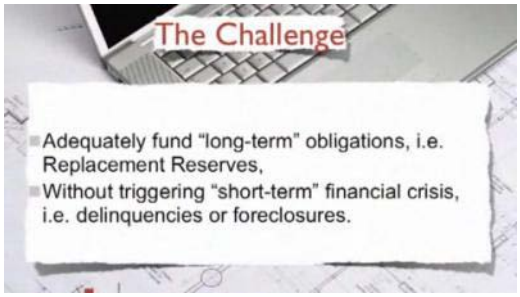
Where do the numbers come from?
Cumulative expenditures and funding, what?

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