



COLONIAL GREEN ROW HOUSES MASTER

ROANOKE, VA

INTERACTIVE RESERVE ANALYSIS



DRAFT ISSUED:	5/14/2018
MANAGER REVIEW:	8/21/2018
FINAL REPORT ISSUED:	8/23/2018
REVISION/UPDATE ISSUED:	

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DMA does not support the validity of this report until a Working Session has been conducted with the Board of Directors and the final report issued.



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This is a printout of a dynamic reserve analysis that will change over time. The analysis is made up of information sheets and spreadsheets, whose contents may change each time the analysis is updated. If comparing this report to other copies, verify the latest issue date on the front cover. Summary descriptions of the spreadsheets are provided below. Some spreadsheets, which are continuous in Excel, are divided up into several pages in this report for legibility.

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<i>Contains Community Associations Institute (CAI) National Standards, limitations and legal restrictions on the use of information in this document and legal disclosures.</i>	
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STANDARDS, LIMITATIONS AND CONDITIONS DISCLOSURE AND LEGAL RESTRICTIONS

STUDY STANDARDS

This study was conducted in accordance with the Community Associations Institute National Reserve Study Standards. A summary of the standards is contained in our information article entitled “National Standards” which is included in the Appendix.

The data and analysis information that forms a part of this report was formatted in Microsoft Excel but contains proprietary programming and program coding that is not available for distribution to outside parties. Copies of the data and analysis information have been made available in Adobe's Portable Document Format and included as part of this report. Limited program versions can also be provided, upon request, in Excel format for easier viewing and navigating through the data.

STUDY LIMITATIONS AND CONDITIONS

1. No destructive testing, lab analysis or other investigative methods were used to determine the condition of the components. Due to these limitations, as set forth in the reserve study guidelines that we subscribe to, the limited visual observations that were made are not sufficient to be considered a qualified architectural or engineering assessment of the state or condition of the components.
2. All common areas on the property were observed unless access was limited or not made available to us at the time of the inspection. The observations and opinions expressed herein with regard to the useful life of the components are based on our general professional knowledge of construction and our knowledge of the typical replacement experience of many communities and other entities with the same component types.
3. The inventory included taking field measurements, measurements from aerial and satellite imagery, digitized measurement over photo imagery and takeoffs and measurements from design and as-built drawings as there were deemed to be reliable. In the case of a Level II Update the quantities provided by the Client from previous studies was utilized when it was deemed to be reliable and accurate. In the case of a Level III Update all inventory data from previous studies provided by the Client was deemed accurate and reliable.
4. Our projections of remaining useful life are not architectural or engineering recommendations for executing specific projects. As the end of the remaining useful life approaches, as set forth in this study, the association should seek professional architectural, engineering, contractor, service providers or qualified product manufacturer or supplier assistance, as appropriate, and as to the need for and the scheduling of each specific replacement project. Particularly those of any significant magnitude.
5. An asset can be made up of several components that need to be maintained, repaired and replaced. Other elements of the asset may be considered permanent with respect to the asset. The schedule of components provided herein, is based upon information received from the client regarding the common elements and/or assets that the client is responsible for. It is the client's responsibility to verify that the schedule of components is complete.
6. Financial information including the present fund balance, interest from funds on deposit, and recent capital expenditures, were provided by the Association and are deemed reliable and complete by Design/Management Associates, Inc.

7. Information provided by the Association about prior reserve replacement projects is considered to be reliable and complete. No inspection by Design/Management Associates, Inc. should be interpreted as a project audit or quality inspection.
8. Industry Life Expectancy is based on printed product literature, product or material warranties, industry standards literature, and on the opinions of manufacturers, installers, or maintenance contractors based on their experience with these products and materials.
9. Unit prices are based on published unit price standards such as R. S. Means "Residential Cost Data", Facilities Maintenance and Repair Cost Data, and "Facilities Construction Cost Data", latest editions, and on pricing obtained from contractors, installers, or manufacturers. All prices are given in present dollars unless noted otherwise. Prices listed are not guaranteed as exact quotes for work included.
10. This analysis incorporates assumptions about the future rate of inflation, and the future interest income on your account deposits. If significant changes occur in either of these rates, this calculation should be re-run with current information.
11. The results of this analysis are predicated on your contributing the recommended amount in each previous year and on expenses occurring generally as predicted. The Reserve Study should be updated at least every 3 to 5 years, which may depend on statutory requirements, to correct for normal variations. However if significant changes occur in your present funding or in major expenses, in a shorter period of time, the account should be re-run.
12. DMA's Capital Replacement Reserve Studies are designed to be used as planning tools. They are a reflection of information provided by the Association and our analytical inputs, and are assembled for the Association's use. This reserve study should not be used for the purpose of performing an audit, quality/forensic analysis, or for background checks of historical records.

DISCLOSURE

DMA does not have any financial interest in this community, its management company or any vendor mentioned or used in this study beyond this work. This study represents all facts known to DMA at the time of its preparation that if purposefully omitted would cause a distortion of the Association's situation regarding its capital reserve plan.

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Interactive Reserve Analysis

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EXECUTIVE SUMMARY

COLONIAL GREEN ROW HOUSES MASTER

RESERVE SPECIALIST AND STAFF RESPONSIBLE FOR THIS ANALYSIS

This study was prepared under the direct supervision of:

Lynette Wuensch, a Reserve Specialist certified by the Community Association Institute and a registered Professional Engineer in Virginia, Florida and North Carolina. Ms. Wuensch holds a BS degree in Civil Engineering.

The field survey, inventory, and condition assessment was conducted by:

Lynette Wuensch, a Reserve Specialist certified by the Community Association Institute and a registered Professional Engineer in Virginia, Florida and North Carolina. Ms. Wuensch holds a BS degree in Civil Engineering.

The cost estimating data was prepared by:

Tim R. Gebott, who has over 40 years construction contract estimating and programming experience. Mr. Gebott holds a BS degree in Civil Engineering.

COMMUNITY INFORMATION

COLONIAL GREEN ROW HOUSES MASTER

Study Level:	II
Association Name:	Colonial Green Neighborhood Association
Community Location / Address:	Roanoke, Virginia
Community Size (Number of Units):	18
Unit Type(s):	Row Houses
Management:	Hall Associates, Inc.
Represented by:	Christina L. Greene, CMCA, AMS, PCAM
Telephone and E-mail:	540-982-0011, ext. 155; Chrissy Greene <cgreene@hallassociatesinc.com>
Year(s) constructed:	2006
Scope of Reserves:	

FINANCIAL SUMMARY

Current Reserve Account Balance Information:

Average annual income rate on reserve deposit accounts:	<u>3.00%</u>		
Balance on account:	<u>\$20,023</u>	as of	<u>12/31/2017</u>
Less contributions already made this year:			
Plus expenditures already made and/or scheduled:			
Money held in investment accounts:	<u>\$0</u>		
Total balance:	<u>\$20,023</u>	as of	<u>1/1/2018</u>

Reserve Account Contribution in Study Year:

Current budgeted contribution for study year:	<u>\$4,819</u>	for	<u>2018</u>
Recommended contribution for study year from Reserve Funding Navigator worksheet:	<u>\$4,819</u>		
Remaining contribution to be made for study year:	<u>\$4,819</u>		

INTERACTIVE ANALYSIS - WORKING DRAFT

This document is a draft print-out of the spreadsheet analysis for your community's capital reserve account. It illustrates your current fund balance, current funding level, investment income and projected annual expenditures - all in current dollars. **NOTE: THIS DRAFT REPORT DOES NOT CONTAIN A FUNDING SOLUTION!** The next step in the completion of this analysis is a **working session** conducted with representatives of the community. The working session will review all input information and assumptions made in the analysis. We will then look together at alternate funding plans, from which the community can select a model to become the recommended working in the report. For the session to be most successful, participants should include management, association board members and/or budget committee members. The working session can be conducted online via an internet link or in person. A complete explanation of the working session is available in our information article entitled "DMA's Working Session" included in the Appendix. Upon completion of the interactive working session(s) the primary results of the analysis will be shown below.

CASH FLOW FUNDING MODEL (current as of the latest date on the cover of this report):

Projected Inflation and Escalation Rates (from Reserve Funding Navigator):

The projected inflation rate used in this printout is:	<u>2.49%</u>
The projected annual contribution escalation rate in this printout is:	<u>5.00%</u>

Reserve Funding Projections for next Four Years (from Reserve Funding Navigator):

<u>Amount</u>	<u>Year</u>
<u>\$5,059.91</u>	<u>2019</u>
<u>\$5,312.90</u>	<u>2020</u>
<u>\$5,578.55</u>	<u>2021</u>
<u>\$5,857.48</u>	<u>2022</u>



BASIC COMPONENT INFORMATION		SITE VISIT INFORMATION			AGE
LINE NUMBER	COMPONENT NAME	FIELD MEASURED QUANTITY OR COUNT	UNITS	% QUANTITY TO BE REPLACED EACH OCCURRENCE	LAST IN-SERVICE DATE
					2006
1.00	Row Houses				
1.01	Roofs - 19 - A,B,C,D	60	SQ	100%	2007
1.02	Roofs - 22 - A,B,C,D	59	SQ	100%	2007
1.03	Roofs - 20 - A,B,C,D, E	73	SQ	100%	2008
1.04	Roofs - 21 - A,B,C,D, E	70	SQ	100%	2009
1.05	Soffits, Fascia, Trim - 19 - A,B,C,D	2,808	LF	100%	2007
1.06	Soffits, Fascia, Trim - 22 - A,B,C,D	2,479	LF	100%	2007
1.07	Soffits, Fascia, Trim - 20 - A,B,C,D, E	3,170	LF	100%	2008
1.08	Soffits, Fascia, Trim - 21 - A,B,C,D, E	2,570	LF	100%	2009
1.09	Gutters and Downspouts - 19 - A,B,C,D	647	LF	100%	2007
1.10	Gutters and Downspouts - 22 - A,B,C,D	602	LF	100%	2007
1.11	Gutters and Downspouts - 20 - A,B,C,D, E	548	LF	100%	2008
1.12	Gutters and Downspouts - 21 - A,B,C,D,E	735	LF	100%	2009
1.13	Vinyl Siding - 19 - A,B,C,D	3,035	SF	100%	2007
1.14	Vinyl Siding - 22 - A,B,C,D	3,600	SF	100%	2007
1.15	Vinyl Siding - 20 - A,B,C,D, E	4,200	SF	100%	2008
1.16	Vinyl Siding - 21 - A,B,C,D, E	4,600	SF	100%	2009
1.17	15" HDPE (private drainage for roof drains)	50	LF	10%	2005



COMPONENT LIFECYCLE AND COSTING COLONIAL GREEN ROW HOUSES MASTER

BASIC COMPONENT INFORMATION		LIFE CYCLE				REPLACEMENT COST				
						LOCATION CCI		BASE CCI		87.3
LINE NUMBER	COMPONENT NAME	CURRENT ESTIMATED USEFUL LIFE (EUL)	REPLACEMENT INTERVAL AFTER FIRST REPLACEMENT	REMAINING USEFUL LIFE OR YEARS PAST DUE	NEXT REPLACEMENT YEAR	% OF TOTAL QUANTITY TO BE REPLACED	UNITS	QUANTITY OR COUNT	UNIT COST	REPLACEMENT COST, PER OCCURRENCE
		DEFAULT	DEFAULT	2018	AUTO CALC	NO EDITING	NO EDITING	NO EDITING	NO EDITING	NO EDITING
1.00	Row Houses									
1.01	Roofs - 19 - A,B,C,D	25	25	14	2032	100%	SQ	60	\$372.20	\$22,332.00
1.02	Roofs - 22 - A,B,C,D	25	25	14	2032	100%	SQ	59	\$372.20	\$21,959.80
1.03	Roofs - 20 - A,B,C,D, E	25	25	15	2033	100%	SQ	73	\$372.20	\$27,170.60
1.04	Roofs - 21 - A,B,C,D, E	25	25	16	2034	100%	SQ	70	\$372.20	\$26,054.00
1.05	Soffits, Fascia, Trim - 19 - A,B,C,D	40	40	29	2047	100%	LF	2,808	\$5.42	\$15,219.36
1.06	Soffits, Fascia, Trim - 22 - A,B,C,D	40	40	29	2047	100%	LF	2,479	\$5.42	\$13,436.18
1.07	Soffits, Fascia, Trim - 20 - A,B,C,D, E	40	40	30	2048	100%	LF	3,170	\$5.42	\$17,181.40
1.08	Soffits, Fascia, Trim - 21 - A,B,C,D, E	40	40	31	2049	100%	LF	2,570	\$5.42	\$13,929.40
1.09	Gutters and Downspouts - 19 - A,B,C,D	25	25	14	2032	100%	LF	647	\$9.58	\$6,198.26
1.10	Gutters and Downspouts - 22 - A,B,C,D	25	25	14	2032	100%	LF	602	\$9.58	\$5,767.16
1.11	Gutters and Downspouts - 20 - A,B,C,D, E	25	25	15	2033	100%	LF	548	\$9.58	\$5,249.84
1.12	Gutters and Downspouts - 21 - A,B,C,D,E	25	25	16	2034	100%	LF	735	\$9.58	\$7,041.30
1.13	Vinyl Siding - 19 - A,B,C,D	40	40	29	2047	100%	SF	3,035	\$6.30	\$19,120.50
1.14	Vinyl Siding - 22 - A,B,C,D	40	40	29	2047	100%	SF	3,600	\$6.30	\$22,680.00
1.15	Vinyl Siding - 20 - A,B,C,D, E	40	40	30	2048	100%	SF	4,200	\$6.30	\$26,460.00
1.16	Vinyl Siding - 21 - A,B,C,D, E	40	40	31	2049	100%	SF	4,600	\$6.30	\$28,980.00
1.17	15" HDPE (private drainage for roof drains)	50	5	37	2055	10%	LF	50	\$44.73	\$223.65



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EXPENDITURE SUMMARY COLONIAL GREEN ROW HOUSES MASTER

2018

Sum of 2018

LINE NUMBER	COMPONENT NAME	LOCATION	Total
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2019

Sum of 2019

LINE NUMBER	COMPONENT NAME	LOCATION	Total
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2020

Sum of 2020

LINE NUMBER	COMPONENT NAME	LOCATION	Total
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2021

Sum of 2021

LINE NUMBER	COMPONENT NAME	LOCATION	Total
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2022

Sum of 2022

LINE NUMBER	COMPONENT NAME	LOCATION	Total
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2023

Sum of 2023

LINE NUMBER	COMPONENT NAME	LOCATION	Total
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2024

Sum of 2024

LINE NUMBER	COMPONENT NAME	LOCATION	Total
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2025

Sum of 2025

LINE NUMBER	COMPONENT NAME	LOCATION	Total
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2026

Sum of 2026

LINE NUMBER	COMPONENT NAME	LOCATION	Total
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2027

Sum of 2027

LINE NUMBER	COMPONENT NAME	LOCATION	Total
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2028

Sum of 2028

LINE NUMBER	COMPONENT NAME	LOCATION	Total
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2029

Sum of 2029

LINE NUMBER	COMPONENT NAME	LOCATION	Total
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2030

Sum of 2030

LINE NUMBER	COMPONENT NAME	LOCATION	Total
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2031

Sum of 2031

LINE NUMBER	COMPONENT NAME	LOCATION	Total
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2032**Sum of 2032**

LINE NUMBER	COMPONENT NAME	LOCATION	Total
1.01	Roofs - 19 - A,B,C,D	(blank)	\$22,332
1.02	Roofs - 22 - A,B,C,D	(blank)	\$21,960
1.09	Gutters and Downspouts - 19 - A,B,C,D	(blank)	\$6,198
1.1	Gutters and Downspouts - 22 - A,B,C,D	(blank)	\$5,767
Grand Total			\$56,257

2033**Sum of 2033**

LINE NUMBER	COMPONENT NAME	LOCATION	Total
1.03	Roofs - 20 - A,B,C,D, E	(blank)	\$27,171
1.11	Gutters and Downspouts - 20 - A,B,C,D, E	(blank)	\$5,250
Grand Total			\$32,420

2034**Sum of 2034**

LINE NUMBER	COMPONENT NAME	LOCATION	Total
1.04	Roofs - 21 - A,B,C,D, E	(blank)	\$26,054
1.12	Gutters and Downspouts - 21 - A,B,C,D,E	(blank)	\$7,041
Grand Total			\$33,095

2035**Sum of 2035**

LINE NUMBER	COMPONENT NAME	LOCATION	Total
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2036

Sum of 2036

LINE NUMBER	COMPONENT NAME	LOCATION	Total
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2037

Sum of 2037

LINE NUMBER	COMPONENT NAME	LOCATION	Total
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2038

Sum of 2038

LINE NUMBER	COMPONENT NAME	LOCATION	Total
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2039

Sum of 2039

LINE NUMBER	COMPONENT NAME	LOCATION	Total
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2040

Sum of 2040

LINE NUMBER	COMPONENT NAME	LOCATION	Total
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2041

Sum of 2041

LINE NUMBER	COMPONENT NAME	LOCATION	Total
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2042

Sum of 2042

LINE NUMBER	COMPONENT NAME	LOCATION	Total
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2043

Sum of 2043

LINE NUMBER	COMPONENT NAME	LOCATION	Total
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2044

Sum of 2044

LINE NUMBER	COMPONENT NAME	LOCATION	Total
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2045

Sum of 2045

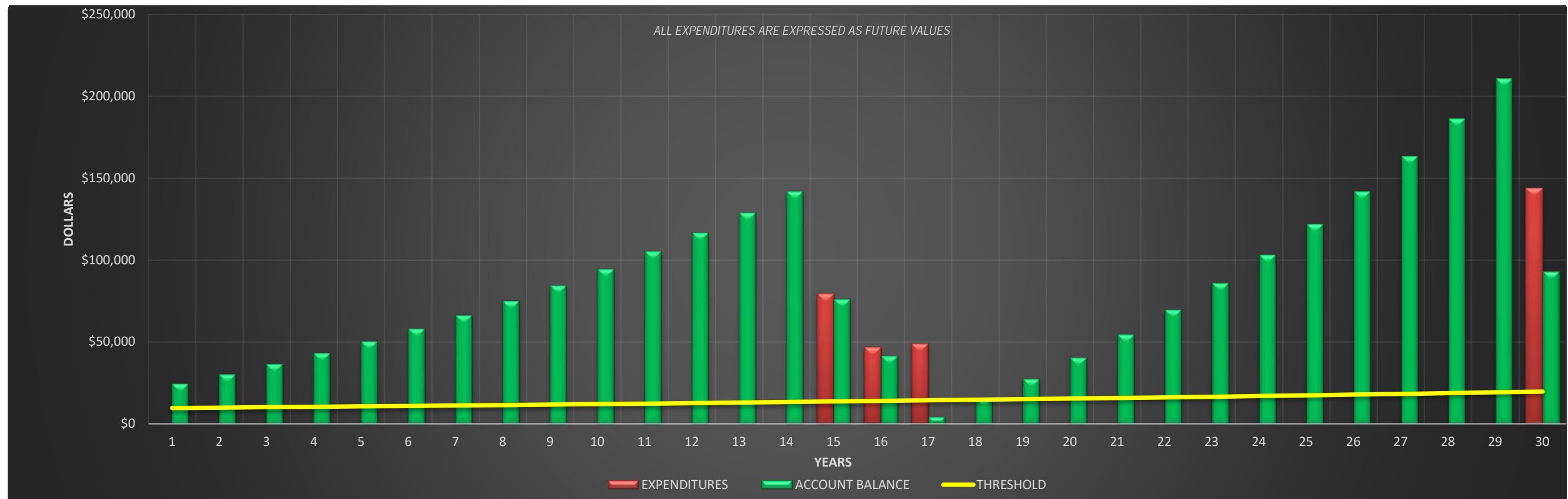
LINE NUMBER	COMPONENT NAME	LOCATION	Total
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2046**Sum of 2046**

LINE NUMBER	COMPONENT NAME	LOCATION	Total
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2047**Sum of 2047**

LINE NUMBER	COMPONENT NAME	LOCATION	Total
1.05	Soffits, Fascia, Trim - 19 - A,B,C,D	(blank)	\$15,219
1.06	Soffits, Fascia, Trim - 22 - A,B,C,D	(blank)	\$13,436
1.13	Vinyl Siding - 19 - A,B,C,D	(blank)	\$19,121
1.14	Vinyl Siding - 22 - A,B,C,D	(blank)	\$22,680
Grand Total			\$70,456



EXPENDITURE | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047

Inflation rate historical period; <i>select year</i>:	10 years	Annual escalation to the contribution per year, if any:	5.0%	50
Anticipated annual construction inflation rate:	2.49% per year			
Threshold Balance to be Maintained in Account:		Annual Contribution in Year:		
A selected minimum balance of:	\$0	OR	2018	\$4,819 \$4,819
Total of the next 30 years of expenditures, times:	5.0%	50	2019	\$5,060 \$5,060
			2020	\$5,313
			2021	\$5,579
			2022	\$5,857

The graph above is a pictorial representation of the cash flow funding model used for this analysis. It illustrates the projected reserve account balance in each of the next 30 years (green bars) as it is impacted by the projected reserve expenditures over the same period (red bars). The yellow line is a designated threshold or "floor" of the reserve account - a line that allows the plan to keep the account balance equal to or greater than in the lowest balance year(s). It essentially represents a contingency balance that the account will always be available over and above the amounts required to fund all of the components when the funding model projects them to be replaced. This threshold value is not prescribed by law or standards, and can be adjusted to a level desired by the community.

The graph is called a "navigator" because the funding model can be adjusted from this sheet to react to varying inflation rates, interest rates, actual adjusted account balances, and variations in reserve expenditures and project schedules based on your community's actual experience, and in response to changes in priorities. These adjustments are typically performed in real time during a live working session, where the participants can see the impact of any and all changes on the account, and determine how to respond to them.

If this navigator shows an inflation rate of 0.0% and an annual escalation to the contribution of 0.0% then all numbers in the analysis shown are in current dollars only. These rates will be adjusted in the live working session.

**CASH FLOW SPREADSHEET
COLONIAL GREEN ROW HOUSES MASTER**

YEAR	1	2	3	4	5
CALENDAR YEAR	2018	2019	2020	2021	2022

PROGRAMMED EXPENDITURES, PRESENT WORTH VALUES					
SCHEDULE OF REPAIRS AND REPLACEMENTS	\$0	\$0	\$0	\$0	\$0
CAPITAL IMPROVEMENT PROJECTS	\$0	\$0	\$0	\$0	\$0

BEGINNING YEAR BALANCE	\$20,023	\$24,842	\$30,647	\$36,879	\$43,564
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FINANCIAL ANALYSIS SUMMARY

INCOME					
CONTRIBUTION TO RESERVES	\$4,819	\$5,060	\$5,313	\$5,579	\$5,857
LOAN DEPOSITS	\$0	\$0	\$0	\$0	\$0
PLUS SPECIAL ASSESSMENTS	\$0	\$0	\$0	\$0	\$0
PLUS OTHER FUNDS COMING DUE	\$0	\$0	\$0	\$0	\$0
PLUS INVESTMENT INCOME ON PRIOR YEAR'S ENDING BALANCE	\$0	\$745	\$919	\$1,106	\$1,307
INVESTMENT 1	\$0	\$0	\$0	\$0	\$0
INVESTMENT 2	\$0	\$0	\$0	\$0	\$0
TOTAL INCOME	\$4,819	\$5,805	\$6,232	\$6,685	\$7,164

EXPENDITURES, FUTURE VALUES					
SCHEDULE OF REPAIRS AND REPLACEMENTS	\$0	\$0	\$0	\$0	\$0
CAPITAL IMPROVEMENT PROJECTS	\$0	\$0	\$0	\$0	\$0
FINANCIAL LOAN PAYMENT	\$0	\$0	\$0	\$0	\$0
OTHER DISBURSEMENTS	\$0	\$0	\$0	\$0	\$0
TOTAL EXPENDITURES	\$0	\$0	\$0	\$0	\$0

END OF YEAR BALANCE	\$24,842	\$30,647	\$36,879	\$43,564	\$50,728
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MINIMUM ACCOUNT THRESHOLD					
CALCULATED THRESHOLD AS A % OF TOTAL 30 YEAR COSTS	\$9,611	\$9,851	\$10,096	\$10,348	\$10,606
FUNDING OBJECTIVE MET?	YES	YES	YES	YES	YES
MINIMUM REQUIRED CASH TRANSFER	\$0	\$0	\$0	\$0	\$0

ESCALATION, INFLATION, EARNINGS RATES					
ANNUAL CONTRIBUTION ESCALATION:	N/A	5.00%	5.00%	5.00%	5.00%
ANNUAL CONSTRUCTION COST ESCALATION:	N/A	2.49%	2.49%	2.49%	2.49%
ANNUAL RESERVE ACCOUNT INCOME RATE	3.00%	3.00%	3.00%	3.00%	3.00%



YEAR	6	7	8	9	10
CALENDAR YEAR	2023	2024	2025	2026	2027

PROGRAMMED EXPENDITURES, PRESENT WORTH VALUES					
SCHEDULE OF REPAIRS AND REPLACEMENTS	\$0	\$0	\$0	\$0	\$0
CAPITAL IMPROVEMENT PROJECTS	\$0	\$0	\$0	\$0	\$0

BEGINNING YEAR BALANCE	\$50,728	\$58,401	\$66,610	\$75,390	\$84,771
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FINANCIAL ANALYSIS SUMMARY

INCOME					
CONTRIBUTION TO RESERVES	\$6,150	\$6,458	\$6,781	\$7,120	\$7,476
LOAN DEPOSITS	\$0	\$0	\$0	\$0	\$0
PLUS SPECIAL ASSESSMENTS	\$0	\$0	\$0	\$0	\$0
PLUS OTHER FUNDS COMING DUE	\$0	\$0	\$0	\$0	\$0
PLUS INVESTMENT INCOME ON PRIOR YEAR'S ENDING BALANCE	\$1,522	\$1,752	\$1,998	\$2,262	\$2,543
INVESTMENT 1	\$0	\$0	\$0	\$0	\$0
INVESTMENT 2	\$0	\$0	\$0	\$0	\$0
TOTAL INCOME	\$7,672	\$8,210	\$8,779	\$9,381	\$10,019

EXPENDITURES, FUTURE VALUES					
SCHEDULE OF REPAIRS AND REPLACEMENTS	\$0	\$0	\$0	\$0	\$0
CAPITAL IMPROVEMENT PROJECTS	\$0	\$0	\$0	\$0	\$0
FINANCIAL LOAN PAYMENT	\$0	\$0	\$0	\$0	\$0
OTHER DISBURSEMENTS	\$0	\$0	\$0	\$0	\$0
TOTAL EXPENDITURES	\$0	\$0	\$0	\$0	\$0

END OF YEAR BALANCE	\$58,401	\$66,610	\$75,390	\$84,771	\$94,790
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MINIMUM ACCOUNT THRESHOLD					
CALCULATED THRESHOLD AS A % OF TOTAL 30 YEAR COSTS	\$10,870	\$11,141	\$11,418	\$11,703	\$11,994
FUNDING OBJECTIVE MET?	YES	YES	YES	YES	YES
MINIMUM REQUIRED CASH TRANSFER	\$0	\$0	\$0	\$0	\$0

ESCALATION, INFLATION, EARNINGS RATES					
ANNUAL CONTRIBUTION ESCALATION:	5.00%	5.00%	5.00%	5.00%	5.00%
ANNUAL CONSTRUCTION COST ESCALATION:	2.49%	2.49%	2.49%	2.49%	2.49%
ANNUAL RESERVE ACCOUNT INCOME RATE	3.00%	3.00%	3.00%	3.00%	3.00%



YEAR	11	12	13	14	15
CALENDAR YEAR	2028	2029	2030	2031	2032

PROGRAMMED EXPENDITURES, PRESENT WORTH VALUES					
SCHEDULE OF REPAIRS AND REPLACEMENTS	\$0	\$0	\$0	\$0	\$56,257
CAPITAL IMPROVEMENT PROJECTS	\$0	\$0	\$0	\$0	\$0

BEGINNING YEAR BALANCE	\$94,790	\$105,483	\$116,890	\$129,051	\$142,009
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FINANCIAL ANALYSIS SUMMARY

INCOME					
CONTRIBUTION TO RESERVES	\$7,850	\$8,242	\$8,654	\$9,087	\$9,541
LOAN DEPOSITS	\$0	\$0	\$0	\$0	\$0
PLUS SPECIAL ASSESSMENTS	\$0	\$0	\$0	\$0	\$0
PLUS OTHER FUNDS COMING DUE	\$0	\$0	\$0	\$0	\$0
PLUS INVESTMENT INCOME ON PRIOR YEAR'S ENDING BALANCE	\$2,844	\$3,164	\$3,507	\$3,872	\$4,260
INVESTMENT 1	\$0	\$0	\$0	\$0	\$0
INVESTMENT 2	\$0	\$0	\$0	\$0	\$0
TOTAL INCOME	\$10,693	\$11,407	\$12,161	\$12,958	\$13,801

EXPENDITURES, FUTURE VALUES					
SCHEDULE OF REPAIRS AND REPLACEMENTS	\$0	\$0	\$0	\$0	\$79,397
CAPITAL IMPROVEMENT PROJECTS	\$0	\$0	\$0	\$0	\$0
FINANCIAL LOAN PAYMENT	\$0	\$0	\$0	\$0	\$0
OTHER DISBURSEMENTS	\$0	\$0	\$0	\$0	\$0
TOTAL EXPENDITURES	\$0	\$0	\$0	\$0	\$79,397

END OF YEAR BALANCE	\$105,483	\$116,890	\$129,051	\$142,009	\$76,414
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MINIMUM ACCOUNT THRESHOLD					
CALCULATED THRESHOLD AS A % OF TOTAL 30 YEAR COSTS	\$12,293	\$12,599	\$12,913	\$13,235	\$13,565
FUNDING OBJECTIVE MET?	YES	YES	YES	YES	YES
MINIMUM REQUIRED CASH TRANSFER	\$0	\$0	\$0	\$0	\$0

ESCALATION, INFLATION, EARNINGS RATES					
ANNUAL CONTRIBUTION ESCALATION:	5.00%	5.00%	5.00%	5.00%	5.00%
ANNUAL CONSTRUCTION COST ESCALATION:	2.49%	2.49%	2.49%	2.49%	2.49%
ANNUAL RESERVE ACCOUNT INCOME RATE	3.00%	3.00%	3.00%	3.00%	3.00%



YEAR	16	17	18	19	20
CALENDAR YEAR	2033	2034	2035	2036	2037

PROGRAMMED EXPENDITURES, PRESENT WORTH VALUES					
SCHEDULE OF REPAIRS AND REPLACEMENTS	\$32,420	\$33,095	\$0	\$0	\$0
CAPITAL IMPROVEMENT PROJECTS	\$0	\$0	\$0	\$0	\$0

BEGINNING YEAR BALANCE	\$76,414	\$41,829	\$4,539	\$15,720	\$27,789
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FINANCIAL ANALYSIS SUMMARY

INCOME					
CONTRIBUTION TO RESERVES	\$10,018	\$10,519	\$11,045	\$11,597	\$12,177
LOAN DEPOSITS	\$0	\$0	\$0	\$0	\$0
PLUS SPECIAL ASSESSMENTS	\$0	\$0	\$0	\$0	\$0
PLUS OTHER FUNDS COMING DUE	\$0	\$0	\$0	\$0	\$0
PLUS INVESTMENT INCOME ON PRIOR YEAR'S ENDING BALANCE	\$2,292	\$1,255	\$136	\$472	\$834
INVESTMENT 1	\$0	\$0	\$0	\$0	\$0
INVESTMENT 2	\$0	\$0	\$0	\$0	\$0
TOTAL INCOME	\$12,311	\$11,774	\$11,181	\$12,069	\$13,011

EXPENDITURES, FUTURE VALUES					
SCHEDULE OF REPAIRS AND REPLACEMENTS	\$46,895	\$49,064	\$0	\$0	\$0
CAPITAL IMPROVEMENT PROJECTS	\$0	\$0	\$0	\$0	\$0
FINANCIAL LOAN PAYMENT	\$0	\$0	\$0	\$0	\$0
OTHER DISBURSEMENTS	\$0	\$0	\$0	\$0	\$0
TOTAL EXPENDITURES	\$46,895	\$49,064	\$0	\$0	\$0

END OF YEAR BALANCE	\$41,829	\$4,539	\$15,720	\$27,789	\$40,800
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MINIMUM ACCOUNT THRESHOLD					
CALCULATED THRESHOLD AS A % OF TOTAL 30 YEAR COSTS	\$13,903	\$14,249	\$14,604	\$14,968	\$15,341
FUNDING OBJECTIVE MET?	YES	NO	YES	YES	YES
MINIMUM REQUIRED CASH TRANSFER	\$0	\$9,710	\$0	\$0	\$0

ESCALATION, INFLATION, EARNINGS RATES					
ANNUAL CONTRIBUTION ESCALATION:	5.00%	5.00%	5.00%	5.00%	5.00%
ANNUAL CONSTRUCTION COST ESCALATION:	2.49%	2.49%	2.49%	2.49%	2.49%
ANNUAL RESERVE ACCOUNT INCOME RATE	3.00%	3.00%	3.00%	3.00%	3.00%



YEAR	21	22	23	24	25
CALENDAR YEAR	2038	2039	2040	2041	2042

PROGRAMMED EXPENDITURES, PRESENT WORTH VALUES					
SCHEDULE OF REPAIRS AND REPLACEMENTS	\$0	\$0	\$0	\$0	\$0
CAPITAL IMPROVEMENT PROJECTS	\$0	\$0	\$0	\$0	\$0

BEGINNING YEAR BALANCE	\$40,800	\$54,810	\$69,880	\$86,073	\$103,457
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FINANCIAL ANALYSIS SUMMARY

INCOME					
CONTRIBUTION TO RESERVES	\$12,786	\$13,425	\$14,097	\$14,802	\$15,542
LOAN DEPOSITS	\$0	\$0	\$0	\$0	\$0
PLUS SPECIAL ASSESSMENTS	\$0	\$0	\$0	\$0	\$0
PLUS OTHER FUNDS COMING DUE	\$0	\$0	\$0	\$0	\$0
PLUS INVESTMENT INCOME ON PRIOR YEAR'S ENDING BALANCE	\$1,224	\$1,644	\$2,096	\$2,582	\$3,104
INVESTMENT 1	\$0	\$0	\$0	\$0	\$0
INVESTMENT 2	\$0	\$0	\$0	\$0	\$0
TOTAL INCOME	\$14,010	\$15,070	\$16,193	\$17,384	\$18,645

EXPENDITURES, FUTURE VALUES					
SCHEDULE OF REPAIRS AND REPLACEMENTS	\$0	\$0	\$0	\$0	\$0
CAPITAL IMPROVEMENT PROJECTS	\$0	\$0	\$0	\$0	\$0
FINANCIAL LOAN PAYMENT	\$0	\$0	\$0	\$0	\$0
OTHER DISBURSEMENTS	\$0	\$0	\$0	\$0	\$0
TOTAL EXPENDITURES	\$0	\$0	\$0	\$0	\$0

END OF YEAR BALANCE	\$54,810	\$69,880	\$86,073	\$103,457	\$122,102
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MINIMUM ACCOUNT THRESHOLD					
CALCULATED THRESHOLD AS A % OF TOTAL 30 YEAR COSTS	\$15,723	\$16,115	\$16,516	\$16,928	\$17,350
FUNDING OBJECTIVE MET?	YES	YES	YES	YES	YES
MINIMUM REQUIRED CASH TRANSFER	\$0	\$0	\$0	\$0	\$0

ESCALATION, INFLATION, EARNINGS RATES					
ANNUAL CONTRIBUTION ESCALATION:	5.00%	5.00%	5.00%	5.00%	5.00%
ANNUAL CONSTRUCTION COST ESCALATION:	2.49%	2.49%	2.49%	2.49%	2.49%
ANNUAL RESERVE ACCOUNT INCOME RATE	3.00%	3.00%	3.00%	3.00%	3.00%



YEAR	26	27	28	29	30
CALENDAR YEAR	2043	2044	2045	2046	2047

PROGRAMMED EXPENDITURES, PRESENT WORTH VALUES					
SCHEDULE OF REPAIRS AND REPLACEMENTS	\$0	\$0	\$0	\$0	\$70,456
CAPITAL IMPROVEMENT PROJECTS	\$0	\$0	\$0	\$0	\$0

BEGINNING YEAR BALANCE	\$122,102	\$142,084	\$163,481	\$186,377	\$210,859
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FINANCIAL ANALYSIS SUMMARY

INCOME					
CONTRIBUTION TO RESERVES	\$16,319	\$17,135	\$17,991	\$18,891	\$19,835
LOAN DEPOSITS	\$0	\$0	\$0	\$0	\$0
PLUS SPECIAL ASSESSMENTS	\$0	\$0	\$0	\$0	\$0
PLUS OTHER FUNDS COMING DUE	\$0	\$0	\$0	\$0	\$0
PLUS INVESTMENT INCOME ON PRIOR YEAR'S ENDING BALANCE	\$3,663	\$4,263	\$4,904	\$5,591	\$6,326
INVESTMENT 1	\$0	\$0	\$0	\$0	\$0
INVESTMENT 2	\$0	\$0	\$0	\$0	\$0
TOTAL INCOME	\$19,982	\$21,397	\$22,896	\$24,482	\$26,161

EXPENDITURES, FUTURE VALUES					
SCHEDULE OF REPAIRS AND REPLACEMENTS	\$0	\$0	\$0	\$0	\$143,832
CAPITAL IMPROVEMENT PROJECTS	\$0	\$0	\$0	\$0	\$0
FINANCIAL LOAN PAYMENT	\$0	\$0	\$0	\$0	\$0
OTHER DISBURSEMENTS	\$0	\$0	\$0	\$0	\$0
TOTAL EXPENDITURES	\$0	\$0	\$0	\$0	\$143,832

END OF YEAR BALANCE	\$142,084	\$163,481	\$186,377	\$210,859	\$93,188
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MINIMUM ACCOUNT THRESHOLD					
CALCULATED THRESHOLD AS A % OF TOTAL 30 YEAR COSTS	\$17,782	\$18,225	\$18,679	\$19,144	\$19,621
FUNDING OBJECTIVE MET?	YES	YES	YES	YES	YES
MINIMUM REQUIRED CASH TRANSFER	\$0	\$0	\$0	\$0	\$0

ESCALATION, INFLATION, EARNINGS RATES					
ANNUAL CONTRIBUTION ESCALATION:	5.00%	5.00%	5.00%	5.00%	5.00%
ANNUAL CONSTRUCTION COST ESCALATION:	2.49%	2.49%	2.49%	2.49%	2.49%
ANNUAL RESERVE ACCOUNT INCOME RATE	3.00%	3.00%	3.00%	3.00%	3.00%



Interactive Reserve Analysis
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ASSESSMENT ALLOCATION COLONIAL GREEN ROW HOUSES MASTER

TOTAL BUDGET

Year	Row Houses Reserve Assessment	Shared Reserve & Operating Budget Assessment*	Total Assessment	Reserves as a Percentage of Total Assessment	Annual Increase In Total Assessment	Special Assessments
2018	\$4,818.96	\$20,940.24	\$25,759.20	18.71%		\$0.00
2019	\$5,059.91	\$21,461.95	\$26,521.86	19.08%	2.96%	\$0.00
2020	\$5,312.90	\$21,996.65	\$27,309.56	19.45%	2.97%	\$0.00
2021	\$5,578.55	\$22,544.68	\$28,123.23	19.84%	2.98%	\$0.00
2022	\$5,857.48	\$23,106.36	\$28,963.84	20.22%	2.99%	\$0.00

* Operating budget is increased annually at the projected inflation rate.

ALLOCATION CALCULATIONS

Total Number of Units	18
Unit Type	Row Houses
Percentage Allocation To Unit Type	100.00%
Number of Units of This Type	18

Annual Contribution Per Unit Type

Year	Reserve Assessment	Operating Budget Assessment	Total Assessment	Special Assessments
2018	\$267.72	\$1,163.35	\$1,431.07	\$0.00
2019	\$281.11	\$1,192.33	\$1,473.44	\$0.00
2020	\$295.16	\$1,222.04	\$1,517.20	\$0.00
2021	\$309.92	\$1,252.48	\$1,562.40	\$0.00
2022	\$325.42	\$1,283.69	\$1,609.10	\$0.00

Monthly Contribution Per Unit Type

Year	Reserve Assessment	Operating Budget Assessment	Total Assessment	Special Assessments
2018	\$22.31	\$96.95	\$119.26	\$0.00
2019	\$23.43	\$99.36	\$122.79	\$0.00
2020	\$24.60	\$101.84	\$126.43	\$0.00
2021	\$25.83	\$104.37	\$130.20	\$0.00
2022	\$27.12	\$106.97	\$134.09	\$0.00



HISTORIC COST INDICES

Source: R.S. MEANS

Year	Index	Difference	% Increase	Direct Cost Multiplier	Period in Years	Average Annual Escalation	Month
2016	207.2	0	0.00%	1.0000	0	n/a	Estimated as of January
2015	206.2	1	0.48%	1.0048	1	0.48%	As of January
2014	204.9	2.3	1.12%	1.0112	2	0.56%	As of January
2013	201.2	6	2.98%	1.0298	3	0.98%	As of January
2012	194.6	12.6	6.47%	1.0647	4	1.58%	As of January
2011	191.2	16	8.37%	1.0837	5	1.62%	As of January
2006	162.0	45.2	27.90%	1.2790	10	2.49%	As of January
2001	125.1	82.1	65.63%	1.6563	15	3.42%	As of January

R S Means Company maintains a construction cost database for North America that is updated quarterly (4 times per year). The current company was incorporated in 1984, but has existed in other forms previously. The company claims to have maintained cost data for over 70 years. In addition to current costs for both materials and labor, R S Means maintains a historical index of these costs, which they publish for a time period going back 20 years.

DMA uses these historical indexes as a logic base for projecting future construction cost escalation (inflation). In order to have a logical basis for the inflation rate used in this study, we offer this guide to selecting the rate that the association wants to use. Generally, the longer the look-back period (say 15 years vs. 5 years) the more conservative your future inflation projection will be.

In making a selection for future inflation, keep in mind that if your selected rate varies significantly from the current inflation rate, you should make a corresponding adjustment for the projected interest or earnings rate on your money kept in a savings or money market account, as those rates follow (but do not equal) inflation rates.