

# CAPITAL RESERVE STUDY

July 2016

Submitted to:

**THE FALLSWOOD II CONDOMINIUM ASSOCIATION**

Hamill Road, The Village of Cross Keys

Baltimore, Maryland 21209

c/o Mike Grier, Property Manager

Village Management, Inc.



Submitted by:

**Architectural Support Group, Inc. d/b/a ASG, Inc.**

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ASG Job Code: FAL209



July 5, 2016

The Fallswood II Condominium  
c/o Mike Grier, Property Manager  
Village Management Company  
5100 Falls Road, Baltimore, Maryland 21209

ASG Job Code: FAL209

RE: Capital Reserve Study

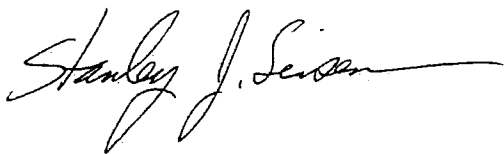
Dear Association Board Members:

I am pleased to present this Reserve Study for the Fallswood II Condominium Association. Our findings are summarized in the Executive Summary on pages 4-6. Our report is based on our observations and analysis of information supplied to us by your representatives. If no changes are required, please consider this the final product per our agreement. However, if minor changes are required, please contact us and we will be happy to make the requested revisions and reissue the report.

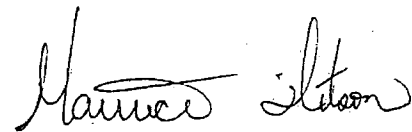
We would like to thank you for this opportunity to be of service. If you have any questions regarding our findings and recommendations, please do not hesitate to contact us. We recommend this study be updated every three years as a minimum.

As a full service architectural consulting firm, ASG is uniquely positioned to assist your organization in the future as assets are replaced or repaired. Having a professional on your team can help a project go more smoothly and efficiently. ASG has assisted many organizations with bidding and negotiation of contracts, managing the re-construction project and providing an independent review of the contractor's work and pay applications. We would be pleased to continue to assist your Association in the future.

Sincerely,  
ASG, INC.



Stanley J. Sersen, NCARB, LEED™ MAP RS  
President



Maurice Wilson  
Associate



Michael Daly, AIA, NCIDQ, LEED AP BD +C  
Principle

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<u>A. SCOPE OF STUDY</u>	

The following scope describes the services performed by ASG<sub>®</sub> and the final product rendered to complete the Reserve Study (the "Study") for The Fallswood II Condominium Association. This is a Level 1 or "Full" Study as defined by the Community Association Institute (CAI) (see attached Best Practices Guide) for the fiscal year of 2016.

Your Property Manager provided the information and documents used as a basis for this study. Quantities were developed by ASG<sub>®</sub> from a prior reserve study provided by your management team. In addition, ASG<sub>®</sub> used a site visit and a set of plat drawings to determine/verify assets and measurements of the community's common elements. Requests were made to management for recent and past replacement, repair or maintenance contracts or proposal documents. Our pricing and age determinations were made from our estimating books, past work completed for other similar projects, our experience in the construction industry, and the documents provided.

An itemized listing of the Association's physical assets, based on the "Property Profile" submitted, and conversations with the Property Manager was created and reviewed with management. It included current estimates for the projected useful life of each listed asset. Typical useful life is based on average construction and design care with normal aging of each individual asset.

The primary intent of this Capital Reserve Study is to establish an opinion on the replacement reserve funding recommended in order to replace the physical assets when they reach the end of their projected useful life. The replacement schedules are based on an estimated useful life as determined by normal aging schedules and a visual review of existing conditions. This study however, does not include a full condition assessment. Adjustments have been made to the useful remaining life of certain line items that will require earlier than normal repair or replacement, if believed necessary as a result of the visual examination.

## II.A. INTRODUCTION

We at Architectural Support Group Inc. (ASG<sub>®</sub>) are pleased to present this Reserve Study to The Fallswood II Condominium Association. This study is comprised of a Physical and Financial Analysis in accordance with the "National Reserve Study Standards" adopted by the Community Association Institute (CAI). We are proud to claim that as a founding member of CAI's Reserve Specialist's Committee in 1990 we assisted in the formation of the only published national standard of its kind. The standard Best Practices Guide is attached to the end of this report for your reference.

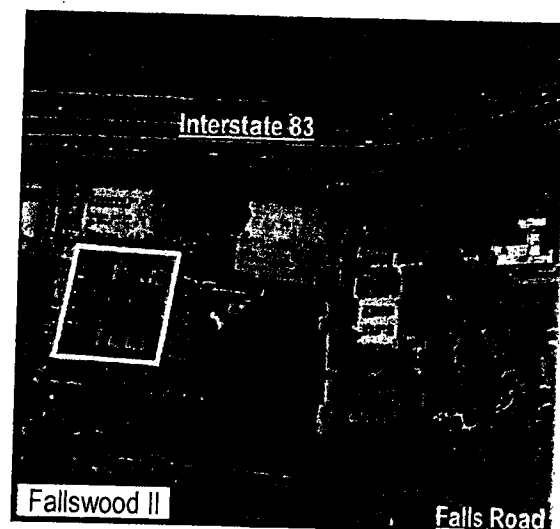
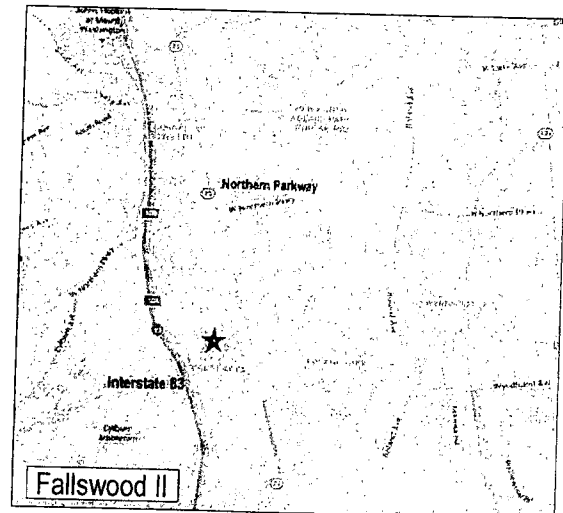
The physical assets were viewed by Architectural Support Group, Inc. (ASG<sub>®</sub>) on April 18, 2016. It was conveyed to ASG<sub>®</sub> by The Fallswood II Condominium Property Manager that the starting reserve balance to be used for the Capital Reserve fund is \$181,133 with an annual contribution to the reserves of \$15,000. The General Property description can be found below and the Assumptions and Methodologies for the study are found on page 7 of this report. This study focuses on the "Capital Replacement Reserve" requirements. This study includes accumulated interest and annual inflation calculations.

### The Property

The Fallswood II Condominiums were constructed thirty-five (35) years ago. The community consists of eleven (11) Garden Style buildings with separate entrances and a private parking lot. Each 3 story condominium building has an exterior facade composed of mostly brick veneer and wooden gables with asphalt shingled roofs. Most of the exterior brick has been sealed with paint. There are 66 total units that occupy these buildings. The community is located within The Village of Cross Keys in Roland Park, a suburb of Baltimore, Maryland just off Interstate 83.

The Condominium Association is responsible for three asset categories. These assets as shown in section III.D. are categorized as site items (asphalt paving, concrete paving, fencing, etc.), exterior items (gutters & downspouts, asphalt shingle roofing, windows, etc.) and interior items (doors, mailboxes, washer & dryer, etc.)

### VICINITY MAP



## *II. Executive Summary (Continued)*

### **II.B. Physical Analysis**

As can be seen in the included schedule and the prioritized replacement list, the major expenses in the near future for The Fallswood II Condominium are the asphalt, common window replacement, hot water heater replacement and concrete curbing. The following is a brief summary of the findings regarding the listed component items (See section III.C.). Not all items observed are included in the following summary. During our site visit we observed the following general conditions:

**1. SITE** - Overall the site components at the Fallswood II Condominium were observed to be in good condition with few areas of concern.

#### **Asphalt:**

It is recommended that the community rejuvenate the asphalt soon as a means of preventative maintenance. The rejuvenation is a process that is recommended every 5-8 years to prolong the useful life of the asphalt by returning elasticity to the asphalt so that it can contract and expand with the change of weather conditions (See section IV. A. photos 1 & 2).

#### **Concrete Sidewalks and Curbs:**

Concrete sidewalks were observed to be in good condition with minor deterioration and one area of concern (See section IV. A. photos 3 & 4). There were several areas observed that need caulking/joint sealant where the concrete meets the building or concrete stair (See section IV. A. photos 5 & 6). Concrete curbing was observed to be in fair condition with some areas showing signs of early failure most likely due to snow removal (See section IV. A. photo 7).

#### **Metal Railing:**

The metal railing throughout the community have been properly maintained and outlived their useful life. There were no signs of rusting or physical failure, however, it is recommended that sections of railing be scheduled to be replaced in phases to offset total replacement costs (See section III. F. photo 9).

#### **Trellis/Landscape Tie Retaining Walls/Fencing:**

The trellis at the entrance of the community was observed to be in good condition but will need to be sealed soon to prolong its useful life. There was another Trellis adjacent to building #11 that was observed to be in poor condition with heavy vegetation and a very noticeable lean (See section III. F. photo 8). The wooden retaining walls were observed in poor condition. Timbers can be replaced as needed and should be replaced before complete deterioration, which can result in a loss of stability (See section III. F. photos 9 - 11). The community's wooden fencing was observed to be in good condition with all fencing being sealed with a paint to prolong the useful life (See section III. F. photo 12).

**2. EXTERIOR** - The exterior components at the Fallswood II Condominium were observed to be in good condition.

#### **Roof:**

Roofing was observed to be in good condition with no visible defects observed or mention of leaks (See section III. F. photo 16).

#### **Brick:**

The brick facades were observed to be in good condition with many areas being sealed with paint to prolong the useful life. Areas not painted will need to be monitored for repointing (See section III. F. photos 14 & 15).

#### **Common Windows:**

The common windows in the laundry rooms and mechanical rooms were observed to be nearing their useful life and should be scheduled for replacement soon (See section III. F. photo 15).

**3. INTERIOR** - The Fallswood II interior components were in fair condition with some components nearing the end of the components useful life. Components such as the water heaters, common doors and mailboxes should all be scheduled for replacement soon (See section III. F. photos 17 - 20).

### II.C. Financial Analysis

Per the component method, your Association's Capital Replacement Reserve account is currently funded to 58% of it's "Fully Funded" status. The Component Method, as further defined in this report, is a straight line analysis without consideration for interest earned on your fund or current inflation rates. For purposes of this report we use reported construction inflation versus consumer price inflation as this is more true to the replacement costs.

The Cash Flow Method, which gives a more global picture and INCLUDES interest earned and inflation, shows that with no changes to the current reserve balance or annual contributions, the capital reserve account is calculated to become underfunded in the year 2021. This is primarily due to the number of high priced components that will be required to be replaced/maintained. The current plan, which has an annual contribution of \$15,000 for the Capital Reserve fund, will not have the funds necessary to replace scheduled components after year 2021. It is recommended that annual contributions to the reserve fund be sufficient enough to continuously build the reserve fund to 70% "Fully Funded" status. This "Fully Funded" percentage fluctuates each year based on the scheduled components needing to be maintained or replaced. The 70% percent "Fully Funded" status is favored by most Lenders in today's market and will give the association another option to rectify an underfunded account. With the current funding level and scheduled contribution increases as presented "special assessments" should be able to be avoided.

If the recommended replacements were carried out as scheduled, a large infusion of funds would be needed in order to offset the anticipated short and long term replacement expenses. In order to accomplish this, various funding strategies need to be considered. The Cash Flow analysis and 40 year account balance graph in Section III.E. page 14 details the community's current plan as well as two potential funding plans (Option 1 and 2).

The goal is to have funds available to replace all required components in any given year based on the components useful life schedule. The useful life of these components can be lengthened or prematurely ended, which can

make the reserve numbers fluctuate in either a positive or negative direction. As stated later in Section V, a proper maintenance program can sometimes extend the expected useful life of some items. The opposite, without proper maintenance, would be an early total replacement or replacement of large quantities of an item that failed prematurely, which could be costly.

### **RECOMMENDATIONS:**

Based on using both the Component Method and the Cash Flow Method to calculate and analyze the funds needed to replace your community's assets, we recommend the following course of actions:

1. Based on the funding strategies explored (see section III.E page 21) Option 2 appears to be the best suited for the association at this time to stay competitive with other communities and to establish a workable plan. It is important that the condominium association strive to maintain a healthy Reserve Fund that can foresee the major expenses in the future without large **special assessments** and without having to **borrow money** from the banks. With the recommended funding methods noted in Section IV.2. your association will be at 70% "Fully Funded" in 2027 and will have the appropriate funds to cover scheduled components for the duration of this 40 year study without becoming underfunded.
2. Maintain a system to store paper and electronic documents such as site drawings, contracts, proposals and warranties for repairs to and replacement of assets of the community. These important documents will be needed in the future for contractor bidding, detailed locations and quantities of assets such as asphalt, roofing, sidewalks, etc. Since these paper prints will, in time, deteriorate we recommend that the most important documents be scanned so that an electronic copy can be archived and copies made for use. We do not recommend relying on any Management company to be the only holder of the documents for your community. Storing them in a cloud based system might be the easiest for all to use.

3. Create an approved "Plan of attack" to begin scheduled replacement items on a "proactive" approach rather than on a "reactive" approach. This should be updated annually. This Strategic Replacement plan will then become the basis for all future repairs and maintenance.

4. Have this study updated on paper annually with a minimum physical inspection conducted every three years to review the aging of the components and to adjust pricing and estimated remain life expectancies.

### III.A. Assumptions

This report assumes that all of the assets listed herein are the responsibility of The Fallswood II Condominiums to replace when they reach the end of their useful life. Based on our review of the documentation available, the following additional assumptions have been made as to items that are not included in this report. The Client should review these assumptions for their accuracy as further research to determine their inclusion is currently beyond the scope of ASG®'s contracted service.

1. The recommendations for asset replacements will be carried out.
2. Normal Maintenance & Servicing of components will be completed.
3. Decks are assumed to be the responsibility of the unit owners.

### III.B. Methodology

A Capital Reserve Study is a report giving "an estimate" of the amount of money which must be put aside to replace the major items (or building components) that will wear out before the entire community or project wears out. "Per the Community Associations Institute's (CAI) standards this study is presented with both the "Component Method" of Analysis, and a Cash Flow analysis. The "Component Method" is a straight line analysis of each individual listed asset (component) that compares the current replacement cost against the remaining life of that component. Calculations are made to assign an available current reserve funds to that individual component. This step

must first be completed to establish the list of components and when they are anticipated to be replaced. The "Cash Flow Method" of analysis takes the estimated remaining life of all components and reviews the funds required from year to year (ASG® studies a 40 year time frame). As the estimated annual expenses occur along with the annual contributions, a running total balance can be analyzed to see if the total pool of money will be enough to fund all needed future replacements. It is common that the Component summary will show more money is needed to bring the account to a "fully funded" status whereas the "Cash Flow Study" might show that the pool of money is adequate to handle the future expenses. The Cash Flow method gives the long term view and as such tends to be a better picture of the total reserve fund.

The "Cash Flow" analysis includes interest earned and inflation on projected expenses.

The commonly accepted guidelines as established by "CAI", the National Association of Certified Public Accountants, and the judgment and architectural experience of Architectural Support Group, Inc. have been used as a basis for the reserve schedules included in this report. The schedule, when implemented in conjunction with a well planned preventative maintenance program, should provide adequate funds for the replacement of the facility's assets as they reach the end of their useful lives. In order to assure that this schedule remains current, a reassessment of the existing condition and replacement costs for each item is necessary a minimum of every three (3) years. Annual "paper" updating of the schedule, reduction of the useful lives, and adjustment of the replacement costs (if needed), may be executed without the need for a reexamination. The schedule must also be adjusted as common elements are added or modified. This is especially important if the organization will be adding future assets such as nature trails, asphalt pathways, etc. on site.

### *III. The Study (Continued)*

It is very important to note that this reserve schedule must be reviewed relative to the overall operating budget for this association with your tax advisor. The client's review should assure that no overlap exists. An example of this would be the inclusion of an item in the reserve schedule which also has a maintenance contract to replace the item as it wears out. Based on our review, it appears no such overlap exists. As a final note, ASG® has no other involvement with this entity that might present a conflict of interest.

### **III.C. Definition of Schedule Category**

#### **1. The "Component Method Summary"**

(See Section IV. page 20)

##### **Replacement Reserve Major Asset Categories**

The major reserve categories are organized on the following schedules by major asset subgroups. If the community has been constructed in multiple phases over the course of many years, a delineation by phase (2 year increments minimum) is also included.

-The following are summaries from the schedules in Section III.D

##### **Replacement Cost Present Dollars**

This is the estimated cost of replacing the listed line items in present day dollars. These numbers are taken from the individual spread sheets of each major physical asset category. They are based on general cost estimates of the quantified assets.

##### **Current Reserves Required**

The amount that should be in the reserve fund in present dollars based on the replacement cost and the amount expended (aged) to date. This number is strictly a guide to judge current reserves funding.

##### **Current Reserve Funds Available**

This number is provided by the client, and indicates dollars available to the organization in reserve designated account(s). The total is given by the client, the amounts per asset category are taken from the individual spread sheets.

##### **Balance Requiring Funding**

Difference between current reserve funds available and current reserves required.

##### **Calculated Monthly Contribution**

Yearly reserve funding required divided by twelve.

##### **Calculated Annual Contributions**

The recommended total annual contribution to the reserves in order to provide for adequate funding. Divide this number by the number of units to get the per unit annual assessment for replacement reserves. A comparison of the current annual reserve contribution budget is made to the total recommended annual reserve contribution. It is very common that organizations having their first reserve study are finding that they are underfunded to replace the long term items.

#### **2. The "Schedule Of Reserve Components By Category"** (See Section III.D - page 10-13)

##### **Asset Description**

Individual line item assets are grouped in both phases of original construction, where applicable, and by subgroup headings. Assets can be listed more than once due to certain quantities of the asset needing replacement sooner than other quantities.

##### **Quantities**

The quantities which are used as a basis for this report were developed by Architectural Support Group, Inc. through two site reviews and a drawings obtained from management. Basic assumptions for underground unknowns were conducted when necessary.

##### **Unit Cost**

The construction and replacement costs used in this report are based primarily on the various publications written by the R.S. Means Company, or by actual known costs from manufacturers or contractors. These are listed in the Bibliography. These prices are then adjusted for inflation using a weighted factor.



*III.C. The Study (Continued)*

Typical Useful Life

The useful life values, which are used as part of this report, are established by industry standards and the field experience of ASG® Inc. In order to ensure that all items attain their anticipated useful lives, it is important that a well-planned inspection and maintenance program be established.

Estimated Remaining Life

ASG® conducted site visits to develop an approximation of the remaining life of each asset depending on its current condition. Many items are not visible, hence it must be assumed that it was installed under some type of professional overview. The estimated remaining life is the estimated useful life minus the asset's length of time in service. Adjustments in the negative direction are made when the asset is aging prematurely, construction defects are found or assumed to exist. Adjustments in the positive direction may be made if timely repairs and/or maintenance have been made. This is usually a subjective analysis by the field technician, and is not intended to be a full condition assessment of the physical properties of the assets.

**Condition Code**

During the visual condition examination, items observed were given the following general descriptions to help the reader understand the assets condition. The following codes and explanations relate to each noted asset.

**UC - Unsafe conditions** exist, which should be addressed immediately.

**RN - Repairs needed** now to minimize further asset degradation.

**FA - Further analysis** should be performed beyond this scope due to limited sampling or limited visual symptoms available during the site visit.

**NATT - None at this time** other than creation of reserves for replacement.

**IA - Immediate action** is needed to correct deficiencies.

**MR - Major repairs** or upgrade needed.

**Notes:**

*The categorized schedules typically will include a listing of specific notes for certain line items. These notes are given to advise the client of the need for special attention, immediate action, or needs for further study. The lack of a note typically indicates that the component is aging normally and will require replacement in a normal time frame provided proper maintenance.*

**3. The "Cash Flow Method" Of Funding**

Included in this report is a cash flow analysis per the requirements of the CAI National Reserve Study Standards. As this study includes all of the association's assets no matter how long it will take to require replacement, the analysis projects income and expenses over a 40 year period. This analysis is for cash income and expenses and includes interest and inflation adjustments. The attached spreadsheet in chapter III. Section E. shows the income and expenses and account balance (principal) over 20 years and charts the account balances over 40 years. Annual updates and adjustments for age and items replaced should be made. As such, the "Current Year Reserve Funding Required" includes all assets even beyond the 20 year period. If your association is currently not adequately funding the reserve accounts, we have included some alternate funding plans for you and your Accountant's consideration. Using both the component and cash flow methods will provide you with a clear picture of the financial needs of your facility as it ages over time.

# The Fallswood II Condominium Association

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## III. The Schedules

Reserve Study July 2016

### III.D. Schedules of Reserve Components by Category

THE FALLSWOOD II CONDOMINIUM													
SCHEDULE OF RESERVE COMPONENTS BY CATEGORY													
SITE COMPONENTS													
Asset Description	Qty	Unit	Unit Cost-BALT.	Typ. Useful Life	Est. Remain. Life	Replace Cost - Present Dollars	Current Reserve Funds Required	Current Reserve Funds Available	Monthly Reserve Funding Required	Annual Reserve Funding Required	Condition Code	Photo Ref.	Notes/Location
<b>Site:</b>													
Asphalt Paving Rejuvenation	28176	S.Y.	\$2.00	8	1	\$56,352	\$49,308	\$28,655	\$2,308	\$27,697	RN	1	preventative maintenance to prevent cracking and deterioration as asphalt begins to dry and lose flexibility
Asphalt Walking Path	543	S.F.	\$4.00	8	4	\$2,172	\$1,086	\$631	\$32	\$385	NATT	2	
Parking Lot Striping	1	L.S.	\$950.00	8	1	\$950	\$831	\$483	\$39	\$467	RN		should be stripped after rejuvenation
Concrete Sidewalk/Leader Phase 1	1825	S.F.	\$7.00	50	15	\$12,775	\$8,943	\$5,197	\$42	\$505	NATT	3	
Concrete Sidewalk/Leader Phase 2	1825	S.F.	\$7.00	50	20	\$12,775	\$7,665	\$4,454	\$35	\$416	NATT		
Concrete Sidewalk/Leader Phase 3	1825	S.F.	\$7.00	50	25	\$12,775	\$6,388	\$3,712	\$30	\$363	NATT		
Concrete Sidewalk/Leader Repair	1	S.F.	\$1,250.00	5	1	\$1,250	\$1,000	\$581	\$56	\$669	RN	4	Tripping Hazards
Concrete Caulking/Joint Sealant	1	L.S.	\$2,500.00	10	1	\$2,500	\$2,250	\$1,308	\$99	\$1,192	RN	5,6	Around the buildings foundation and steps where concrete meets another building material
Concrete Curb Phase 1	253	L.F.	\$25.13	40	1	\$6,358	\$6,199	\$3,602	\$230	\$2,755	RN	7	Aggregated concrete curbing is beginning to deteriorate
Concrete Curb Phase 2	253	L.F.	\$25.13	40	3	\$6,358	\$5,881	\$3,418	\$82	\$980	NATT	7	Aggregated concrete curbing is beginning to deteriorate
Concrete Curb Phase 3	253	L.F.	\$25.13	40	5	\$6,358	\$5,563	\$3,233	\$52	\$625	NATT	7	
Trellis	1	Ea.	\$3,800.00	30	5	\$3,800	\$3,167	\$1,840	\$33	\$392	NATT		Should be sealed to prolong wood
Trellis (Fenced)	1	Ea.	\$3,800.00	30	1	\$3,800	\$3,673	\$2,135	\$139	\$1,665	RN	8	Trellis Adjacent to Building 11 was observed to be leaning

**THE FALLSWOOD II CONDOMINIUM**  
**SCHEDULE OF RESERVE COMPONENTS BY CATEGORY**

**SITE COMPONENTS**

Asset Description	Qty	Unit	Unit Cost-BALT.	Typ. Useful Life	Est. Remain. Life	Replace Cost - Present Dollars	Current Reserve Funds Required	Current Reserve Funds Available	Monthly Reserve Funding Required	Annual Reserve Funding Required	Condition Code	Photo Ref.	Notes/Location
Metal Railing	132	L.F.	\$49.00	30	3	\$6,468	\$5,821	\$3,383	\$86	\$1,028	RN	9	
Landscape Tie Retaining Walls Phase 1	113	L.F.	\$47.00	30	1	\$5,311	\$5,134	\$2,984	\$194	\$2,327	RN	10,11	Can be replaced piecemeal however a large number of timbers were observed to be deteriorated
Landscape Tie Retaining Walls Phase 2	112	L.F.	\$47.00	30	2	\$5,264	\$4,913	\$2,855	\$100	\$1,204	RN	10,11	
6' P.T. Wood Fencing Phase 1	270	L.F.	\$24.20	30	4	\$6,534	\$5,663	\$3,291	\$68	\$811	NATT	12	
6' P.T. Wood Fencing Phase 2	270	L.F.	\$24.20	30	5	\$6,534	\$5,445	\$3,164	\$56	\$674	NATT	12	
Wooden Benches	2	Ea.	\$250.00	30	15	\$500	\$250	\$145	\$2	\$24	NATT		
Pavers	1	L.S.	\$750.00	40	20	\$750	\$375	\$218	\$2	\$27	NATT		
Street Lighting	8	Ea.	\$1,150.00	25	2	\$9,200	\$8,464	\$4,919	\$178	\$2,141	RN		Lighting fixtures have out lived their useful life
Tree Removal, Tree Planting, Replace Shrubs	1	L.S.	\$3,750.00	1	1	\$3,750	\$0	\$0	\$313	\$3,750	NATT		
<b>Site Signage:</b>													
Community Sign	1	Ea.	\$5,000.00	30	15	\$5,000	\$2,500	\$1,453	\$20	\$236	NATT		Well Maintained and Aging Normally
Private Property Sign	1	Ea.	\$225.00	25	24	\$225	\$9	\$5	\$1	\$9	NATT		
*Estimated Based On Limited Documentation													
<b>TOTALS</b>						<b>\$177,759</b>	<b>\$140,527</b>	<b>\$81,666</b>	<b>\$4,195</b>	<b>\$50,343</b>			

# The Fallswood II Condominium Association

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## III. The Schedules

Reserve Study July 2016

### III.D. Schedules of Reserve Components by Category

THE FALLSWOOD II CONDOMINIUM													
SCHEDULE OF RESERVE COMPONENTS BY CATEGORY													
BUILDING EXTERIOR & INTERIOR													
Asset Description	Qty	Unit	Unit Cost-BALT.	Typ. Useful Life	Est. Remain. Life	Replace Cost - Present Dollars	Current Reserve Funds Required	Current Reserve Funds Available	Monthly Reserve Funding Required	Annual Reserve Funding Required	Condition Code	Photo Ref.	Notes/Location
<b>BUILDING EXTERIOR:</b>													
Aluminum Gutters & Downspout	2,398	L.F.	\$7.50	30	17	\$17,985	\$7,794	\$4,529	\$66	\$792	NATT	13	Should be replaced when roofing is replaced
Brick Repointing Allowance	1	L.S.	\$9,000.00	10	5	\$9,000	\$4,500	\$2,615	\$106	\$1,277	NATT	14,15	Repointing of any unsealed (painted) brick areas
Entrance Louvers	6	Ea.	\$4,700.00	40	10	\$28,200	\$21,150	\$12,291	\$133	\$1,591	NATT	14	
Entrance Louvers	5	Ea.	\$4,700.00	40	11	\$23,500	\$17,038	\$9,901	\$103	\$1,236	NATT	14	
Frost Free Spigots	11	Ea.	\$200.00	30	2	\$2,200	\$2,053	\$1,193	\$42	\$503	RN		
Common Windows	14	Ea.	\$550.00	30	2	\$7,700	\$7,187	\$4,176	\$147	\$1,762	RN	15	Laundry Room and Storage Room
<b>Shingled &amp; Flat Roof:</b>													
Asphalt Shingle Roof	30602	S.F.	\$1.50	25	17	\$45,903	\$14,689	\$8,536	\$183	\$2,198	NATT	16	
EPDM Roof	11	Ea.	\$3,500.00	10	2	\$38,500	\$30,800	\$17,899	\$858	\$10,300	NATT		
Roof Gable Repair Allowance	1	L.S.	\$4,000.00	15	7	\$4,000	\$2,133	\$1,240	\$33	\$394	NATT		
Gable Siding Repair	1	L.S.	\$4,500.00	15	7	\$4,500	\$2,400	\$1,395	\$37	\$444	NATT		
<b>BUILDING INTERIOR:</b>													
Stairwell Lights	44	Ea.	\$150.00	20	7	\$6,600	\$4,290	\$2,493	\$49	\$587	NATT		
Florescent Light Fixture	11	Ea.	\$215.00	20	7	\$2,365	\$1,537	\$893	\$18	\$210	NATT		
Common Room Lighting	22	Ea.	\$120.00	20	7	\$2,640	\$1,716	\$997	\$20	\$235	NATT		
Carpet	2,926	S.F.	\$1.30	10	7	\$3,804	\$1,141	\$663	\$37	\$449	NATT	19	

## THE FALLSWOOD II CONDOMINIUM

## SCHEDULE OF RESERVE COMPONENTS BY CATEGORY

## BUILDING EXTERIOR &amp; INTERIOR

Asset Description	Qty	Unit	Unit Cost-BALT.	Typ. Useful Life	Est. Remain. Life	Replace Cost - Present Dollars	Current Reserve Funds Required	Current Reserve Funds Available	Monthly Reserve Funding Required	Annual Reserve Funding Required	Condition Code	Photo Ref.	Notes/Location
Common Area Doors	22	Ea.	\$450.00	40	3	\$9,900	\$9,158	\$5,322	\$127	\$1,526	RN		Laundry Room and Storage Room
Mailboxes	11	Sets	\$300.00	50	2	\$3,300	\$3,168	\$1,841	\$61	\$729	RN	17	
Washer	11	Ea.	\$550.00	12	6	\$6,050	\$3,025	\$1,758	\$60	\$715	NATT	18	
Dryer	11	Ea.	\$500.00	12	6	\$5,500	\$2,750	\$1,598	\$54	\$650	NATT	18	
Utility Sink	11	Ea.	\$200.00	10	6	\$2,200	\$880	\$511	\$23	\$281	NATT	18	
Hot Water Heater	1	Ea.	\$14,890.00	12	1	\$14,890	\$13,649	\$0	\$1,241	\$14,890	RN	20	Replacement and install
Hot Water Heater	1	Ea.	\$14,890.00	12	1	\$14,890	\$13,649	\$0	\$1,241	\$14,890	RN	20	Replacement and install
Hot Water Heater	1	Ea.	\$14,890.00	12	7	\$14,890	\$6,204	\$3,605	\$134	\$1,612	NATT	20	Replacement and install
Wall Mounted Heaters	11	Ea.	\$150.00	20	17	\$1,650	\$248	\$144	\$7	\$89	NATT		

\*Estimated Based On Limited Documentation

TOTALS						\$270,167	\$171,158	\$99,467	\$4,780	\$57,361			
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### III. E. CASH FLOW METHOD OF RESERVE FUNDING

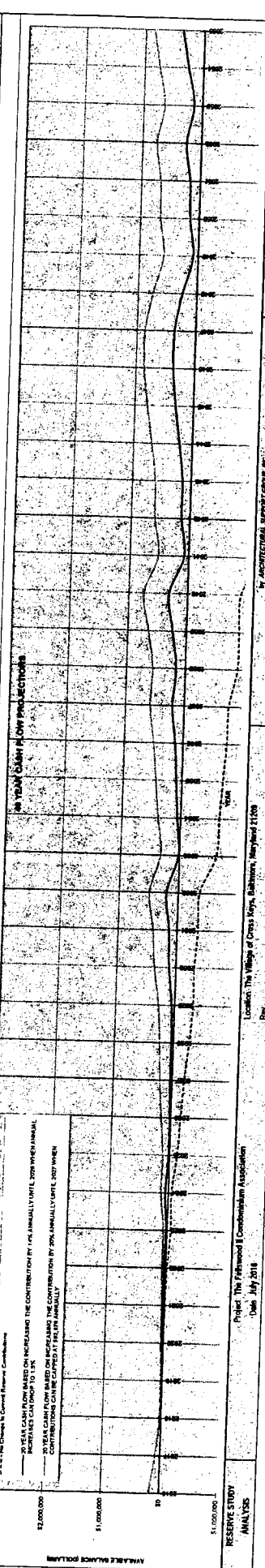
20 YEAR CASH FLOW BASED ON CURRENT FUNDING LEVELS											
YEAR	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Beginning Capital Reserve Balance	\$181,133	\$181,133	\$181,133	\$181,133	\$181,133	\$181,133	\$181,133	\$181,133	\$181,133	\$181,133	\$181,133
Annual total contributions to reserves	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000
Year end balance before expenses	\$196,133	\$196,133	\$196,133	\$196,133	\$196,133	\$196,133	\$196,133	\$196,133	\$196,133	\$196,133	\$196,133
With quarterly compounded interest rate = 1.5%	\$199,687	\$201,491	\$203,370	\$205,324	\$207,354	\$209,460	\$211,641	\$213,897	\$216,229	\$218,637	\$221,116
Annual expenses - with annual inflation rate = 4.5%	\$115,003	\$119,348	\$124,133	\$129,460	\$135,333	\$141,760	\$148,750	\$156,313	\$164,460	\$173,200	\$182,651
Available Balance	\$84,684	\$82,143	\$79,237	\$76,864	\$74,021	\$70,700	\$66,890	\$62,584	\$57,769	\$52,437	\$46,465
"Percent Funded" based on 2016 "Current Reserves Required"	88%	87%	86%	85%	84%	82%	79%	76%	72%	68%	63%

#### OPTIONAL FUNDING PLANS

20 YEAR CASH FLOW BASED ON INCREASING THE CONTRIBUTION BY 14% ANNUALLY UNTIL 2025 WHEN ANNUAL INCREASES CAN DROP TO 1.5%											
YEAR	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Beginning Capital Reserve Balance	\$181,133	\$181,133	\$181,133	\$181,133	\$181,133	\$181,133	\$181,133	\$181,133	\$181,133	\$181,133	\$181,133
Annual total contributions to reserves	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000
Year end balance before expenses	\$196,133	\$196,133	\$196,133	\$196,133	\$196,133	\$196,133	\$196,133	\$196,133	\$196,133	\$196,133	\$196,133
With quarterly compounded interest rate = 1.5%	\$201,835	\$203,825	\$205,899	\$208,050	\$210,279	\$212,587	\$214,974	\$217,440	\$220,000	\$222,650	\$225,390
Annual expenses - with annual inflation rate = 4.5%	\$115,003	\$119,348	\$124,133	\$129,460	\$135,333	\$141,760	\$148,750	\$156,313	\$164,460	\$173,200	\$182,651
Available Balance	\$86,832	\$84,477	\$81,766	\$78,590	\$74,946	\$70,817	\$66,224	\$61,167	\$55,540	\$49,350	\$42,739
"Percent Funded" based on 2016 "Current Reserves Required"	88%	87%	86%	85%	84%	82%	79%	76%	72%	68%	63%

20 YEAR CASH FLOW BASED ON INCREASING THE CONTRIBUTION BY 30% ANNUALLY UNTIL 2027 WHEN CONTRIBUTIONS CAN BE CAPTED AT \$63,376 ANNUALLY											
YEAR	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Beginning Capital Reserve Balance	\$181,133	\$181,133	\$181,133	\$181,133	\$181,133	\$181,133	\$181,133	\$181,133	\$181,133	\$181,133	\$181,133
Annual total contributions to reserves	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000
Year end balance before expenses	\$196,133	\$196,133	\$196,133	\$196,133	\$196,133	\$196,133	\$196,133	\$196,133	\$196,133	\$196,133	\$196,133
With quarterly compounded interest rate = 1.5%	\$202,742	\$204,920	\$207,189	\$209,548	\$211,998	\$214,539	\$217,171	\$219,894	\$222,609	\$225,416	\$228,316
Annual expenses - with annual inflation rate = 4.5%	\$115,003	\$119,348	\$124,133	\$129,460	\$135,333	\$141,760	\$148,750	\$156,313	\$164,460	\$173,200	\$182,651
Available Balance	\$87,739	\$85,572	\$83,056	\$80,088	\$76,665	\$72,779	\$68,421	\$63,581	\$58,149	\$52,216	\$45,865
"Percent Funded" based on 2016 "Current Reserves Required"	88%	87%	86%	85%	84%	82%	79%	76%	72%	68%	63%



### Site Components



Photo 1: Current condition of the asphalt parking lot of the Fallswood II Condominium. It is recommended that the asphalt gets rejuvenated every 5-8 years to prolong its useful life.



Photo 2: Current condition of asphalt walking path that runs through the community.



Photo 3: Current condition of concrete observed at the Fallswood II Condominium.



Photo 4: Typical problematic area observed in the concrete sidewalk where a slab is heaving/sinking at the joint, creating a possible tripping hazard. It is recommended that these areas be taken care of as soon as possible to prevent injury.

### Site Components



Photo 5: Typical problematic areas observed at the foundation of condominium buildings and concrete stairs leading into buildings. It is recommended that these areas be caulked to prevent water from entering causing further deterioration and movement.



Photo 6: Another area where caulking is needed to prevent further infiltration.

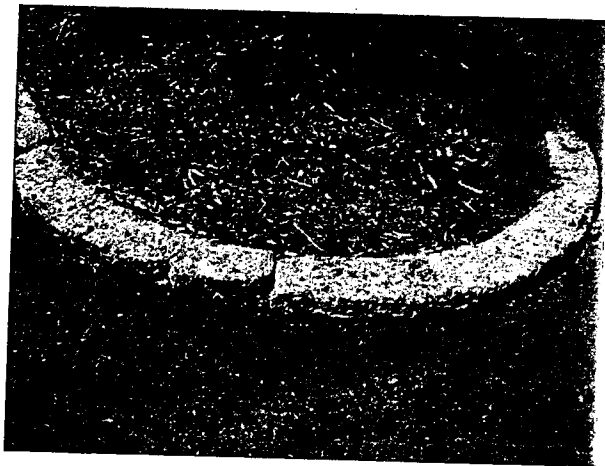


Photo 7: Aggregated concrete curbing was observed to be in need of repair from likely snow removal and normal aging. Cracks should be sealed to prevent water infiltration and further deterioration.

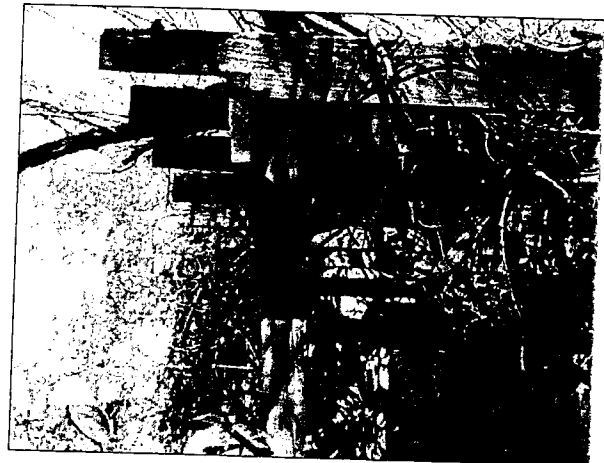


Photo 8: Trellis adjacent to building 11 was observed to be in poor condition with heavy vegetation. The trellis was observed to be leaning and should be scheduled for repair/replacement.



### Site Components



Photo 9: Typical metal railing observed in the Fallswood II community.

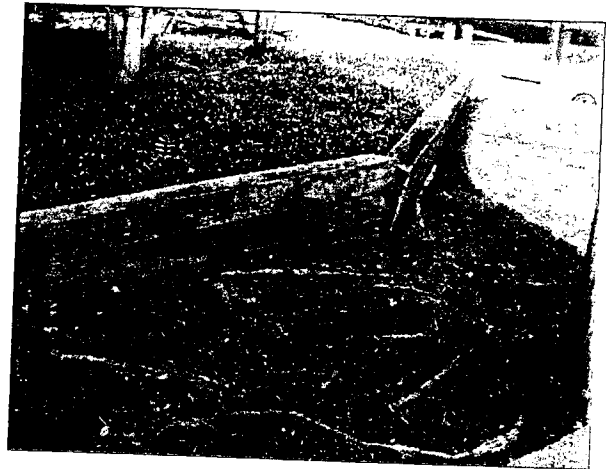


Photo 10: Current condition of landscape retaining walls.

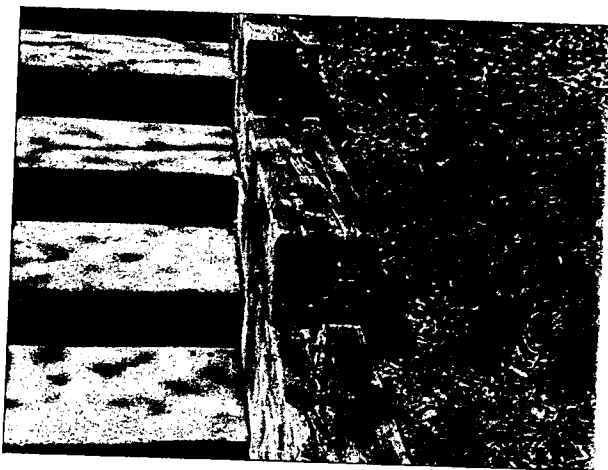


Photo 11: Current condition of landscape retaining walls at the entrance to each building. Timbers can be replaced piecemeal as needed.

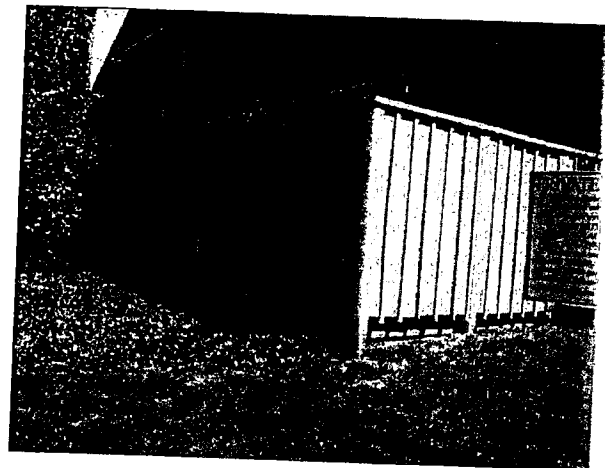


Photo 12: Typical PT fencing observed at Fallswood II Condominium. Fencing has been painted to prolong its useful life.

### Exterior Components

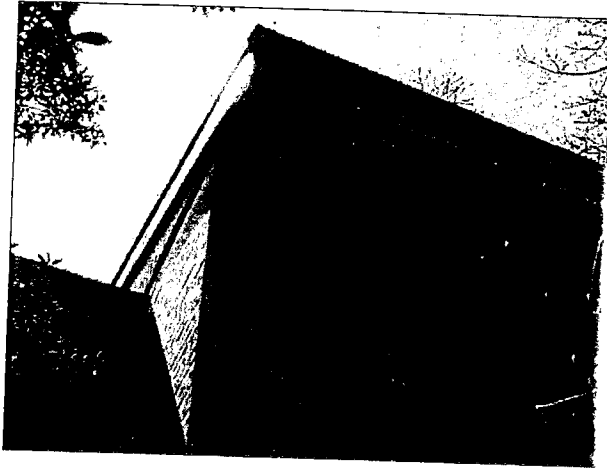


Photo 13: Typical gutter & downspout system at Fallswood II Condominium.

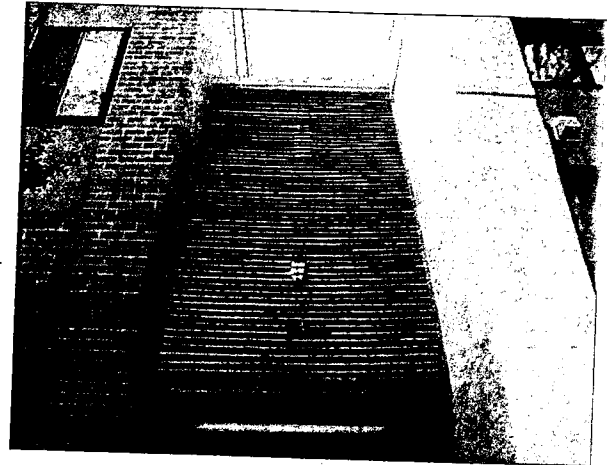


Photo 14: Entrance louvers were observed to be in need of maintenance.



Photo 15: Common area windows were observed to be at the end of their useful life and should be scheduled for replacement.

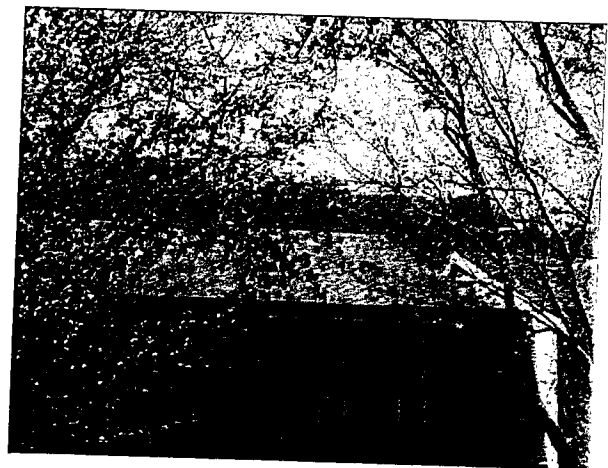


Photo 16: Based on visual observation it was determined that the asphalt roofing is aging normally. Further analysis is recommended for more detail.

### Interior Components

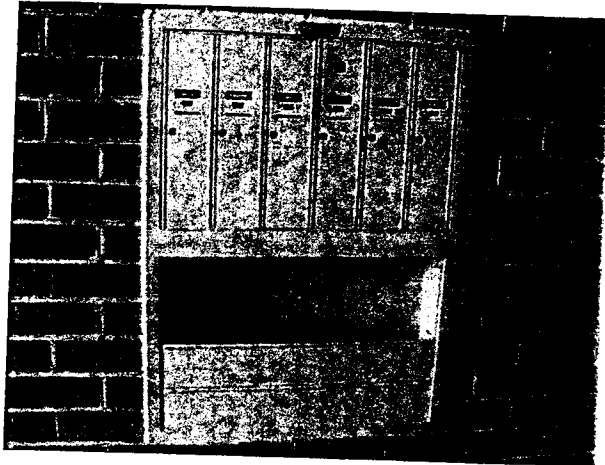


Photo 17: Typical mailbox set observed in each building entrance at Fallswood II Condominium.



Photo 18: Typical washer and dryer found in all 11 condominium buildings

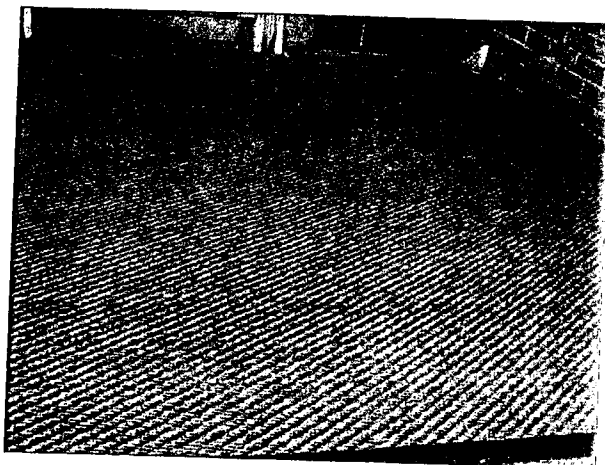


Photo 19: Typical carpet found at the buildings entrance/hallway.



Photo 20: Typical hot water heater found in the community. 2 units are nearing the end of their useful life and should be scheduled for replacement.

COMPONENT METHOD SUMMARY						
LISTED BY MAJOR ASSET CATEGORIES						
REPLACEMENT RESERVE MAJOR ASSET CATEGORIES	REPLACE COST - PRESENT DOLLARS	CURRENT RESERVES REQUIRED	CURRENT RESERVE FUNDS AVAILABLE	BALANCE NEEDED FOR FULL FUNDING	CALCULATED MONTHLY CONTR.	CALCULATED ANNUAL CONTR.
BUILDING EXTERIOR & INTERIOR	\$270,167	\$171,158	\$99,467	\$71,691	\$4,780	\$57,361
SITE COMPONENTS	\$177,759	\$140,527	\$81,666	\$58,861	\$4,195	\$50,343
TOTAL	\$447,925	\$311,686	<b>\$181,133</b>	\$130,553	\$8,975	\$107,704

\* Based on a projection of anticipated total contributions to existing Reserve accounts given to ASG by The Fallswood II Condominium Association.

#### IV.1. COMPONENT METHOD SUMMARY

The following charts are the Summary of Replacement Reserve Schedules developed to establish the required funding to replace the major components of the buildings contained in this report, when those items reach the end of their useful life. This Summary Schedule is a compilation of the separate category sheets which follow and shows the COMPONENT METHOD funding analysis.

These funding recommendations will bring the organization's reserves up to fully funded under the Component Method of analysis. Refer to page 14 for a CASH FLOW ANALYSIS GRAPH of The Fallswood II Community, and for further funding recommendations see the Cash Flow Method Summary on the following page.

#### COMPONENT METHOD CONCLUSION:

Currently, under the "Component Method" of calculating the needed reserves, the Association is 58% "fully funded". To be Fully Funded is to have a reserve balance which will replace each component item at the time replacement is required without taking funds from other future replacement items. Based on the Component Method of calculating the needed reserves, which is based primarily on the expenditures of the "Current Reserve Funds Available" the 2017 Calculated Annual Contribution required would be **\$107,704**. To maintain proper cashflow over time the "Cash Flow Method" of funding below should be reviewed.

*IV.2. Summary (Continued)*

**IV.2. THE CASH FLOW METHOD SUMMARY**

A review of the "Cash Flow" method (see page 12) reveals that the reserve account will not have sufficient funds for future replacements if maintained at current levels. In order to maintain a positive cash position in the Capital Reserve Fund through the next 40 years, the existing reserve contribution will need to be increased annually to prevent the Reserve account from becoming underfunded due to expected replacements. This does not include maintenance expenses.

Using the Cash flow spreadsheet we found two ways that the reserve account could be brought into a positive funding situation.

**Option 1- Capital Reserve (p. 14)**

Our cash flow projection shows that an increase to the current annual contribution of \$15,000 is needed in order to prevent any **special assessment** or **astronomical** percentage increase. Option 1 details a annual contribution increase of 14% until the year 2029 when contributions can be dropped to 1.5%. This level of funding increase is projected to keep the reserve account positively funded for the 40 year scope of this study. Under this option your Capital Reserve fund will have the necessary funds to replaced the scheduled components in 2021 without becoming underfunded.

**Option 2- Capital Reserve (p. 14)**

An alternate method of maintaining reserve funds at positive levels without the need of special assessments is to increase the current annual contribution by 20% until 2027 when contributions can be dropped to a 0% increase and \$92,876 annual contribution. This will maintain a positive balance in the reserve account for the next 40+ years. Option 2 asks for more money up front but builds the account to a 70% fully funded level quickly. Under Option 2 your Capital Reserve fund will stand at 70% "fully funded" in 2027 and be able to fund any early unforeseen replacements that may arise.

*The organization's accountant may be able to suggest additional strategies to reach the desired funding levels.*

Our cash flow does take into account interest on the reserve account, which we calculated at 1.8% based on average returns, and we used an inflation rate of 4.5% compounded annually. While earned interest in the next few years may be close to zero, 1.8% has been established as a report average. Construction costs can fluctuate tremendously at a higher percentage rate than the average consumer rates of inflation. We recommend for that reason alone, that the organization update their reserve study at least every three years as it would reflect current situations with the facility's assets, reserve accounts, interest and inflation costs and not projected.

In general, as a community ages, more expensive assets will require repair and/or replacement potentially depleting the reserve account. We highly recommend placing assets that require regular maintenance (such as concrete, asphalt, fencing and brick repointing) on inspection schedules to make sure assets are properly maintained before areas can become severely deteriorated requiring either earlier than anticipated replacement or more costly repairs.

**It is our opinion, based on this analysis, that your Association will need to increase it's current annual contribution at the minimum of 14% to prevent under funding or the need of future special assessments to cover scheduled replacements and maintenance. The annual contribution can be decreased to 1.5% in 2029. This strategy should be sufficient to maintain positive reserve funding levels at The Fallswood II Condominiums for the duration of this 40 year study.**

### Maintenance Information

The following guidelines are intended to insure that a program of preventive maintenance is implemented in order to assure that, as a minimum, the predicted useful life of the major common elements are attained. A Preventative Maintenance Program is made up of "a system of periodic inspections of existing facilities to uncover conditions leading to breakdown or harmful depreciation and the correction of these conditions while they are still minor." It should be noted that experience has shown a proper maintenance program can add 50 percent to the expected useful life of some items.

In any case, the proper determination of the useful lives of the items which make up your common elements is critical to the proper updating of your Reserve Schedule. The items included will only attain their anticipated useful life if a proper maintenance program is implemented. Please refer to III.A and III.B. Methodology and Assumptions for recommended schedule updates. As items age, unsafe conditions may develop which will require repair and/or replacement. The inspection schedules should be documented and the assets inspected by a third party annually to limit the organization's liability.

### SITE COMPONENTS

#### **Concrete:**

From our experience, properly installed concrete should last 35 years or more with proper maintenance and repair. The inspection should note any cracked sections, uneven settlement (which may result in a tripping hazard) and surface damage. In addition, possible problems such as broken pipes, malfunctioning downspout leaders and/or improper grading should be investigated and any necessary repairs made. The freeze/thaw cycle in the winter, use of salt or chemicals to prevent ice, undermining of tree roots to heave the walk, and water erosion all contribute to concrete sidewalk deterioration. Sections of sidewalk can be cut out and replaced. Where slight heaving or lifting has occurred, causing tripping hazards, the lifted sections can be temporarily ground off to eliminate.

#### **Asphalt:**


The early detection and repair of minor defects is the most important consideration in preventative maintenance of pavement. Cracks and other surface breaks, which in their first stages are almost unnoticeable, may develop into serious defects if not repaired in a timely manner. For this reason, walking inspections of the pavement should be conducted in the fall and spring of each year (as a minimum).

#### **Treated Lumber:**

Treated wood (CCA) used in decks, walkways, retaining walls, footbridges and docks and piers should be maintained with a seal coating that moisturizes the wood and protects it from the UV rays of sunlight. Typically this wood will last 15-20 years with minimal maintenance, but with annual resealing, this life span can be extended to 30-40 years. As individual pieces or sections of wood deteriorate, twist or warp, they can be replaced piecemeal. Support structures such as decks, bridges, docks, walls, etc. should be inspected twice a year, in the spring and fall.

CCA treated lumber will often vary in quality, depending on the quality of the original lumber as well as the treatment used to protect the lumber from fungus and insect damage. Treated lumber tends to dry out and when it does it usually warps. Maintenance for treated wood should consist of power washing and an application of water sealant, about every 2-4 years depending on its location. Replace damaged wood as necessary.

Items By Category	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Every 2 Yrs	Every 3 Yrs	Every 5 Yrs
Asphalt/Rejuvenation															
Concrete Sidewalk															
Curb and Gutter															
Concrete Leaders/Stairs															
Gutter & Downspout															
Roofs															
Wooden Fencing/Trellis															
Wooden Entrance Louvers															
Wooden Retaining Walls															

 Minimum recommended inspection/ maintenance interval\*

\*Assets should be inspected on an annual basis, in accordance with this Inspection/Maintenance Schedule. Failure to inspect the assets regularly may result in personal injury and may be a liability to the Association. It is recommended that a line item be established in the Operating Budget for annual inspections by a third party to insure the client's assets are being maintained in good condition. This will assist in limiting the liability of the organization and in keeping this report current.

# The Fallswood II Condominium Association

Hamill Road • The Village of Cross Keys • Baltimore • Maryland • 21209

## VII. Prioritized Replacement List

Reserve Study July 2016

Asset Description	Quantity	Unit	Unit Cost	Est. Remain. Life	Current Replace. Cost	Notes
Asphalt Paving Rejuvenation	28,176	S.Y.	\$2.00	1	\$56,352	
Parking Lot Striping	1	L.S.	\$950.00	1	\$950	
Concrete Sidewalk/Leader Repair	1	S.F.	\$1,250.00	1	\$1,250	
Concrete Caulking/Joint Sealant	1	L.S.	\$2,500.00	1	\$2,500	
Concrete Curb Phase 1	253	L.F.	\$25.13	1	\$6,358	
Trellis (Fenced)	1	Ea.	\$3,800.00	1	\$3,800	
Landscape Tie Retaining Walls Phase 1	113	L.F.	\$47.00	1	\$5,311	
Tree Removal, Tree Planting, Replace Shrubs	1	L.S.	\$3,750.00	1	\$3,750	
Hot Water Heater	1	Ea.	\$14,890.00	1	\$14,890	
Hot Water Heater	1	Ea.	\$14,890.00	1	\$14,890	
ESTIMATED REPLACEMENT COST YEAR: 1					\$110,051	
Landscape Tie Retaining Walls Phase 2	112	L.F.	\$47.00	2	\$5,264	
Street Lighting	8	Ea.	\$1,150.00	2	9,200	
Frost Free Spigots	11	Ea.	\$200.00	2	2,200	
Common Windows	14	Ea.	\$550.00	2	7,700	
EPDM Roof	11	Ea.	\$3,500.00	2	38,500	
Mailboxes	11	Sets	\$300.00	2	3,300	
ESTIMATED REPLACEMENT COST YEAR: 2					\$66,164	
Concrete Curb Phase 2	253	L.F.	\$25.13	3	\$6,358	
Metal Railing	132	L.F.	\$49.00	3	\$6,468	
Common Area Doors	22	Ea.	\$450.00	3	9,900	
ESTIMATED REPLACEMENT COST YEAR: 3					\$22,726	
Asphalt Walking Path	543	S.F.	\$4.00	4	\$2,172	
6' P.T. Wood Fencing Phase 1	270	L.F.	\$24.20	4	\$6,534	
ESTIMATED REPLACEMENT COST YEAR: 4					\$8,706	
Concrete Curb Phase 3	253	L.F.	\$25.13	5	\$6,358	
Trellis	1	Ea.	\$3,800.00	5	\$3,800	
6' P.T. Wood Fencing Phase 2	270	L.F.	\$24.20	5	\$6,534	
Brick Repointing Allowance	1	L.S.	\$9,000.00	5	\$9,000	
ESTIMATED REPLACEMENT COST YEAR: 5					\$25,692	

\*END OF REPORT\*



- 1) Architectural Support Group, Inc.  
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- 2) National Reserve Study Standards for the Community Associations Institute 2003
- 3) Building Construction Cost Data  
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- 4) ENR Architect's Square Foot Costbook  
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- 5) Condominium Budget Guidelines  
By Richard Wyndhamsmith, ASA, ACCI, SCV  
Condominium Research Corporation  
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- 6) Total Asphalt-Achieving new levels in pavement performance 2011
- 7) Time Saver Standards for Site Planning  
By Joseph DeChiara and Lee E. Koppelman  
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- 8) Mean Facilities Maintenance Standards  
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- 9) National Construction Estimator  
Edited by Martin D. Kiley and William M. Moselle  
41st Edition  
Craftsman Book Company, 1993
- 10) Asphalt Pavement Maintenance and Repair  
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- 11) Life Cycle Cost Analysis  
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- 12) Reserve to Preserve  
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1984

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