

PARKSIDE AT WOODBRIDGE

Redmond, Washington

RESERVE STUDY WITH SITE VISIT

December 8, 2016

DRAFT



Report Period: January 1, 2017 - December 31, 2017

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Executive Summary

Parkside at Woodbridge is a 24 unit, residential condominium community located in Kirkland, Washington. The complex consists of eight 2-story wood framed triplexes with two townhouses and one flat in each. Construction was completed in 2003; the complex is 13 years old.

This is an initial “Full Reserve Study” and consists of an evaluation of the current nature and physical condition of “common area” building and site features that are maintained by the condominium association (C.A). Normal, anticipated construction repairs, and cost for those repairs, are projected over a 30-year Study duration. These projected expenses are compared to the current Reserve balance, and a calculation is made of an annual Reserve Contribution sufficient to address projected expenses.

Based on our analysis, we recommend that the association set aside **\$51,100 annually for Reserves beginning in 2017**, with that amount increasing annually with inflation. This recommended level of reserve funding is equivalent to an average of **\$2,129 per unit per year, or about \$177 per unit per month**. This “Threshold” funding level was calculated to meet all projected Reserve cost, over the 30-year Study duration, while maintaining a minimum “Threshold” reserve balance equal to the annual reserve contribution.

The fiscal year for the Reserve Study is a calendar year 2017.

Based on our analysis, the current **Fully Funded Balance for your condominium Reserve account in year 2017 would be \$346,681**. We understand the current reserve account balance to be \$108,300. **The association is 31% funded at this time**. We would consider this level of funding to put the association at moderate risk for future special assessments.

The condominium association should determine the best reserve funding level for their association. There is no legal requirement to fund reserves, only to have a Reserve Study and to know what reserve contribution rate is recommended. This Reserve Study must be updated annually to reflect contributions and expenditures made, actual reserve balances, and adjustments in anticipated future repair costs. Every three years the update must be based on a visual site inspection conducted by a reserve study professional.

This Reserve Study meets the requirements of the Washington Condominium Act RCW 64.34, and was prepared by a Reserve Study Professional.

Purpose, Benefits and Limitations of the Reserve Study

PURPOSE

The purpose of a Reserve Study is to identify an annual Reserve contribution rate that is sufficient to address projected “common” building expenses, over a 30-year Study duration. See the “Reserve Contribution Recommendation” section for a description of this analysis.

The Reserve Study also includes a calculation of the current “Fully Funded Balance”. This calculation expresses the actual, current “Reserve Balance” (reported by the Community Association) *as a percentage of* a calculated “Fully Funded Balance”. This calculation only applies to the current year and is frequently cited as a measure of the health of the Reserve account. See the “Fully Funded Balance” section for a description of this analysis.

SCOPE

The scope of the Study is limited to “common” building and site “components” that are the responsibility of the Condominium Association (C.A.) to maintain and does not consider; operational cost, expenses that are the responsibility of the individual condominium owner, municipal or utility owned and maintained infrastructure.

Examples of typical Reserve Study “components” may include; private roads and sidewalks, fencing and gates, roofing, exterior siding, doors and windows, waterproofing, exterior painting, mailboxes, signage and “common” mechanical and electrical systems.

The Reserve Study assumes that the buildings will be maintained to keep a good level of appearance with a special emphasis on retaining the original appearance of the building to the greatest possible extent.

The Study also assumes that the association will replace materials as they are required with good quality materials, installed by qualified contractors and that the building will experience the full typical useful life for the new materials installed.

SCOPE (CONTINUED)

There are several items that the individual condominium owners are responsible to maintain and pay for which may include but are not limited to:

Damage caused by owners, tenants, or pets

Unit interiors, including wallboard/plasterboard/sheetrock, appliances, lighting and plumbing fixtures

Water heaters, heating/cooling units, furnaces and fireplaces

Windows – frame failure requires removal of adjacent siding and replacement of flashings and waterproofing and is considered a C.A. expense. We generally assign window replacement coincident with siding replacement.

The costs for these items have not been included in the Reserve Study unless noted otherwise. Individual owners should remember that they have the responsibility to pay for repairs to these elements and added items. The Association should establish policies and procedures regarding the maintenance on these “owner responsibility” items.

RESERVE STUDY BENEFITS

Provides disclosure to buyers and owners. No matter how the association chooses to fund its reserves, the reserve study will provide owners and prospective purchasers with information about future expenses for repair and replacement of the common elements so that they can make informed decisions about buying and owning a condominium. It will help eliminate the surprise of large unexpected repair costs which may be passed on to the owners.

Protects the owner's investment. By recommending that funds always exist to keep a community maintained and functional, each owner's investment in their unit is protected.

RESERVE STUDY BENEFITS (CONTINUED)

Increases salability / accountability. Savvy purchasers and lenders are closely examining association finances before making commitments. A good reserve study and adequate reserves illustrate an Association's financial health and endurance. Lenders now often require that associations have adequate reserve contributions or they will not offer loans for units within the association.

Reduces the risk of special assessments. By utilizing a reserve study to aid in long range planning, the need for special assessments is greatly reduced. This assists personal financial planning and reduces the uncertainty and fear of ownership.

Complies with the Washington Condominium Act. The Washington Condominium Act as amended on June 12, 2008, requires that all condominiums have a reserve study prepared by an independent professional qualified to perform this work.

RESERVE STUDY LIMITATIONS

The Reserve Study is fundamentally a “broad brush” Reserve budgeting tool intended to arrive at an annual Reserve Contribution recommendation. Due to the detailed nature of the Study process, we sometimes find that more is “read into” the Report than intended. Here is a list of limitations and qualifications to the Report.

Individual “component” cost cited in the Report should not be used for project budgeting. We expect actual cost will vary, in some cases significantly lower or higher than cost identified in the Report. The total of all cost, spread over the term of the Study duration, may be relied upon as an accurate estimate for the purpose of establishing a recommended Reserve Contribution.

We recommend that any actual repair/replacement project should start with a detailed evaluation by a qualified design or construction professional to determine at minimum; scope, budget, schedule and permitting requirements.

Costs projected in the Report were NOT based on repair/replacement contract documents (plans and specifications) and were NOT provided by construction firms bidding to perform the work. Unit cost utilized in the Study are provided by R.S. Means “Building Construction Cost Data”, and our experience.

RESERVE STUDY LIMITATIONS (CONTINUED)

The Report should not be confused with a construction implementation plan. Budgeting and scheduling of repairs in the Report is primarily based on the estimated remaining life of individual components and, unless noted otherwise, no attempt was made to group anticipated repairs into related "projects".

Our recommendations are not based on a worst case scenario, but rather on what we expect is most likely to occur. It should be noted that our approach assumes that the Association will correct minor problems as they occur - before they become major problems.

This Reserve Study is not an investigation into or comment on the quality of the construction of the condominium, nor whether the construction complies with applicable building codes or the requirements of the Washington Condominium Act.

The observations are limited to a visual, non-destructive, inspection of a *sample* of the building's components. Our assumption is that the condominium is constructed in substantial compliance with building codes and industry standards, and that it will receive ordinary and reasonable maintenance and repair by the Association.

If your building is less than four years old, we recommend that you consider a Full Assessment/intrusive investigation of the building envelope to assess its actual construction, and how well it is performing in keeping water from the structure. You may also want to consider investigation of other common elements to determine whether the condominium was constructed in compliance with the requirements of the Washington Condominium Act.

The Washington Condominium Act requires the following disclosure in every reserve study:

"This reserve study should be reviewed carefully. It may not include all common and limited common element components that will require major maintenance, repair, or replacement in future years, and may not include regular contributions to a reserve account for the cost of such maintenance, repair, or replacement. The failure to include a component in a reserve study, or to provide contributions to a reserve account for a component, may, under some circumstances, require you to pay on demand as a special assessment your share of common expenses for the cost of major maintenance, repair, or replacement of a reserve component."

Study Process and Reserve Funding Options

The following is an outline of the Study process and Reserve Funding Options.

STUDY PROCESS

Confirm the list of “common” building and site “components” (the Condominium Association is responsible to repair/replace these items).

Evaluate the normal, anticipated useful life (in years) of each component “as if new”.

Confirm current age and condition of components to determine “remaining useful life” - when it will need to be repaired or replaced. The “remaining useful life” can be adjusted, based upon an evaluation of a number of considerations, such as; initial quality, weather exposure, maintenance, etc.

Estimate approximate repair/replacement cost of each component.

At this point we calculate the annual component “expenses”, for each year, over the 30-year Study duration

Confirm current Reserve Balance (\$ figure provided by the C.A.).

Estimate anticipated construction cost escalation rate to be used over Study duration (typically 3 - 5%). This % is applied to the annual component “expense”.

Estimate anticipated general inflation rate. This is applied as annual increase in Reserve Contribution (typically 3 - 4%).

Estimate anticipated interest rate on annual un-spent Reserve Balance (typically .3 - 3%).

Calculate an annual Reserve Contribution sufficient to meet projected annual “expenses”. Three Reserve Funding Options are considered, outlined below.

FUNDING OPTIONS

The last step of the process involves calculating three Funding Options. We recommend one of the three options based on the objectives of the Condominium Association; with “Threshold Reserve Funding” the most frequently recommended option. The C.A. should determine the best reserve funding level for their association. There is no legal requirement to fund reserves, only to have a Reserve Study and to know what reserve contribution rate is recommended.

“Threshold Reserve Funding”; the annual Reserve Contribution is set to maintain a pre-determined minimum Reserve balance over the duration of the Study. We typically use a minimum reserve balance equal to the recommended annual Reserve Contribution, (considered in current year dollar value). Alternatively, the C.A. may define a minimum “threshold” balance they prefer. Example; if the recommended annual Reserve Contribution is \$100,000, the minimum “threshold” balance, projected over the Study duration is \$100,000.

“Minimum Reserve Funding”; the annual Reserve Contribution is set to maintain a non-zero (no deficit) Reserve balance. This is the least conservative funding option as any minor change in the projected remaining useful life of components, or higher than projected repair/replacement cost may cause the Reserve balance to be in deficit, resulting in a greater likelihood of special assessments.

“Fully Funded” Reserve Funding; the annual Reserve Contribution is set to achieve “Fully Funded” status within a predetermined number of years, typically within 20 years. “Fully Funded” means that the Reserve balance is equal to the current dollar value of all “expended” components. Example; if roofing replacement will cost \$100,000 and the roof is 5 years old, with a 20-year service life, the “expended” cost is $5/20^{\text{th}}$ of \$100,000 or \$25,000. Typically, the annual Reserve Contribution rate for “Fully Funded” status is significantly higher than the other funding options, because the actual Reserve Contribution has been less than the incurred component “expense”.

Figure 1.1 "Component" List and Financial Assumptions

Reserve Study Input Data & Reserve Option Calculations - DRAFT			
Name: Parkside @ Woodbridge	Reserve Balance:	10/31/2016	\$108,300
Date: December 7, 2016	Interest on Reserves		0.55%
By: M. Arndt	Construction Escalation		3.00%
	Inflation Rate CPI		3.00%

No.	Component	Life Cycle Years	Remaining Years	Cost/Cycle	Quantity	Unit
2.1	Concrete Pavement	5	1	\$12,750	11,400	GSF
2.1.1	Asphalt Pavement	7	1	\$1,860	3,100	SF
2.1.2	Concrete Curbs	7	1	\$1,000	400	LF
2.2	Landscaping	6	2	\$3,000	1	LS
2.3	Retaining Walls	20	7	\$2,200	~600	SF
2.4	Top Lattice Fences	20	7	\$4,100	100	LF
2.5	White Picket Fences	15	1	\$20,000	825	LF
2.6	Mailboxes	25	12	\$2,400	2	EA
5.1	Exterior Handrails	30	17	\$1,800	60	LF
6.4	Elastomeric Deck Coatings	7	1	\$4,640	580	SF
7.1	Exterior Sidewall - Panel & Plank	50	37	\$0	41,000	GSF
7.1.1	Exterior Sidewall - Shingles	30	17	\$10,000	15	SQ
7.2	Masonry	40	27	\$3,000	1	LS
7.3	Roofing	25	12	\$115,500	343	SQ
7.4	Gutters & Downspouts	30	17	\$20,790	3,900	LF
8.1	Doors	10	3	\$2,000	24	EA
8.1.1	Fireroom Doors	20	7	\$4,000	8	EA
8.2	Garage Doors	20	7	\$24,000		EA
8.3	Windows & Sliders	35	22	\$339,200	424	EA
9.1	Exterior Painting	7	1	\$66,000	43,000	GSF
10.1	Chimneys	25	12	\$9,600	3,860	LF
15.1	Plumbing	10	7	\$2,000	1	LS
15.2	Irrigation	10	7	\$2,000	1	LS
15.3	Drainage	50	37	\$0	1	LS
15.4	Sewer	30	17	\$10,000	1	LS
16.1	Electrical	10	3	\$1,600	8	EA
16.2	Exterior Lighting	20	7	\$7,200	48	EA
17.1	Fire Alarm System	20	7	\$16,000	8	EA
20.1	Reserve Study	3	3	\$2,500	1	EA

Physical Condition Summary and Significant Reserve Components

PHYSICAL CONDITION

The overall appearance of the building and grounds is fair. The property appears not to be adequately maintained and we did not observe accumulated debris or evidence of significant damage. We noted deterioration of the building body paint and caulking and of the roofing components.

SIGNIFICANT RESERVE COMPONENTS

The following is a brief summary of both near term repair items and the most significant cost items. See the Component Forms for more detailed information. All cost cited in this section are expressed in 2017 dollars.

Near term repairs are budgeted in years 1 or 2 as further deferral of these items may result in damage to building systems or affect tenancy of the facility.

- Concrete Pavement (Component 2.1) budgeted at \$12,700 in year 1. Stamped concrete pavement is located at the entry of each building. Some minor puddling of water was noted in the entries of several homes. Budget for resealing of surface to mitigate fading and preserve luster beginning in year 1, on a 5-year cycle.
- Asphalt Pavement (Component 2.1.1) budgeted at \$1,860, beginning in year 1. Asphalt pavement was observed to be in fair condition with few noted areas of cracking and erosion. Budget for repairs and seal coat beginning year 1, on a 7-year cycle.
- Concrete Curbs (Component 2.1.2) budgeted at \$1,000, beginning in year 1. Minor repairs and striping of the concrete curbs was observed at the time of inspection. Budget for minor repairs striping in year 1, on a 7-year cycle.
- White Picket Fences (Component 2.5) budgeted at \$20,000, beginning in year 1. Rotten post and missing pickets were observed at the time of inspection. Budget for full replacement in year 1, on a 15-year cycle.
- Elastomeric Membranes (Component 6.4) budgeted at \$4,640, beginning in year 1. Elastomeric coatings are located at unit decks were not observed during our limited site visit. They are budgeted for recoat in year 1, on a 7-year cycle.
- Exterior Painting (Component 9.1) budgeted at \$72,000, beginning in year 1. Exterior painting was observed to be in poor condition and caulking is failing with some areas of rot and wear were noted. Budget for \$66,000 for consecutive years for repainting to occur on a 7-year cycle.

SIGNIFICANT RESERVE COMPONENTS (CONTINUED)

Significant long term repair and replacement cost include the following;

- Exterior Sidewall - Shingles (Component 7.1.1) budgeted at \$10,000 in year 17. The cedar shingles were observed to be in fair condition during our inspection. Budget for full replacement in year 17, on a 30-year cycle.
- Roofing (Component 7.3) budgeted at \$115,500, beginning in year 12. The roofs need a full in-depth inspection and attics need to be inspected based on vent pipe boots used are known for warping and cracking. Budget for replacement in year 12, on a 25-year cycle.
- Gutters & Downspouts (Components 7.4) budgeted at \$20,790, beginning in year 17. The gutters need immediate repairs to replace the sealants at joints and endcaps to keep them from leaking and damaging the structures. At least 2 buildings have holes drilled through the backs into the fascia that are currently leaking. Replace and add downspouts accordingly. Budget for repairs of ~\$3,000 in year 1, and replacement in year 17, on a 30-year cycle.
- Windows - Replace (Component 8.3) budgeted at \$339,200, beginning in year 22. The windows and sliding doors were observed to be in good condition, no reported issues. Budget for replacement to occur in year 22, on a 35-year cycle.
- Fire Alarm System - Replace (Component 17.1) budgeted at \$16,000, beginning in year 7. Fire alarm panels are located on each building and were not observed, keys were not present. Budget for replacement in year 7, on a 20-year cycle.

Reserve Contribution Recommendations

➤ THRESHOLD FUNDING

For budgeting purposes, **we recommend that Condo Owner's Association set the contribution rate at \$51,100 for Reserves beginning in year 2017.** This amount should increase annually with inflation. This amount is determined using the Cash Flow method and Threshold Funding, to provide adequate reserves each time an expense is anticipated, with a minimum (threshold) level of reserves equal to one year's contribution at all times during the study period, so that no special assessments will be required. These figures are based on a reserve balance on October 31, 2016 of \$108,300 (figures provided by property management).

An annual Reserve contribution of \$51,100 works out to **an average of \$2,129 per year per unit or an average of \$177 per unit per month.** This is approximately 1/2 of one percent (.48%) of the value of each unit per year based on an average unit value of approximately \$447,833.

This compares favorably with the one to two percent a single-family homeowner can expect to pay each year (on average) for major repairs. This also compares favorably to other condominium associations in the Puget Sound area, falling at the bottom of the average range of contributions as a percent of the unit value each year. Typically, we see contribution rates from 1/2% to 1% of the unit value each year. If there is substantial deferred maintenance, it may be higher.

➤ MINIMUM FUNDING OPTION

An alternative strategy the association could employ would be "Minimum Funding". Minimum Funding provides for necessary expenditures without maintaining a minimum reserve balance. To pursue such a strategy, the recommended annual contribution rate would be **\$48,100.**

➤ FULLY FUNDED OPTION

The association could also consider contributions to obtain and maintain the level of reserves to be Fully Funded (so that the percent funded builds to 100% over time). To pursue such a strategy, the recommended annual contribution rate would start at **\$55,300 to become Fully Funded in 23 years.**

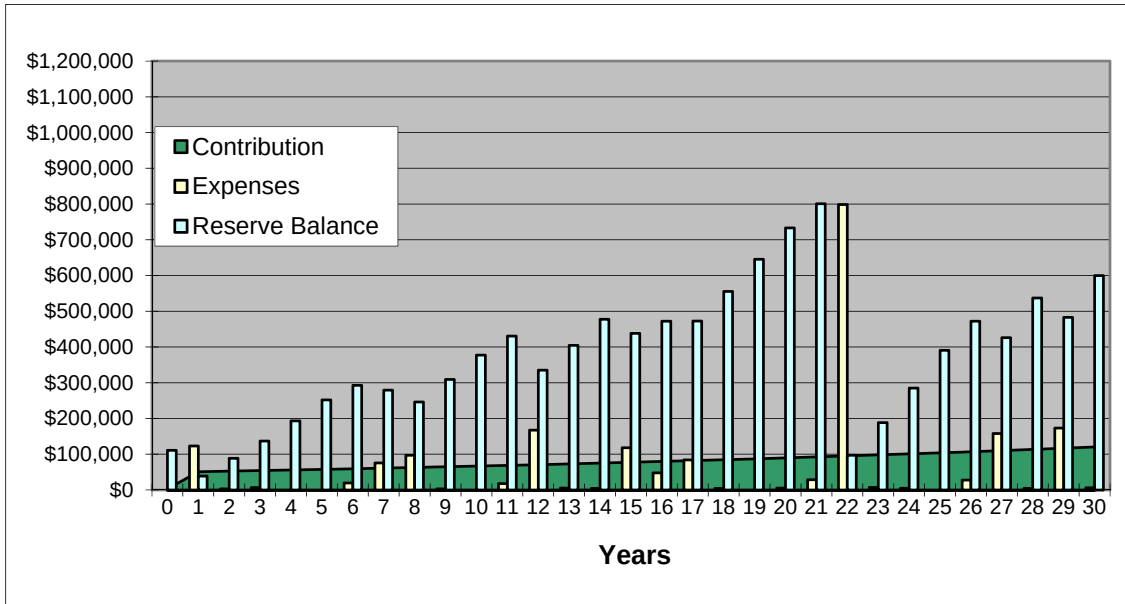
See the following charts and spreadsheets for depiction of each Funding Option and Calculations.

Figure 2.1

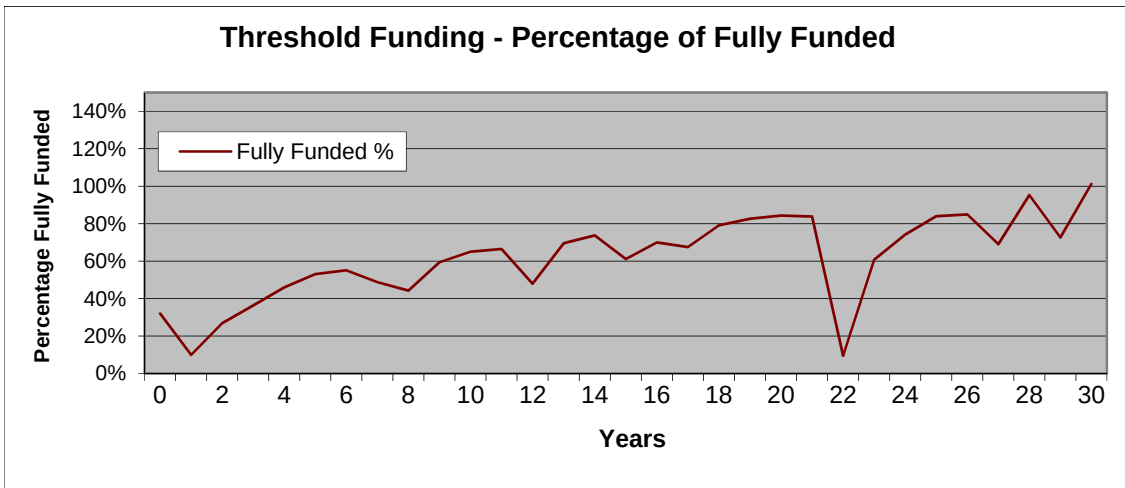
Parkside @ Woodbridge

Threshold Reserve Funding Option

Annual Reserve Contribution:	\$51,100
Reserve Balance:	\$108,300
Interest on Reserves	0.55%
Construction Escalation	3.00%
Inflation Rate CPI	3.00%



Threshold funding is set to maintain a minimum yearly reserve balance equal to the annual yearly reserve contribution, or other minimum value the Association may identify. In the chart above the minimum threshold occurs in year 22, when the reserve balance is (nearly) equal to the annual reserve contribution.



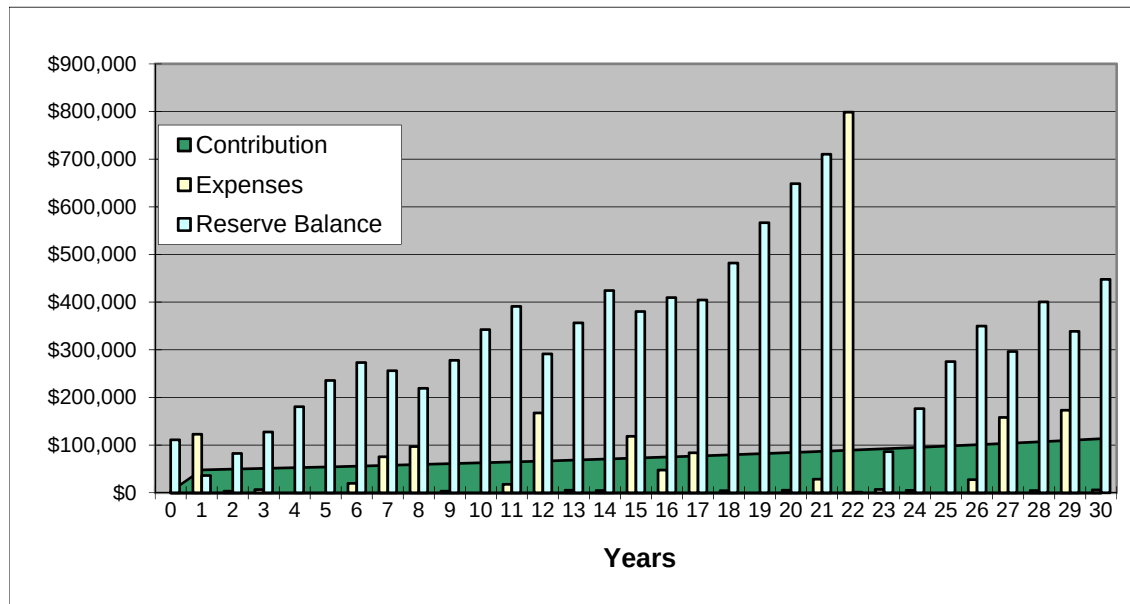
The chart above shows the projected yearly reserve balance as a % of the (optimum) Fully Funded Balance. See the Fully Funded Option for the annual contribution rate required to achieve 100% Fully Funded status.

Figure 2.2

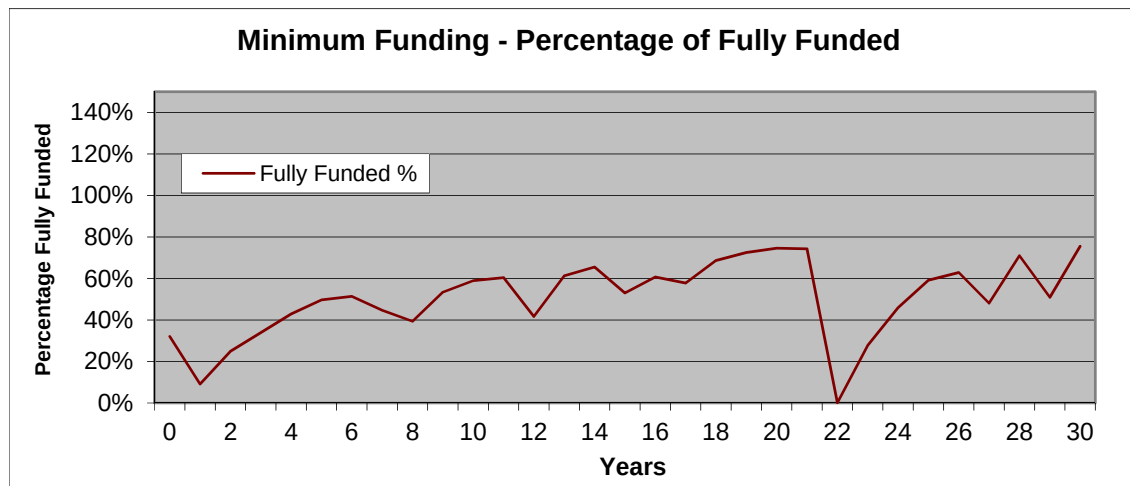
Parkside @ Woodbridge

Minimum Reserve Funding Option

Annual Reserve Contribution:	\$48,100
Reserve Balance:	\$108,300
Interest on Reserves	0.55%
Construction Escalation	3.00%
Inflation Rate CPI	3.00%



Minimum funding is set to maintain a minimum, non-zero reserve balance, or other minimum value the Association may identify. In the chart above the minimum balance occurs in year 22, when the reserve balance is (nearly) equal zero.



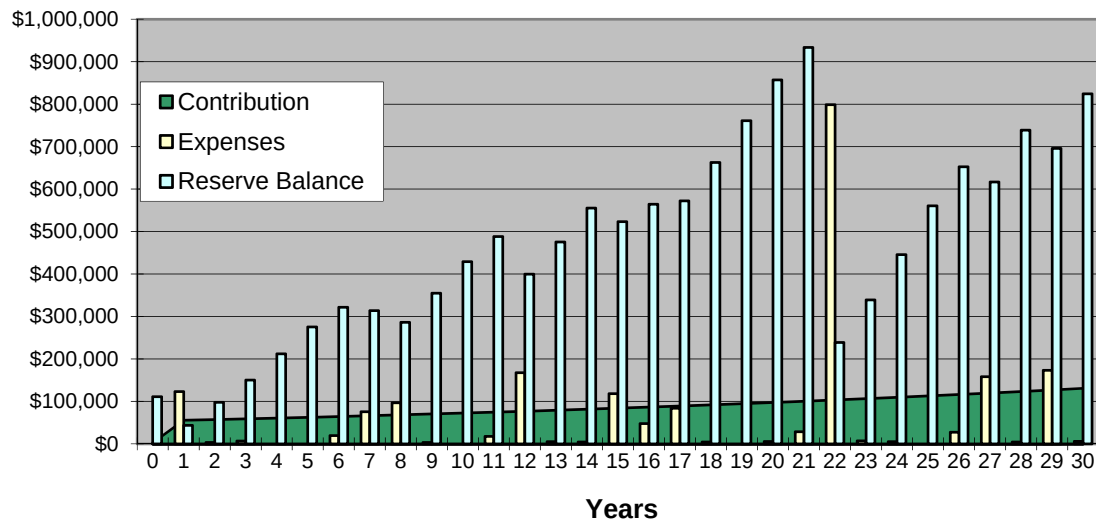
Assuming the Minimum funding contribution rate, the chart above shows the yearly reserve balance as a % of the (optimum) Fully Funded Balance.

Figure 2.3

Parkside @ Woodbridge

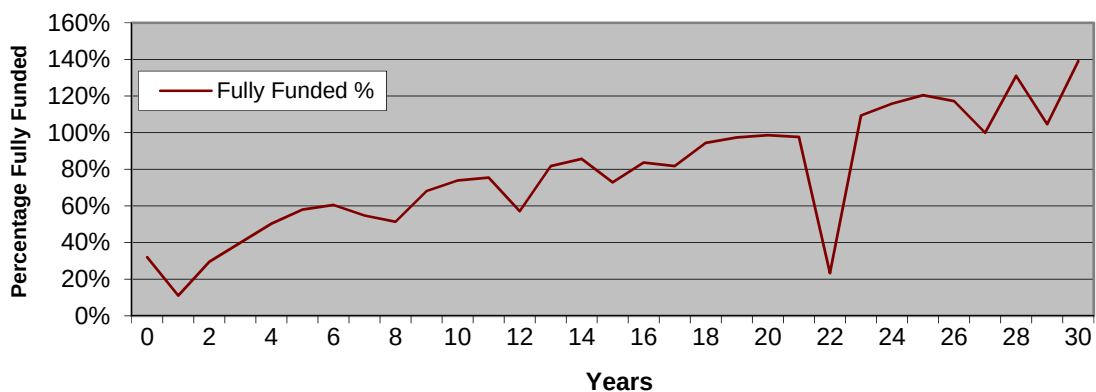
Fully Funded Option

Annual Reserve Contribution:	\$55,500
Reserve Balance:	\$108,300
Interest on Reserves	0.55%
Construction Escalation	3.00%
Inflation Rate CPI	3.00%



The annual Reserve contribution rate is set to achieve Fully Funded status within 5-20 years, or date set by the Association. Typically, the annual Reserve contribution rate for Fully Funded status is significantly higher than the Threshold or Baseline Options.

Fully Funding Option - Percentage of Fully Funded



The annual Reserve contribution rate is set to a value that will achieve Fully Funded status for the Reserve funds. Typically, we set the contribution rate to attain Fully Funded status within 20 years or a date set by the Association. The chart above indicates that Fully Funded status is projected to occur in year 23. It is assumed the contribution rate would then be re-set to approximate the annual cost of depreciated building components.

Fully Funded Balance Calculation

The Fully Funded Balance for Parkside at Woodbridge is \$346,681. The actual current funding is \$108,300. The condominium is approximately 31% Fully Funded. This means that based on a straight line savings for each building component, you have a moderate risk of special assessments.

"Fully Funded Balance" means the value of the deteriorated portion of all the reserve components (*see chart at the end of this section for this calculation*). The fully funded balance for each reserve component is calculated by multiplying the current replacement cost of that reserve component by its effective age, then dividing the result by that reserve component's useful life. The sum total of all reserve components' fully funded balances is the association's fully funded balance. RCW 64.34.020 (22). *Italics text added.*

An example; if roofing replacement will cost \$100,000 and the roof is 5 years old, with a 20-year service life, the expended cost is $5/20^{\text{th}}$ of \$100,000 or \$25,000. The Fully Funded Balance is the current sum of all "common" expended component cost.

We recommend that the association adopt a policy regarding their reserve funding, which would address the level of funding that the association would strive to maintain, and well as methods of investing reserve funds to best match risk with return, and investment length with expected expenses.

FUNDING STATUS

Generally, condominiums that are:

70% or more "Funded" are considered at low risk for special assessment;

30% to 70% "Funded" are considered at moderate risk for special assessment;

30% or less "Funded" are considered at high risk for special assessment.

At 31% funded, your condominium is considered at moderate risk for special assessment.

SEEKING FULLY FUNDED STATUS?

In an ideal world, the original Condominium Association would have begun setting aside Reserve funds equal to the annual component expense (loss of 1-year life on all components) commencing in the first year of occupancy, with yearly adjustments tied to construction cost escalation. In practice, most C.A.s begin with lower annual reserve contributions (if any), and few inflation adjustments. The effect of this practice is to postpone the recovery of these expenses to future years and future owners. This means that future reserve contributions will need to be higher than otherwise required, in order to “make-up” for low initial reserve contributions. Seeking Fully Funded status is a reasonable goal, although it is technically not necessary to maintain a viable Reserve account.

The essential funding consideration is to set the contribution rate at a level that will insure that the balance in the account, after expenses, does not reach zero, (or other “threshold” amount), over a sufficiently long (30-year minimum) duration. The contribution rate is the amount sufficient to pay for repairs as they occur, and does not have any mathematical connection to the fully funded balance, or the percent fully funded. The contribution rate is a look at the cash required each year to make the anticipated repairs, and whether or not there is enough money in the bank to pay for them.

SO WHY CARE ABOUT THE PERCENT FULLY FUNDED?

In effect the “percent fully funded” is a measure of how well an association can withstand the risk of unexpected expenses. Either unplanned emergency expenses (not covered by insurance), or expenses that are more expensive than predicted in the reserve study, or required earlier than in the reserve study. A higher percent funded means more money in the bank and lower risk of special assessment when these unexpected expenses occur.

We typically recommend that the association select a minimum reserve account balance (or Threshold) it wants to maintain, and select a contribution rate to maintain that minimum with a upward trend toward “fully funded” status. We often recommend that the HOA consider a threshold balance equal to one years reserve contribution, however each HOA must judge their unique risk tolerance.

Figure 3.1

Parkside @ Woodbridge

Current Fully Funded Balance Calculation

Date: 12/7/2016

Reserve Balance: \$108,300

As of Date: 10/31/2016

No.	Component	Life Cycle Years	Remaining Years	Cost/Cycle	Quantity	Unit	Fully Funded Balance
2.1	Concrete Pavement	5	1	12750	11400	GSF	\$ 10,200
2.1.1	Asphalt Pavement	7	1	1860	3100	SF	\$ 1,594
2.1.2	Concrete Curbs	7	1	1000	400	LF	\$ 857
2.2	Landscaping	6	2	3000	1	LS	\$ 2,000
2.3	Retaining Walls	20	7	2200	~600	SF	\$ 1,430
2.4	Top Lattice Fences	20	7	4100	100	LF	\$ 2,665
2.5	White Picket Fences	15	1	20000	825	LF	\$ 18,667
2.6	Mailboxes	25	12	2400	2	EA	\$ 1,248
5.1	Exterior Handrails	30	17	1800	60	LF	\$ 780
6.4	Elastomeric Deck Coatings	7	1	4640	580	SF	\$ 3,977
7.1	Exterior Sidewall - Panel & Plank	50	37	0	41000	GSF	\$ -
7.1.1	Exterior Sidewall - Shingles	30	17	10000	15	SQ	\$ 4,333
7.2	Masonry	40	27	3000	1	LS	\$ 975
7.3	Roofing	25	12	115500	343	SQ	\$ 60,060
7.4	Gutters & Downspouts	30	17	20790	3900	LF	\$ 9,009
8.1	Doors	10	3	2000	24	EA	\$ 1,400
8.1.1	Fireroom Doors	20	7	4000	8	EA	\$ 2,600
8.2	Garage Doors	20	7	24000	0	EA	\$ 15,600
8.3	Windows & Sliders	35	22	339200	424	EA	\$ 125,989
9.1	Exterior Painting	7	1	66000	43000	GSF	\$ 56,571
10.1	Chimneys	25	12	9600	3860	LF	\$ 4,992
15.1	Plumbing	10	7	2000	1	LS	\$ 600
15.2	Irrigation	10	7	2000	1	LS	\$ 600
15.3	Drainage	50	37	0	1	LS	\$ -
15.4	Sewer	30	17	10000	1	LS	\$ 4,333
16.1	Electrical	10	3	1600	8	EA	\$ 1,120
16.2	Exterior Lighting	20	7	7200	48	EA	\$ 4,680
17.1	Fire Alarm System	20	7	16000	8	EA	\$ 10,400
20.1	Reserve Study	3	3	2500	1	EA	\$ -

Fully Funded Balance (Reserves required to be considered Fully Funded)

\$346,681

Current Reserve Balance (Not incl. current year contribution or expenses)

\$108,300

Current Reserve Balance - Percent Fully Funded

31%

The Current "Fully Funded Balance" is a calculation of the replacement cost of expended "common" building components. An example; if roofing replacement will cost \$100,000 and the roof is 5 years old, with a 20 year service life, the expended cost is 5/20th. of \$100,000 or \$25,000. The Fully Funded Balance is the current sum of all "common" expended component cost.

HERE IS WHAT THE CONDOMINIUM ACT SAYS ABOUT THESE TERMS:

RCW 64.34.382(2)(i) says a reserve study shall include: "Recommended reserve account contribution rate"

"Contribution Rate" means, in a Reserve Study as described in RCW 64.34, the amount contributed to the reserve account so that the association will have cash reserves to pay major maintenance, repair, or replacement costs without the need of a special assessment. RCW 64.34.020 (10).

RCW 64.34.382(2)(j) says a reserve study shall include: "Projected reserve account balance for thirty years and a funding plan to pay for projected costs from those reserves without reliance on future unplanned special assessments"

RCW 64.34.382(2)(e) says a reserve study shall include "The percentage of the fully funded balance that the reserve account is funded".

"Fully Funded Balance" means the value of the deteriorated portion of all the reserve components. The fully funded balance for each reserve component is calculated by multiplying the current replacement cost of that reserve component by its effective age, then dividing the result by that reserve component's useful life. The sum total of all reserve components' fully funded balances is the association's fully funded balance. RCW 64.34.020 (22).

Reserve Study Amendment to the Washington Condominium Act

RCW 64.34.380 to 64.34.390

Chapter 115, Laws of 2008

60th Legislature 2008 Regular Session

CONDOMINIUM ASSOCIATIONS--RESERVE ACCOUNTS AND STUDIES

EFFECTIVE DATE: 06/12/08

AN ACT Relating to reserve accounts and studies for condominium associations; amending RCW 64.34.010, 64.34.020, 64.34.304, 64.34.410, and 64.34.425; and adding new sections to chapter 64.34 RCW.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF WASHINGTON:

NEW SECTION. Sec. 1. A new section is added to chapter 64.34 RCW under the subchapter heading "Article 3" to read as follows:

(1) An association is encouraged to establish a reserve account to fund major maintenance, repair, and replacement of common elements, including limited common elements that will require major maintenance, repair, or replacement within thirty years. A reserve account shall be established in the name of the association. The board of directors is responsible for administering the reserve account.

(2) Unless doing so would impose an unreasonable hardship, an association shall prepare and update a reserve study, in accordance with the association's governing documents and RCW 64.34.224(1). The initial reserve study must be based upon a visual site inspection conducted by a reserve study professional.

(3) Unless doing so would impose an unreasonable hardship, the association shall update the reserve study annually. At least every three years, an updated reserve study must be prepared and based upon a visual site inspection conducted by a reserve study professional.

(4) This section and sections 2 through 6 of this act apply to condominiums governed by chapter 64.32 RCW or this chapter and intended in whole or in part for residential purposes. These sections do not apply to condominiums consisting solely of units that are restricted in the declaration to nonresidential use. An association's governing documents may contain stricter requirements.

NEW SECTION. Sec. 2. A new section is added to chapter 64.34 RCW under the subchapter heading "Article 3" to read as follows:

(1) A reserve study as described in section 1 of this act is supplemental to the association's operating and maintenance budget. In preparing a reserve study, the association shall estimate the anticipated major maintenance, repair, and replacement costs, whose infrequent and significant nature make them impractical to be included in an annual budget.

(2) A reserve study shall include:

(a) A reserve component list, including quantities and estimates for useful life of each reserve component, remaining useful life of each reserve component, and current repair and replacement cost for each component;

(b) The date of the study and a statement that the study meets the requirements of this section;

(c) The level of reserve study performed: (i) Level I: Full reserve study funding analysis and plan;

(ii) Level II: Update with visual site inspection; (iii) Level III: Update with no visual site inspection;

(d) The association's reserve account balance;

(e) The percentage of the fully funded balance that the reserve account is funded;

(f) Special assessments already implemented or planned;

(continued)

- (g) Interest and inflation assumptions;
 - (h) Current reserve account contribution rate;
 - (i) Recommended reserve account contribution rate;
 - (j) Projected reserve account balance for thirty years and a funding plan to pay for projected costs from those reserves without reliance on future unplanned special assessments; and
 - (k) Whether the reserve study was prepared with the assistance of a reserve study professional.
- (3) A reserve study shall include the following disclosure:

"This reserve study should be reviewed carefully. It may not include all common and limited common element components that will require major maintenance, repair, or replacement in future years, and may not include regular contributions to a reserve account for the cost of such maintenance, repair, or replacement. The failure to include a component in a reserve study, or to provide contributions to a reserve account for a component, may, under some circumstances, require you to pay on demand as a special assessment your share of common expenses for the cost of major maintenance, repair, or replacement of a reserve component."

NEW SECTION. Sec. 3. A new section is added to chapter 64.34 RCW under the subchapter heading "Article 3" to read as follows:

An association may withdraw funds from its reserve account to pay for unforeseen or unbudgeted costs. The board of directors shall record any such withdrawal in the minute books of the association, cause notice of any such withdrawal to be hand delivered or sent prepaid by first-class United States mail to the mailing address of each unit or to any other mailing address designated in writing by the unit owner, and adopt a repayment schedule not to exceed twenty-four months unless it determines that repayment within twenty-four months would impose an unreasonable burden on the unit owners.

NEW SECTION. Sec. 4. A new section is added to chapter 64.34 RCW under the subchapter heading "Article 3" to read as follows:

(1) Where more than three years have passed since the date of the last reserve study prepared by a reserve study professional, the owners of the units to which at least twenty percent of the votes are allocated may demand, in writing, to the association that the cost of a reserve study be included in the next budget and that the study be obtained by the end of that budget year. The written demand must refer to this section. The board of directors shall, upon receipt of the written demand, provide unit owners making the demand reasonable assurance that the board of directors will include a reserve study in the next budget and, if the budget is not rejected by the owners, will arrange for the completion of a reserve study.

(2) In the event a written demand is made and a reserve study is not timely prepared, a court may order specific performance and award reasonable attorneys' fees to the prevailing party in any legal action brought to enforce this section. An association may assert unreasonable hardship as an affirmative defense in any action brought against it under this section. Without limiting this affirmative defense, an unreasonable hardship exists where the cost of preparing a reserve study would exceed ten percent of the association's annual budget.

(3) A unit owner's duty to pay for common expenses shall not be excused because of the association's failure to comply with this section or sections 2 through 6 of this act. A budget ratified by the unit owners under RCW 64.34.308(3) may not be invalidated because of the association's failure to comply with this section or sections 2 through 6 of this act.

(continued)

NEW SECTION. Sec. 5. A new section is added to chapter 64.34 RCW under the subchapter heading "Article 3" to read as follows:

Subject to section 4 of this act, the decisions relating to the preparation and updating of a reserve study must be made by the board of directors of the association in the exercise of the reasonable discretion of the board. Such decisions must include whether a reserve study will be prepared or updated, and whether the assistance of a reserve study professional will be utilized.

NEW SECTION. Sec. 6. A new section is added to chapter 64.34 RCW under the subchapter heading "Article 3" to read as follows:

Monetary damages or any other liability may not be awarded against or imposed upon the association, the officers or board of directors of the association, or those persons who may have provided advice or assistance to the association or its officers or directors, for failure to: Establish a reserve account; have a current reserve study prepared or updated in accordance with sections 1 through 5 of this act; or make the reserve disclosures in accordance with section 2 of this act and RCW 64.34.410(1)(oo) and 64.34.425(1)(s).

NOTE: FOLLOWING SECTIONS REDACTED TO REFLECT CHANGES TO EXISTING LAW

Sec. 7. RCW 64.34.010 and 1993 c 429 s 12 are each amended to read as follows:

(1) This chapter applies to all condominiums created within this state after July 1, 1990. RCW 64.34.040 (separate titles and taxation), RCW 64.34.050 (applicability of local ordinances, regulations, and building codes), RCW 64.34.060 (condemnation), RCW 64.34.208 (construction and validity of declaration and bylaws), RCW 10 64.34.212 (description of units), RCW 64.34.304(1) (a) through (f) and (k) through (r) (powers of unit owners' association), RCW 64.34.308(1) (board of directors and officers), RCW 64.34.340 (voting-proxies), RCW 64.34.344 (tort and contract liability), RCW 64.34.354 (notification on sale of unit), RCW 64.34.360(3) (common expenses-assessments), RCW 64.34.364 (lien for assessments), RCW 64.34.372 (association records), RCW 64.34.425 (resales of units), RCW 64.34.455 (effect of violation on rights of action; attorney's fees), sections 1 through 6 of this act (reserve studies and accounts), and RCW 64.34.020 (definitions) to the extent necessary in construing any of those sections, apply to all condominiums created in this state before July 1, 1990; but those sections apply only with respect to events and circumstances occurring after July 1, 1990, and do not invalidate or supersede existing, inconsistent provisions of the declaration, bylaws, or survey maps or plans of those condominiums.

...

Sec. 8. RCW 64.34.020 and 2004 c 201 s are each amended to read as follows:

In the declaration and bylaws, unless specifically provided otherwise or the context requires otherwise, and in this chapter:

...

(10) "Contribution rate" means, in a reserve study as described in section 1 of this act, the amount contributed to the reserve account so that the association will have cash reserves to pay major maintenance, repair, or replacement costs without the need of a special assessment.

...

((18)) (19) "Effective age" means the difference between the useful life and the remaining useful life.

...

((20)) (22) "Fully funded balance" means the value of the deteriorated portion of all the reserve components. The fully funded balance for each reserve component is calculated by multiplying the current replacement cost of that reserve component by its effective age, then dividing the result by that reserve component's useful life. The sum total of all reserve components' fully funded balances is the association's fully funded balance.

...

((28)) (31) "Remaining useful life" means the estimated time, in years, that a reserve component can be expected to continue to serve its intended function.

(continued)

(32) "Replacement cost" means the current cost of replacing, repairing, or restoring a reserve component to its original functional condition.

...
 (((29))) (34) "Reserve components" means common elements whose cost of maintenance, repair, or replacement is infrequent, significant, and impractical to include in an annual budget.

(35) "Reserve study professional" means an independent person suitably qualified by knowledge, skill, experience, training, or education to prepare a reserve study in accordance with sections 1 and 2 of this act.

...
 (40) "useful life" means the estimated time, in years, that a reserve component can be expected to serve its intended function.

...
 Sec. 9. RCW 64.34.304 and 1993 c 429 s 11 are each amended to read as follows:

(1) Except as provided in subsection (2) of this section, and subject to the provisions of the declaration, the association may:

- (p) Establish and administer a reserve account as described in section 1 of this act;
- (q) Prepare a reserve study as described in section 1 of this act; (r) Exercise any other powers conferred by the declaration or bylaws;

...
 Sec. 10. RCW 64.34.410 and 2005 c 456 s 19 are each amended to read as follows:

(1) A public offering statement shall contain the following information:

...
 (oo) If the association does not have a reserve study that has been prepared in accordance with sections 1 and 2 of this act or its governing documents, the following disclosure:

"This association does not have a current reserve study. The lack of a current reserve study poses certain risks to you, the purchaser. Insufficient reserves may, under some circumstances, require you to pay on demand as a special assessment your share of common expenses for the cost of major maintenance, repair, or replacement of a common element."

...
 (2) The public offering statement shall include copies of each of the following documents: The declaration, the survey map and plans, the articles of incorporation of the association, bylaws of the association, rules and regulations, if any, current or proposed budget for the association, the balance sheet of the association current within ninety days if assessments have been collected for ninety days or more, the association's current reserve study, if any, and the inspection and repair report or reports prepared in accordance with the requirements of RCW 64.55.090.

If any of the foregoing documents listed in this subsection are not available because they have not been executed, adopted, or recorded, drafts of such documents shall be provided with the public offering statement, and, before closing the sale of a unit, the purchaser shall be given copies of any material changes between the draft of the proposed documents and the final documents.

(continued)

Sec. 11. RCW 64.34.425 and 2004 c 201 s 4 are each amended to read as follows:

(1) Except in the case of a sale where delivery of a public offering statement is required, or unless exempt under RCW 64.34.400(2), a unit owner shall furnish to a purchaser before execution of any contract for sale of a unit, or otherwise before conveyance, a resale certificate, signed by an officer or authorized agent of the association and based on the books and records of the association and the actual knowledge of the person signing the certificate, containing:

...
(q) A copy of the declaration, the bylaws, the rules or regulations of the association, the association's current reserve study, if any, and any other information reasonably requested by mortgagees of prospective purchasers of units. Information requested generally by the federal national mortgage association, the federal home loan bank board, the government national mortgage association, the veteran's administration and the department of housing and urban development shall be deemed reasonable, provided such information is reasonably available to the association; ((and))

...
(s) If the association does not have a reserve study that has been prepared in accordance with sections RCW 64.34.380 and 64.34.382 of this act or its governing documents, the following disclosure:

"This association does not have a current reserve study. The lack of a current reserve study poses certain risks to you, the purchaser. Insufficient reserves may, under some circumstances, require you to pay on demand as a special assessment your share of common expenses for the cost of major maintenance, repair, or replacement of a common element."

Passed by the Senate March 8, 2008.

Passed by the House March 4, 2008.

Approved by the Governor March 21, 2008.

Filed in Office of Secretary of State March 24, 2008.

Amended in 2011

Terms and Definitions

BUILDING CODES – Nationally recognized set of rules/standards that specify the minimum acceptable level of safety for constructed building structures, known as “Building Codes”. Purpose is to protect public health, safety and general welfare as they relate to the construction and occupancy of buildings and structures and used to measure the acceptability of a particular material or building procedure. To state this is built to "code," it is acceptable to all concerned. Codes can include the following: International Building Code (IBC) (applicable to most multifamily housing), International Residential Code (IRC)(applicable to one and two family structures), Washington Energy Code, National Electric Code (NEC), Uniform Plumbing Code (UPC) , National Fire Protection Association Standards (NFPA). The practice of amending these building codes can vary considerably by each city or county.

BUILDING COMPONENT – see “Reserve Component”.

CAULKING – A silicone, polyurethane, polyether, acrylic latex, and one-component sealants are commonly sold in cartridges (tube) which are loaded into a pistol-like caulking gun (opening at the side), used to seal cracks for painting, provide thermal insulation, control water penetration and noise mitigation. Also known as, “Sealant”.

CIRCUIT BREAKERS – An automatically-operated electrical switch designed to protect an electrical circuit from damage caused by overload or short circuit. Its basic function is to detect a fault condition and, by interrupting continuity, to immediately discontinue electrical flow.

COMPONENT NUMBER – A number assigned to each building component that allows orderly grouping for each component. Based on the Construction Specifications Institute’s Numbers and Titles for the Building Industry.

COMMON ELEMENTS – Those portions of the building which are owned collectively by all Unit owners in a condominium, and for which the association is responsible.

CONDITION ASSESSMENT – The task of evaluating the current condition of the component based on observed or reported characteristics.

CONTRIBUTION RATE – In a Reserve Study as described in RCW 64.34, the amount contributed to the reserve account so that the association will have cash reserves to pay major maintenance, repair, or replacement costs without the need of a special assessment.

EFFECTIVE AGE – The difference between the Useful Life and the Remaining Useful Life (UL – RUL).

Terms and Definitions (continued)

EIFS – Exterior Insulation and Finish System. An exterior building system with the stucco like appearance of traditional stucco, but is a synthetic stucco. It is actually a lightweight synthetic wall cladding that includes foam insulation board, a polymer and cement base coat that's applied to the top of the insulation, then reinforced with glass fiber mesh, and a thin colored textured finish coating. It is marketed as a waterproof, lifetime finish, but has had many problems in the Pacific Northwest.

ELECTRICAL SWITCH GEAR – Any switching and interrupting devices in combination with their associated control, regulating, metering, and protective devices for part or all of a building; includes electrical enclosures, fuses, large breakers, and connecting equipment. (See “Electrical” component)

EXPERIENCE – A phrase used in component worksheets to describe how a component Useful Life might be determined. This expression indicates that the person inspecting is using their past experience and knowledge of similar situations to predict a ‘useful life’.

FLASHING – Typically refers to thin continuous pieces of sheet metal or other impervious material installed to prevent the passage of water into a structure from an angle or joint, between like or different materials on the exterior of a building. Flashing generally operates on the principle that, for water to penetrate a joint, it must work itself upward against the force of gravity or in the case of wind-driven rain, it would have to follow a tortuous path during which the driving force will be dissipated. Exterior building materials can be configured with a non-continuous profile to defeat water surface tension.

FULLY FUNDED BALANCE – An indicator against which the actual (or projected) reserve balance can be compared. The reserve balance that is in direct proportion to the fraction of life “used up” (deteriorated portion) of the current repair or replacement cost of a reserve component. This number is calculated for each component, and then summed together for an association’s total fully funded balance. $FFB = \text{Current Replacement Cost} * \text{Effective Age} / \text{Useful Life}$.

FULLY FUNDED (CONTRIBUTION RATE) – A Reserve Contribution Rate that is constant, increasing with inflation, that will bring the Reserve Account balance up to the “Fully Funded Balance” level and keep it there.

HVAC – Heating, Ventilation, and Air Conditioning.

INFLATED DOLLARS – As opposed to current dollars, inflated dollars recognize that costs in the future will likely be higher than today. The rise in the general level of prices of goods and services over a period of time; which buys fewer goods and services in future years. A rate of inflation must be assumed and then applied to all future costs. Also referred to as future cost.

Terms and Definitions (continued)

INFLATION MULTIPLIER – 100% plus the assumed rate of inflation. Thus, for an assumed yearly inflation rate of 5%, the "multiplier" would be 105% or 1.05 if expressed as a decimal number rather than as a percentage. Each successive year the previous year's "multiplier" is multiplied by this number to arrive at the next year's "multiplier."

INTEREST RATE MULTIPLIER – The assumed rate of interest earned on the average annual reserve bank account balance. Thus, 4% interest would be 0.04 expressed as a decimal number. A rate of interest earned must be assumed for all future years. Typically, this is lower than the rate of inflation.

LIFE AND VALUATION ESTIMATES – The task of estimating Useful Life, Remaining Useful Life, and Repair or Replacement Costs for the Reserve components.

LIMITED COMMON ELEMENT – Those common elements which are assigned exclusively to one or some Units. Unit owners may be responsible for the cost to repair and maintain limited common elements.

MEANS – A term used in component sheets to describe how a component 'typical life' might be determined. This term refers to a book published by RS Means. The book lists various maintenance terms, problem solutions, and 'typical lives'.

MINIMUM FUNDING (CONTRIBUTION RATE) – A Reserve Contribution Rate that is constant, increasing with inflation, to provide funds for all anticipated Reserve Expenses so that no special assessments are required for 30 years, but with no minimum balance above zero in some years.

PERCENT FULLY FUNDED – The ratio or percent of the Fully Funded Balance at any point in time of the actual (or projected) condominium Reserve Balance.

PHYSICAL ANALYSIS – The portion of the Reserve Study where the Component Inventory, Condition Assessment, and Life & Valuation Estimate tasks are performed.

PREVENTIVE MAINTENANCE – All care and servicing by personnel for the purpose of maintaining equipment and facilities in satisfactory operating condition by providing for systematic inspection, detection, and correction of incipient failures either before they occur or before they develop into major defects.

RCW – the **R**evised **C**ode of **W**ashington. RCW 64.34 is the Washington Condominium Act, the statute that governs condominiums.

Terms and Definitions (continued)

REMAINING USEFUL LIFE – The estimated time, in years, that a reserve component can be expected to continue to serve its intended function. Projects anticipated to occur in the initial year have “zero” Remaining Useful Life.

REPLACEMENT COST – The current cost of replacing, repairing, or restoring a reserve component to its original functional condition.

RESERVE ACCOUNT – Money set aside for future repair and replacement projects. For condominiums, the RCW requires a separate Reserve Account be maintained to hold reserves to fund repair or replacement of Reserve Components.

RESERVE COMPONENTS – Individual line items in the Reserve Study developed or undated in the physical analysis. These elements form the building blocks for the Reserve Study. Components typically are: 1) Association responsibility, 2) with limited useful life expectancies, 3) have predictable remaining life expectancies, 4) above a minimum threshold cost, and 5) as required by local codes. Common elements whose cost of maintenance, repair, or replacement is infrequent, significant, and impractical to include in an annual budget.

RESERVE CONTRIBUTION – The amount of money saved to fund “replacement Costs” for maintenance and repairs of Common Elements. See “Contribution Rate”. Current contributions and recommended contributions may be different.

RESERVE STUDY – A Physical Assessment and a Financial Analysis of a building for the purpose of providing a budget planning tool which identifies the current status of the Reserve fund. And provides a stable and equitable Funding Plan to offset the anticipated major maintenance, repair, and replacement costs, whose infrequent and significant nature make them impractical to be included in an annual budget, which will need to be repaired or replaced over the next 30 years. The Washington Condominium Act sets out requirements for annual reserve studies.

RESERVE STUDY PROFESSIONAL – An independent person suitably qualified by knowledge, skill, experience, training, or education to prepare a reserve study in accordance with RCW 64.34. RCW 64.34.020 (35)

SPECIAL ASSESSMENT – A charge or assessment levied against all unit owners that are necessary when a needed repair/replacement/upgrade has not been planned for and for which there wasn't enough money in the Reserve fund.

SURPLUS – An actual (or projected) Reserve Balance greater than the Fully Funded Balance.

Terms and Definitions (continued)

TOTAL COST – Total cost to replace entire quantity of component in today's dollars.
=(Quantity x Unit Cost)

THRESHOLD FUNDING (CONTRIBUTION RATE) – A Reserve Contribution Rate that is constant, which increases with inflation, to keep the reserve balance above a determined minimum amount (“threshold”) during the next 30 years.

TYP. – Abbreviation for ‘typical’ ; used on photographs and in text to refer to a problem that is shown or described once, but applies to many locations.

TYPICAL LIFE – An average expected life for an average building component. As in any statistical average, there is a range of years over which each individual item might fall. This is the same as “Useful life”.

USEFUL LIFE (UL) – Total Useful Life, the estimated time, in years, that a reserve component can be expected to serve its intended function if properly constructed in its present application or installation.

YEAR END BALANCE OR RESERVE BALANCE – What is projected to be left in the reserve account after the expected yearly expenses and contributions are added to the prior year's carryover balance. The balance assumes that the reserve contributions expenses occur as predicted.

YEARLY EXPENSES – The total labor and material costs associated with all of the repairs/maintenance that are scheduled in that particular year.

UNIT OF MEASURE – Unit used to measure component. (See explanation below)

SF – Square Feet

GSF – Gross Square Feet

SY – Square Yard

SQ – Square = 100 square feet

LF – Linear Feet

LS – Lump Sum

EA – Each = Per Single Unit

Allowance – Allowance for component repair or replacement

Contract – Cost obtained from actual contract or bid

Evaluators Credentials

James E. Miller

Reserve Professional
Senior Project Manager

James Miller has an extensive background in residential, retail development and construction, with over 40 years of field and management experience in the industry. James' project knowledge in residential, multi-family, and mid-rise construction provides him the expertise in project materials/products, project scheduling, contractor and design team management, value engineering, and knowledge in multiple forms of construction, construction disciplines, and methods.

James has spent the last 22 years in Project Management and Construction Management developing condominium communities throughout Western Washington. As Senior Project Manager, the responsibilities included building design, entitlement, construction quality, schedules and budgets. Projects included townhome communities, condo flats, detached condos and urban mixed-use buildings with retail. James worked directly with Design Consultants, providing the lead for specific building details including critical exterior building envelope assemblies.

James is currently serving as the Senior Project Manager for Kappes Miller Consulting and Construction Management, providing Professional Reserve Studies and Project Management services to Kappes Miller's clients and other Condominium Associations throughout the region.

Evaluators Credentials

Michael L. Arndt, C.B.S.T. Reserve Analyst
Project Manager

Michael Arndt joined Kappes Miller Management, LLC in January 2015 as Project Manager/ Reserve Analyst.

Prior to Mr. Arndt's employment at Kappes Miller Management, LLC, he held a position as Project Manager at BEE Consulting, LLC. His Duties included: Project Manager for Existing Structures, in charge of multiple projects in the Greater Seattle area. A central aspect of his experience at BEE Consulting consisted of failure analysis of building envelope issues and assessments using Infrared Thermography. Mr. Arndt also has extensive experience in leak investigations, urethane deck coating issues and all other areas of the building envelope. As well as, developing a Building Envelope Commissioning Plan and assisting in Testing Division and the Inspection Division.

He also held a position as President of Fair & Square Contracting, Inc. His duties included: designing remedial repairs; conducting leak and structural investigations; HOA Assessments; and managing a variety of waterproofing projects and specialty projects on both Multi-family and single family structures.

During his studies at Edmonds C.C., he completed an internship with Dwayne Rowdy of AAA Pest and Home Inspections, performing Condominium assessments and home inspections.

Disclosures

1 – Kappes - Miller also provides Project Management services for major repair projects including roofing, decks, and building envelope replacement.

2 – No employee of Kappes - Miller has any interest in, or obligation to any construction company or development entity that creates condominiums.

This report and analysis is based upon observations of the visible and apparent condition of the building and its major components on the date of the inspection. Although care has been taken in the performance of this inspection, Kappes - Miller (and/or its representatives) make no representations regarding latent or concealed defects which may exist and no warranty or guarantee is expressed or implied. This report is made only in the best exercise of our ability and judgment. Conclusions in this report are based on estimates of the age and normal working life of various items of equipment and appliances. Predictions of life expectancy and the balance of useful life are necessarily based on industry and/or statistical comparisons. It is essential to understand that actual conditions can alter the useful life of any item. The previous use/misuse, irregularity of servicing, faulty manufacture, unfavorable conditions, acts of nature and unforeseen circumstances make it impossible to state precisely when each item would require replacement. The client herein should be aware that certain components within the above referenced property may function consistent with their purpose at the time of the inspection, but due to their nature are subject to deterioration without notice. Unless otherwise noted, all building components are assumed to meet the building code requirements in force at the time of construction. Information provided by the client is assumed to be accurate and reliable. Conclusions reached in this report assume responsible ownership and competent management of the property. Information provided to us by others is believed to be reliable, but we assume no responsibility for accuracy thereof.

Appendix A

COMPONENT DATA SHEETS

The following Component Sheets were used to document components and cost projections in the preparation of this Study.

Component Data Sheet

Component Number: 2.1
Component Name: Concrete Pavement
Description: Walkways, Stairs & Entries
Location: Throughout
Reviewed By: MA

Typical Useful Life Cycle Yr. 5
 Age 13
 Typical Remaining Years -8
 Adjustment to Remaining Years 9 Deferred by Board
 Remaining Years (next expense) 1

Reserve Funding Required? YES

Reserve Cost Per Year		
Year No.	Year	Cost
1	2017	\$12,750
6	2022	\$9,750
11	2027	\$12,750
16	2032	\$9,750
21	2037	\$12,750
26	2042	\$9,750



Cost Projection

Quantity: 11,400 Units: GSF

Patios, driveways, broom walkways, stamped walkways and stairs appear to be in fair condition. Noted some cracking and pooling water on several entries. Budget for resealing of surface to mitigate fading and preserve luster on a 5-year cycle, beginning year 1.

Budget Resealing Stamped Concrete: 3,900 SF @ \$2.50/SF = \$9,750

Budget Repair Allowance: \$3,000, on a 10-year cycle starting in year 1.

Component Data Sheet

Component Number: 2.1.1
Component Name: Asphalt Pavement
Description: Asphalt
Location: Throughout
Reviewed By: MA

Typical Useful Life Cycle Yr. 7
 Age 13
 Typical Remaining Years -6
 Adjustment to Remaining Years 7 Deffered by Board
 Remaining Years (next expense) 1

Reserve Funding Required? YES

Reserve Cost Per Year		
Year No.	Year	Cost
1	2017	\$1,860
8	2024	\$1,860
15	2031	\$1,860
22	2038	\$1,860
29	2045	\$1,860



Cost Projection	
Quantity: 3,100	Units: SF
Asphalt pavement was observed to be in fair condition with some surface erosion along drainage paths. Budget for seal coating and 10% of total area for crack repair coinciding on a 7-year cycle, beginning year 1.	
Budget clean and seal coat: 3100 SF @ \$.30/SF = \$930	
Budget crack repair and surface repairs: 310SF @ \$3/SF = \$930	
Total:	\$1,860

Component Data Sheet

Component Number: 2.1.2
Component Name: Concrete Curbs
Description: Concrete
Location: Throughout
Reviewed By: MA

Typical Useful Life Cycle Yr. 7
 Age 13
 Typical Remaining Years -6
 Adjustment to Remaining Years 7 Deferred by Board
 Remaining Years (next expense) 1

Reserve Funding Required? YES

Reserve Cost Per Year		
Year No.	Year	Cost
1	2017	\$1,000
8	2024	\$1,000
15	2031	\$1,000
22	2038	\$1,000
29	2045	\$1,000



Cost Projection	
Quantity: 400	Units: LF
Concrete curbs were observed to be in good condition. Budget for painting and minor repairs in year 1, on a 7-year cycle; to coincide with asphalt seal coat. (Asphalt Pavement - Component 2.1.1)	
Budget Allowance for paint and repairs: \$1,000	

Component Data Sheet

Component Number: 2.2
Component Name: Landscaping
Description: Trees & Shrubs
Location: Throughout
Reviewed By: MA

Typical Useful Life Cycle Yr. 6
 Age 4
 Typical Remaining Years 2
 Adjustment to Remaining Years
 Remaining Years (next expense) 2

Reserve Funding Required? YES

Reserve Cost Per Year		
Year No.	Year	Cost
2	2018	\$3,000
8	2024	\$3,000
14	2030	\$3,000
20	2036	\$3,000
26	2042	\$3,000



Cost Projection	
Quantity: 1	Units: LS
This component is for larger expenses outside of general maintenance fund.	
Tree replacements, drainage issues, large refurbishing, etc.	
Budget for \$3,000 every 6-years, starting in year 2.	
It was noted several locations had standing water issues throughout.	
Budget Allowance: \$3,000	

Component Data Sheet

Component Number: 2.3
Component Name: Retaining Walls
 Description: Masonry
 Location: Throughout
 Reviewed By: MA

Typical Useful Life Cycle Yr. 20
 Age 13
 Typical Remaining Years 7
 Adjustment to Remaining Years
 Remaining Years (next expense) 7

Reserve Funding Required? YES

Reserve Cost Per Year		
Year No.	Year	Cost
7	2023	\$2,200
27	2043	\$2,200



Cost Projection	
Quantity: ~600	Units: SF
Retaining walls appear to be in good condition. Budget for minor repairs to common area retaining walls on a 20-year cycle, beginning year 7.	
Budget Allowance: \$2,200	

Component Data Sheet

Component Number: 2.4
Component Name: Top Lattice Fences
Description: Privacy Fence
Location: Between Buildings
Reviewed By: MA

Typical Useful Life Cycle Yr. 20
 Age 13
 Typical Remaining Years 7
 Adjustment to Remaining Years
 Remaining Years (next expense) 7

Reserve Funding Required? YES

Reserve Cost Per Year		
Year No.	Year	Cost
7	2023	\$4,100
27	2043	\$4,100



Cost Projection	
Quantity: 100	Units: LF
Wood privacy fence appears to be in fair to poor condition. Wood fence consists of 6' height with 12" lattice top. Fence appears to be in need of painting and minor repairs in year 1.	
Budget Replacement: \$4,100 in year 7, on 20-year cycle.	

Component Data Sheet

Component Number:	2.5
Component Name:	White Picket Fences
Description:	Wood
Location:	Between Buildings
Reviewed By:	MA
Typical Useful Life Cycle Yr.	15
Age	<u>13</u>
Typical Remaining Years	<u>2</u>
Adjustment to Remaining Years	<u>-1</u> Poor repair
Remaining Years (next expense)	<u><u>1</u></u>

Reserve Funding Required? YES

[illegible]

Cost Projection

Quantity: 825 Units: LF

White picket fence appears to be in poor condition. Noted paint appeared to be fairly new. Budget for replacement in year 1, on a 15-year cycle.
--

Budget Replacement Allowance: \$20,000

Component Data Sheet

Component Number: 2.6
Component Name: Mailboxes
 Description: Aluminium
 Location: Throughout
 Reviewed By: MA

Typical Useful Life Cycle Yr. 25
 Age 13
 Typical Remaining Years 12
 Adjustment to Remaining Years
 Remaining Years (next expense) 12

Reserve Funding Required? YES

Reserve Cost Per Year		
Year No.	Year	Cost
12	2028	\$2,400



Cost Projection		
Quantity:	2	Units: EA
Aluminum mailboxes appear to be in good condition. Budget for replacement in year 12, on a 25-year cycle.		

Component Data Sheet

Component Number: 5.1
Component Name: Exterior Handrails
 Description: Painted Steel
 Location: Throughout
 Reviewed By: MA

Typical Useful Life Cycle Yr.	30
Age	13
Typical Remaining Years	17
Adjustment to Remaining Years	
Remaining Years (next expense)	17

Reserve Funding Required? YES

Reserve Cost Per Year		
Year No.	Year	Cost
17	2033	\$1,800



Cost Projection	
Quantity: 60	Units: LF
The painted steel handrails appear to be in good condition.	
Budget for replacement of handrails on a 30-year cycle, beginning in year 17. Future Reserve Studies may extend this out further.	
Budget replacement: 60 LF @ \$30/LF = \$1,800	

Component Data Sheet

Component Number: 6.4
Component Name: Elastomeric Deck Coatings
Description: Waterproofing
Location: 2nd Floor Decks
Reviewed By: MA

Typical Useful Life Cycle Yr. 7
 Age 6
 Typical Remaining Years 1
 Adjustment to Remaining Years
 Remaining Years (next expense) 1

Reserve Funding Required?

Reserve Cost Per Year		
Year No.	Year	Cost
1	2017	\$4,600
8	2024	\$4,600
15	2031	\$4,600
22	2038	\$4,600
29	2045	\$4,600



Cost Projection	
Quantity: 580	Units: SF
Second story deck flooring consists of plywood with an elastomeric coating. We were unable to get a visual inspection on the elastomeric coatings; we assume that the decks have been re-coated 6 years ago. Budget re-coating in year 1, on a 7-year cycle.	
We noted dark staining in the soffit vents of 3 units, could indicate water intrusion from the built-in gutter.	
Budget Re-coating Allowance: \$4,600	

Component Data Sheet

Component Number: 7.1
Component Name: Exterior Sidewall - Panel & Plank
Description: Cementitious Fiber Board
Location: Building Exterior
Reviewed By: MA

Typical Useful Life Cycle Yr.	50
Age	13
Typical Remaining Years	37
Adjustment to Remaining Years	
Remaining Years (next expense)	37

Reserve Funding Required? NO

Reserve Cost Per Year		
Year No.	Year	Cost



Cost Projection	
Quantity: 41,000	Units: GSF
Hardi exterior sidewall appears in excellent condition. Assume siding was installed properly by contractor with adequate moisture barrier band. With the long typical useful life HardiPlank offers, there is no budget necessary for replacement in this Reserve Study. It was noted the trims are white wood vs cedar, this will have a limited life span due to wood species used.	
Budget Estimate of \$344,000.	

Component Data Sheet

Component Number: 7.1.1
Component Name: Exterior Sidewall - Shingles
Description: Cedar
Location: Various Sidewalls
Reviewed By: MA

Typical Useful Life Cycle Yr. 30
 Age 13
 Typical Remaining Years 17
 Adjustment to Remaining Years
 Remaining Years (next expense) 17

Reserve Funding Required? YES

Reserve Cost Per Year		
Year No.	Year	Cost
17	2033	\$10,000



Cost Projection	
Quantity: 15	Units: SQ
Cedar wood shingles have not be restrained since orginally installed.	
There are areas of weathering that will take more prep time to restore.	
Budget for restraining in year 1 to coincide with painting.	
Budget for replacment of the weathered areas in year 17, other areas can be extended out per future reserve studies.	
Budget Rteplacement Allowance: \$10,000 on a 30-year cycle.	

Component Data Sheet

Component Number: 7.2
Component Name: Masonary
 Description: Stone
 Location: Throughout
 Reviewed By: MA

Typical Useful Life Cycle Yr. 40
 Age 13
 Typical Remaining Years 27
 Adjustment to Remaining Years
 Remaining Years (next expense) 27

Reserve Funding Required? YES

Reserve Cost Per Year		
Year No.	Year	Cost
27	2043	\$3,000



Cost Projection		
Quantity:	1	Units: LS
Masonry is located along building walkways, steps, and entries on and appears to be in good condition, but needs sealer. Budget for tuckpointing in year 27, on a 40-year cycle.		
Budget Allowance: \$3,000		

Component Data Sheet

Component Number: 7.3
Component Name: Roofing
 Description: Architectural
 Location: Building Rooftops
 Reviewed By: MA

Typical Useful Life Cycle Yr. 25
 Age 13
 Typical Remaining Years 12
 Adjustment to Remaining Years
 Remaining Years (next expense) 12

Reserve Funding Required? YES

Reserve Cost Per Year		
Year No.	Year	Cost
1	2017	\$4,200
6	2022	\$4,200
12	2028	\$102,900
17	2033	\$4,200
22	2038	\$4,200
27	2043	\$4,200



Cost Projection	
Quantity: 343	Units: SQ
Architectural grade roof appears to be in good condition. Recommend routine roof inspections with regular repair and maintenance.	
Budget for minor repairs on a 5-year cycle, starting year 1. Replace the roofing on a 25-year cycle, starting year 12.	
Budget Repairs/Maintenance: \$4,200	
Budget replacement: \$102,900	

Component Data Sheet

Component Number: 7.4
Component Name: Gutters & Downspouts
Description: Metal
Location: Various Elevations
Reviewed By: MA

Typical Useful Life Cycle Yr. 30
 Age 13
 Typical Remaining Years 17
 Adjustment to Remaining Years
 Remaining Years (next expense) 17

Reserve Funding Required?

Reserve Cost Per Year		
Year No.	Year	Cost
1	2017	\$3,000
17	2033	\$20,790



Cost Projection	
Quantity: 3,900	Units: LF
Gutters appear to be in fair condition, sealants are failing and leaks are present at corners and ends. Budget for sealant replacement in year 1.	
Budget for replacement in year 17, on a 30-year cycle. We noted 2 buildings have a pvc pipe drilled through the fascia into the back of the gutter which is not industry standard. Replace these with new and have downspouts installed accordingly.	
Budget Repair: \$3,000	
Budget Allowance: \$20,790	

Component Data Sheet

Component Number: 8.1
Component Name: Doors
 Description: Fiberglass
 Location: Entry Doors
 Reviewed By: MA

Typical Useful Life Cycle Yr. 10
 Age 7
 Typical Remaining Years 3
 Adjustment to Remaining Years
 Remaining Years (next expense) 3

Reserve Funding Required? YES

Reserve Cost Per Year		
Year No.	Year	Cost
3	2019	\$2,000
13	2029	\$2,000
23	2039	\$2,000



Cost Projection		
Quantity:	24	Units: EA
Fiberglass unit doors appear to be in good condition with no significant damage or deterioration observed. Inspect regularly, repair hardware as needed from maintenance. Clean and paint with other exterior and interior building surfaces. Budget for repairs and isolated replacements on a 10-year cycle, starting in year 3.		
Budget Allowance: \$2,000		

Component Data Sheet

Component Number: 8.1.1
Component Name: Fireroom Doors
Description: Steel Doors
Location: Fire Control Room
Reviewed By: MA

Typical Useful Life Cycle Yr. 20
 Age 13
 Typical Remaining Years 7
 Adjustment to Remaining Years
 Remaining Years (next expense) 7

Reserve Funding Required? YES

Reserve Cost Per Year		
Year No.	Year	Cost
7	2023	\$4,000
27	2043	\$4,000



Cost Projection		
Quantity:	8	Units: EA
The steel doors for the fire control rooms are in fair to poor condition.		
There is rust present on most doors and jambs. Prepare, prime, and paint with a direct to metal paint to extend the life cycle.		
Budget for full replacement in year 7, on a 20 year cycle.		
Budget Allowance \$4,000		

Component Data Sheet

Component Number: 8.2
Component Name: Garage Doors
 Description: Metal
 Location: Throughout
 Reviewed By: MA

Typical Useful Life Cycle Yr. 20
 Age 13
 Typical Remaining Years 7
 Adjustment to Remaining Years
 Remaining Years (next expense) 7

Reserve Funding Required? YES

Reserve Cost Per Year		
Year No.	Year	Cost
7	2023	\$24,000
27	2043	\$24,000



Cost Projection	
Quantity: 24	Units: EA
Garage doors generally appear to be in good condition with little to no damage observed. No expectation for large scale repair/replacement, budget for repairs and isolated replacements on a 20-year cycle, starting in year 7.	
Budget Allowance: \$24,000	

Component Data Sheet

Component Number: 8.3
Component Name: Windows & Sliders
Description: Vinyl
Location: Throughout Buildings
Reviewed By: MA

Typical Useful Life Cycle Yr.	35
Age	13
Typical Remaining Years	22
Adjustment to Remaining Years	
Remaining Years (next expense)	22

Reserve Funding Required? YES

Reserve Cost Per Year		
Year No.	Year	Cost
22	2038	\$339,200



Cost Projection	
Quantity: 424	Units: EA
The windows and doors appeared in good condition during the limited scope inspection. Budget for replacement for more energy efficient units in year 22, on a 35-year cycle.	
Budget Allowance: 424 @ \$800 EA = \$339,200	

Component Data Sheet

Component Number: 9.1
Component Name: Exterior Painting
 Description: Buildings
 Location: Sidewalls
 Reviewed By: MA

Typical Useful Life Cycle Yr. 7
 Age 13
 Typical Remaining Years -6
 Adjustment to Remaining Years 7 Deferred by Board
 Remaining Years (next expense) 1

Reserve Funding Required?

Reserve Cost Per Year		
Year No.	Year	Cost
1	2017	\$72,000
8	2024	\$66,000
15	2031	\$66,000
22	2038	\$66,000
29	2045	\$66,000



Cost Projection	
Quantity: 43,000	Units: GSF
Exterior body painting appears in poor condition, chalking and fading have occurred due to UV damage and weathering. It was reported that the trims were painted in 2013. Budget for painting of exterior body color sidewalls in year 1, on a 7-year cycle. Caulking replacements will be needed prior to paint, cut out and replace all sealants with a polyether sealant. The sealants are failing: shrinking, pulling, and hardening.	
Budget Allowance for year 1: \$72,000	
Budget Allowance for full repaint : \$66,000	

Component Data Sheet

Component Number:	10.1
Component Name:	Chimneys
Description:	Chimney Caps
Location:	Rooftops
Reviewed By:	MA

Typical Useful Life Cycle Yr.	25
Age	13
Typical Remaining Years	12
Adjustment to Remaining Years	
Remaining Years (next expense)	12

Reserve Funding Required? YES

[illegible]

Cost Projection

Quantity: 16 Units: EA

We did not have access to roof to check status of the chimney caps during this site visit. Recommend a roof evaluation to determine status of chimney caps. Budget for replacement of chimney chase metal caps in year 12, on a 25-year cycle.

Budget replacement: \$9,600

Component Data Sheet

Component Number: 15.1
Component Name: Plumbing
Description: Service & Repair
Location: Throughout
Reviewed By: MA

Typical Useful Life Cycle Yr. 10
 Age 3
 Typical Remaining Years 7
 Adjustment to Remaining Years
 Remaining Years (next expense) 7

Reserve Funding Required? YES

Reserve Cost Per Year		
Year No.	Year	Cost
7	2023	\$2,000
17	2033	\$2,000
27	2043	\$2,000



Cost Projection		
Quantity:	1	Units: LS
No apparent problems or damage was observe during our inspection. Budget for miscellaneous repairs to plumbing components on a 10-year cycle, beginning in year 7.		
Contact the Greater Association to see where your responsibilities begin.		
Budget Allowance: \$2,000		

Component Data Sheet

Component Number: 15.2
Component Name: Irrigation
 Description: Sprinkler System
 Location: Landscaping
 Reviewed By: MA

Typical Useful Life Cycle Yr. 10
 Age 3
 Typical Remaining Years 7
 Adjustment to Remaining Years
 Remaining Years (next expense) 7

Reserve Funding Required? YES

Reserve Cost Per Year		
Year No.	Year	Cost
7	2023	\$2,000
17	2033	\$2,000
27	2043	\$2,000



Cost Projection		
Quantity:	1	Units: LS
No observed problems during our inspection. Inspect and test system annually; Winterize during cold months to avoid freezing and breaks. Budget for major repairs to irrigation system on 10-year cycle, including timers, control valves, PRVs, etc. Budget repairs beginning in year 7.		
Budget Allowance: \$2,000		

Component Data Sheet

Component Number: 15.3
Component Name: Drainage
Description: Storm System
Location: Throughout
Reviewed By: MA

Typical Useful Life Cycle Yr. 50
 Age 13
 Typical Remaining Years 37
 Adjustment to Remaining Years
 Remaining Years (next expense) 37

Reserve Funding Required? NO

Reserve Cost Per Year		
Year No.	Year	Cost



Cost Projection		
Quantity:	1	Units: LS
System appears in good condition; inspect regularly, keep drains / grates free of debris / flowing freely, and clean catch basins routinely.		
Confirm where the drainage system responsibility is covered by the Greater Association and what part is covered by Parkside @ Woodbridge.		
No funding needed at this time, future Reserve Studies may include this.		

Component Data Sheet

Component Number: 15.4
Component Name: Sewer
 Description: Repair
 Location: Throughout
 Reviewed By: MA

Typical Useful Life Cycle Yr. 30
 Age 13
 Typical Remaining Years 17
 Adjustment to Remaining Years
 Remaining Years (next expense) 17

Reserve Funding Required? YES

Reserve Cost Per Year		
Year No.	Year	Cost
17	2033	\$10,000



Cost Projection		
Quantity:	1	Units: LS
System appears in good condition; inspect regularly, keep drains / grates free of debris / flowing freely, and clean catch basins routinely.		
Confirm where the sewer system responsibility is covered by the Greater Association and what part is covered by Parkside @ Woodbridge.		
Budget for funding major repairs in year 17.		
Budget Allowance: \$10,000		

Component Data Sheet

Component Number: 16.1
Component Name: Electrical
 Description: Main Service & Repairs
 Location: Building Exteriors
 Reviewed By: MA

Typical Useful Life Cycle Yr. 10
 Age 7
 Typical Remaining Years 3
 Adjustment to Remaining Years
 Remaining Years (next expense) 3

Reserve Funding Required? YES

Reserve Cost Per Year		
Year No.	Year	Cost
3	2019	\$1,600
13	2029	\$1,600
23	2039	\$1,600



Cost Projection		
Quantity:	8	Units: EA
There are 8 service entries with individual meters for each unit located on each building. Budget for maintenance of main switchgear and panels in year 3, on a 10-year cycle.		
Budget Maintenance: \$1,600		

Component Data Sheet

Component Number: 16.2
Component Name: Exterior Lighting
 Description: Fixtures Assorted
 Location: Exterior
 Reviewed By: MA

Typical Useful Life Cycle Yr. 20
 Age 13
 Typical Remaining Years 7
 Adjustment to Remaining Years
 Remaining Years (next expense) 7

Reserve Funding Required? YES

Reserve Cost Per Year		
Year No.	Year	Cost
7	2023	\$7,200
27	2043	\$7,200



Cost Projection	
Quantity: 48	Units: EA
Exterior lighting consists of wall mounted and recessed fixtures.	
Budget for replacement of exterior lighting in year 7, on a 20-year cycle.	
Budget Allowance: \$7,200	

Component Data Sheet

Component Number: 17.1
Component Name: Fire Alarm System
Description: Fire Detection
Location: Each Building
Reviewed By: MA

Typical Useful Life Cycle Yr. 20
 Age 13
 Typical Remaining Years 7
 Adjustment to Remaining Years
 Remaining Years (next expense) 7

Reserve Funding Required? YES

Reserve Cost Per Year		
Year No.	Year	Cost
7	2023	\$16,000
27	2043	\$16,000



Cost Projection		
Quantity:	8	Units: EA
Normal minor repairs are considered covered under the monitoring service agreement. However code or fire department revisions may require replacement of panels/devices. Budget for major replacement in year 7, on a 20-year cycle.		
Budget Allowance: \$16,000		

Component Data Sheet

Component Number: 20.1
Component Name: Reserve Study
Description: Full Studies
Location: Parkside @ Woodbridge
Reviewed By: MA

Typical Useful Life Cycle Yr. 3
 Age 0
 Typical Remaining Years 3
 Adjustment to Remaining Years
 Remaining Years (next expense) 3

Reserve Funding Required? YES

Reserve Cost Per Year		
Year No.	Year	Cost
3	2019	\$2,500
6	2022	\$2,500
9	2025	\$2,500
12	2028	\$2,500
15	2031	\$2,500
18	2034	\$2,500
21	2037	\$2,500
24	2040	\$2,500
27	2043	\$2,500
30	2046	\$2,500



Cost Projection		
Quantity:	1	Units: EA
Budget for new Full Reserve Study every 3 years.		
Budget \$2,500 on a 3-year cycle.		

Appendix B

RESERVE CALCULATION SPREADSHEET

The following spreadsheet shows the component expenses and Funding Option calculations used in the preparation of this Study.

Appendix B: Reserve Calculation Spreadsheet - Projected Cost Over 30 Years

Reserve Study Input Data & Reserve Option Calculations - DRAFT			
Name: Parkside @ Woodbridge	Reserve Balance:	10/31/2016	\$108,300
Date: December 7, 2016	Interest on Reserves		0.55%
By: M. Arndt	Construction Escalation		3.00%
	Inflation Rate CPI		3.00%

							Current Yr.	
No.	Component	Life Cycle Years	Remaining Years	Cost/Cycle	Quantity	Unit	0 2016	1 2017
2.1	Concrete Pavement	5	1	\$12,750	11,400	GSF		12,750
2.1.1	Asphalt Pavement	7	1	\$1,860	3,100	SF		1,860
2.1.2	Concrete Curbs	7	1	\$1,000	400	LF		1,000
2.2	Landscaping	6	2	\$3,000	1	LS		
2.3	Retaining Walls	20	7	\$2,200	~600	SF		
2.4	Top Lattice Fences	20	7	\$4,100	100	LF		
2.5	White Picket Fences	15	1	\$20,000	825	LF		20,000
2.6	Mailboxes	25	12	\$2,400	2	EA		
5.1	Exterior Handrails	30	17	\$1,800	60	LF		
6.4	Elastomeric Deck Coatings	7	1	\$4,640	580	SF		4,600
7.1	Exterior Sidewall - Panel & Plank	50	37	\$0	41,000	GSF		
7.1.1	Exterior Sidewall - Shingles	30	17	\$10,000	15	SQ		
7.2	Masonry	40	27	\$3,000	1	LS		
7.3	Roofing	25	12	\$115,500	343	SQ		4,200
7.4	Gutters & Downspouts	30	17	\$20,790	3,900	LF		3,000
8.1	Doors	10	3	\$2,000	24	EA		
8.1.1	Fireroom Doors	20	7	\$4,000	8	EA		
8.2	Garage Doors	20	7	\$24,000		EA		
8.3	Windows & Sliders	35	22	\$339,200	424	EA		
9.1	Exterior Painting	7	1	\$66,000	43,000	GSF		72,000
10.1	Chimneys	25	12	\$9,600	3,860	LF		
15.1	Plumbing	10	7	\$2,000	1	LS		
15.2	Irrigation	10	7	\$2,000	1	LS		
15.3	Drainage	50	37	\$0	1	LS		
15.4	Sewer	30	17	\$10,000	1	LS		
16.1	Electrical	10	3	\$1,600	8	EA		
16.2	Exterior Lighting	20	7	\$7,200	48	EA		
17.1	Fire Alarm System	20	7	\$16,000	8	EA		
20.1	Reserve Study	3	3	\$2,500	1	EA		
Total Expenses By Year							\$0	\$119,410
Construction Cost Escalation								1.03
Total Expenses (Escalated)								\$122,992

"THRESHOLD" RESERVE FUNDING OPTION

Annual Reserve beginning in	2017	\$51,100	2016	2017
Total Expenses (Escalated)			\$0	\$122,992
Beginning Reserve Balance			108300	110966
Interest Earned on Reserve Balance				0
Recommended Reserve Contribution Adjusted For Inflation			2666	51100
Year End Balance (Adjusted For Inflation)			\$110,966	\$39,074
Year End Balance (expressed in current year dollars)			\$110,966	\$37,936

"MINIMUM" RESERVE FUNDING OPTION

Annual Reserve beginning in	2017	\$48,100	2016	2017
Total Expenses (Escalated)			\$0	\$122,992
Beginning Reserve Balance			108300	110966
Interest Earned on Reserve Balance				0
Recommended Reserve Contribution Adjusted For Inflation			2666	48100
Year End Balance (Adjusted For Inflation)			\$110,966	\$36,074
Year End Balance (expressed in current year dollars)			\$110,966	\$35,023

"FULLY FUNDED" RESERVE FUNDING OPTION

Annual Reserve beginning in	2017	\$55,500	2016	2017
Total Expenses (Escalated)			\$0	\$122,992
Beginning Reserve Balance			108300	110966
Interest Earned on Reserve Balance				0
Recommended Reserve Contribution Adjusted For Inflation			2666	55500
Year End Balance (Adjusted For Inflation)			\$110,966	\$43,474
Year End Balance (expressed in current year dollars)			\$110,966	\$42,207

Appendix B: Reserve Calculation Spreadsheet - Projected Cost Over 30 Years

Reserve Study Input Data & Reserve Option Calculations - DRAFT				
Name: Parkside @ Woodbridge	Reserve Balance:	10/31/2016	\$108,300	
Date: December 7, 2016	Interest on Reserves		0.55%	
By: M. Arndt	Construction Escalation		3.00%	
	Inflation Rate CPI		3.00%	

Projected Cost Per Year

No.	Component	Life Cycle Years	Remaining Years	Cost/Cycle	Quantity	Unit	2 2018	3 2019	4 2020	5 2021	6 2022
2.1	Concrete Pavement	5	1	\$12,750	11,400	GSF	3,000				9,750
2.1.1	Asphalt Pavement	7	1	\$1,860	3,100	SF					
2.1.2	Concrete Curbs	7	1	\$1,000	400	LF					
2.2	Landscaping	6	2	\$3,000	1	LS					
2.3	Retaining Walls	20	7	\$2,200	~600	SF					
2.4	Top Lattice Fences	20	7	\$4,100	100	LF					
2.5	White Picket Fences	15	1	\$20,000	825	LF					
2.6	Mailboxes	25	12	\$2,400	2	EA					
5.1	Exterior Handrails	30	17	\$1,800	60	LF					
6.4	Elastomeric Deck Coatings	7	1	\$4,640	580	SF					
7.1	Exterior Sidewall - Panel & Plank	50	37	\$0	41,000	GSF					
7.1.1	Exterior Sidewall - Shingles	30	17	\$10,000	15	SQ					4,200
7.2	Masonry	40	27	\$3,000	1	LS					
7.3	Roofing	25	12	\$115,500	343	SQ					
7.4	Gutters & Downspouts	30	17	\$20,790	3,900	LF					
8.1	Doors	10	3	\$2,000	24	EA					
8.1.1	Fireroom Doors	20	7	\$4,000	8	EA					
8.2	Garage Doors	20	7	\$24,000		EA		2,000			
8.3	Windows & Sliders	35	22	\$339,200	424	EA					
9.1	Exterior Painting	7	1	\$66,000	43,000	GSF					
10.1	Chimneys	25	12	\$9,600	3,860	LF					
15.1	Plumbing	10	7	\$2,000	1	LS					
15.2	Irrigation	10	7	\$2,000	1	LS					
15.3	Drainage	50	37	\$0	1	LS					
15.4	Sewer	30	17	\$10,000	1	LS					
16.1	Electrical	10	3	\$1,600	8	EA					
16.2	Exterior Lighting	20	7	\$7,200	48	EA					
17.1	Fire Alarm System	20	7	\$16,000	8	EA					
20.1	Reserve Study	3	3	\$2,500	1	EA					
Total Expenses By Year							\$3,000	\$6,100	\$0	\$0	\$16,450
Construction Cost Escalation							1.06	1.09	1.13	1.16	1.19
Total Expenses (Escalated)							\$3,183	\$6,666	\$0	\$0	\$19,642

"THRESHOLD" RESERVE FUNDING OPTION

Annual Reserve beginning in	2017	\$51,100								
Total Expenses (Escalated)			2018	2019	2020	2021	2022			
Beginning Reserve Balance			\$3,183	\$6,666	\$0	\$0	\$19,642			
Interest Earned on Reserve Balance			39074	88721	136719	193309	251886			
Recommended Reserve Contribution Adjusted For Inflation			197	451	752	1063	1277			
			52633	54212	55838	57514	59239			
Year End Balance (Adjusted For Inflation)			\$88,721	\$136,719	\$193,309	\$251,886	\$292,760			
Year End Balance (expressed in current year dollars)			\$83,628	\$125,117	\$171,753	\$217,279	\$245,182			

"MINIMUM" RESERVE FUNDING OPTION

Annual Reserve beginning in	2017	\$48,100								
Total Expenses (Escalated)			2018	2019	2020	2021	2022			
Beginning Reserve Balance			\$3,183	\$6,666	\$0	\$0	\$19,642			
Interest Earned on Reserve Balance			36074	82615	127396	180657	235788			
Recommended Reserve Contribution Adjusted For Inflation			181	418	701	994	1189			
Year End Balance (Adjusted For Inflation)			49543	51029	52560	54137	55761			
Year End Balance (expressed in current year dollars)			\$82,615	\$127,396	\$180,657	\$235,788	\$273,095			
			\$77,872	\$116,586	\$160,512	\$203,393	\$228,713			

"FULLY FUNDED" RESERVE FUNDING OPTION

Annual Reserve beginning in		2017	\$55,500						
Total Expenses (Escalated)				2018	2019	2020	2021	2022	
Beginning Reserve Balance				\$3,183	\$6,666	\$0	\$0	\$19,642	
Interest Earned on Reserve Balance				43474	97678	150392	211866	275497	
Recommended Reserve Contribution Adjusted For Inflation				222	501	827	1165	1407	
				57165	58880	60646	62466	64340	
Year End Balance (Adjusted For Inflation)				\$97,678	\$150,392	\$211,866	\$275,497	\$321,602	
Year End Balance (expressed in current year dollars)				\$92,071	\$137,630	\$188,240	\$237,646	\$269,336	

Appendix B: Reserve Calculation Spreadsheet - Projected Cost Over 30 Years

Reserve Study Input Data & Reserve Option Calculations - DRAFT				
Name: Parkside @ Woodbridge	Reserve Balance:	10/31/2016	\$108,300	
Date: December 7, 2016	Interest on Reserves		0.55%	
By: M. Arndt	Construction Escalation		3.00%	
	Inflation Rate CPI		3.00%	

Projected Cost Per Year

No.	Component	Life Cycle Years	Remaining Years	Cost/Cycle	Quantity	Unit	7 2023	8 2024	9 2025	10 2026	11 2027
2.1	Concrete Pavement	5	1	\$12,750	11,400	GSF					
2.1.1	Asphalt Pavement	7	1	\$1,860	3,100	SF		1,860			12,750
2.1.2	Concrete Curbs	7	1	\$1,000	400	LF		1,000			
2.2	Landscaping	6	2	\$3,000	1	LS		3,000			
2.3	Retaining Walls	20	7	\$2,200	~600	SF	2,200				
2.4	Top Lattice Fences	20	7	\$4,100	100	LF	4,100				
2.5	White Picket Fences	15	1	\$20,000	825	LF					
2.6	Mailboxes	25	12	\$2,400	2	EA					
5.1	Exterior Handrails	30	17	\$1,800	60	LF					
6.4	Elastomeric Deck Coatings	7	1	\$4,640	580	SF		4,600			
7.1	Exterior Sidewall - Panel & Plank	50	37	\$0	41,000	GSF					
7.1.1	Exterior Sidewall - Shingles	30	17	\$10,000	15	SQ					
7.2	Masonry	40	27	\$3,000	1	LS					
7.3	Roofing	25	12	\$115,500	343	SQ					
7.4	Gutters & Downspouts	30	17	\$20,790	3,900	LF					
8.1	Doors	10	3	\$2,000	24	EA					
8.1.1	Fireroom Doors	20	7	\$4,000	8	EA	4,000				
8.2	Garage Doors	20	7	\$24,000		EA	24,000				
8.3	Windows & Sliders	35	22	\$339,200	424	EA					
9.1	Exterior Painting	7	1	\$66,000	43,000	GSF		66,000			
10.1	Chimneys	25	12	\$9,600	3,860	LF					
15.1	Plumbing	10	7	\$2,000	1	LS	2,000				
15.2	Irrigation	10	7	\$2,000	1	LS	2,000				
15.3	Drainage	50	37	\$0	1	LS					
15.4	Sewer	30	17	\$10,000	1	LS					
16.1	Electrical	10	3	\$1,600	8	EA					
16.2	Exterior Lighting	20	7	\$7,200	48	EA	7,200				
17.1	Fire Alarm System	20	7	\$16,000	8	EA	16,000				
20.1	Reserve Study	3	3	\$2,500	1	EA			2,500		
Total Expenses By Year							\$61,500	\$76,460	\$2,500	\$0	\$12,750
Construction Cost Escalation							1.23	1.27	1.30	1.34	1.38
Total Expenses (Escalated)							\$75,637	\$96,857	\$3,262	\$0	\$17,649

"THRESHOLD" RESERVE FUNDING OPTION

Annual Reserve beginning in	2017	\$51,100					
Total Expenses (Escalated)			2023	2024	2025	2026	2027
Beginning Reserve Balance			\$75,637	\$96,857	\$3,262	\$0	\$17,649
Interest Earned on Reserve Balance			292760	279333	246326	309133	377507
Recommended Reserve Contribution Adjusted For Inflation			1194	1004	1337	1700	1979
Year End Balance (Adjusted For Inflation)			61016	62847	64732	66674	68674
Year End Balance (expressed in current year dollars)			\$279,333	\$246,326	\$309,133	\$377,507	\$430,511
			\$227,123	\$194,452	\$236,925	\$280,901	\$311,011

"MINIMUM" RESERVE FUNDING OPTION

Annual Reserve beginning in	2017	\$48,100					
Total Expenses (Escalated)			2023	2024	2025	2026	2027
Beginning Reserve Balance			\$75,637	\$96,857	\$3,262	\$0	\$17,649
Interest Earned on Reserve Balance			273095	255978	219153	278010	342299
Recommended Reserve Contribution Adjusted For Inflation			1086	875	1187	1529	1786
Year End Balance (Adjusted For Inflation)			57434	59157	60932	62760	64642
Year End Balance (expressed in current year dollars)			\$255,978	\$219,153	\$278,010	\$342,299	\$391,078

"FULLY FUNDED" RESERVE FUNDING OPTION

Annual Reserve beginning in	2017	\$55,500					
Total Expenses (Escalated)			2023	2024	2025	2026	2027
Beginning Reserve Balance			\$75,637	\$96,857	\$3,262	\$0	\$17,649
Interest Earned on Reserve Balance			321602	313587	286180	354780	429146
Recommended Reserve Contribution Adjusted For Inflation			1353	1192	1556	1951	2263
			66270	68258	70306	72415	74587
Year End Balance (Adjusted For Inflation)			\$313,587	\$286,180	\$354,780	\$429,146	\$488,348
Year End Balance (expressed in current year dollars)			\$254,975	\$225,913	\$271,909	\$319,325	\$352,793

Appendix B: Reserve Calculation Spreadsheet - Projected Cost Over 30 Years

Reserve Study Input Data & Reserve Option Calculations - DRAFT				
Name: Parkside @ Woodbridge	Reserve Balance:	10/31/2016	\$108,300	
Date: December 7, 2016	Interest on Reserves		0.55%	
By: M. Arndt	Construction Escalation		3.00%	
	Inflation Rate CPI		3.00%	

Projected Cost Per Year

No.	Component	Life Cycle Years	Remaining Years	Cost/Cycle	Quantity	Unit	12 2028	13 2029	14 2030	15 2031	16 2032
2.1	Concrete Pavement	5	1	\$12,750	11,400	GSF					
2.1.1	Asphalt Pavement	7	1	\$1,860	3,100	SF				1,860	9,750
2.1.2	Concrete Curbs	7	1	\$1,000	400	LF				1,000	
2.2	Landscaping	6	2	\$3,000	1	LS			3,000		
2.3	Retaining Walls	20	7	\$2,200	~600	SF					
2.4	Top Lattice Fences	20	7	\$4,100	100	LF					
2.5	White Picket Fences	15	1	\$20,000	825	LF					20,000
2.6	Mailboxes	25	12	\$2,400	2	EA	2,400				
5.1	Exterior Handrails	30	17	\$1,800	60	LF					
6.4	Elastomeric Deck Coatings	7	1	\$4,640	580	SF				4,600	
7.1	Exterior Sidewall - Panel & Plank	50	37	\$0	41,000	GSF					
7.1.1	Exterior Sidewall - Shingles	30	17	\$10,000	15	SQ					
7.2	Masonry	40	27	\$3,000	1	LS					
7.3	Roofing	25	12	\$115,500	343	SQ	102,900				
7.4	Gutters & Downspouts	30	17	\$20,790	3,900	LF					
8.1	Doors	10	3	\$2,000	24	EA		2,000			
8.1.1	Fireroom Doors	20	7	\$4,000	8	EA					
8.2	Garage Doors	20	7	\$24,000		EA					
8.3	Windows & Sliders	35	22	\$339,200	424	EA					
9.1	Exterior Painting	7	1	\$66,000	43,000	GSF				66,000	
10.1	Chimneys	25	12	\$9,600	3,860	LF	9,600				
15.1	Plumbing	10	7	\$2,000	1	LS					
15.2	Irrigation	10	7	\$2,000	1	LS					
15.3	Drainage	50	37	\$0	1	LS					
15.4	Sewer	30	17	\$10,000	1	LS					
16.1	Electrical	10	3	\$1,600	8	EA		1,600			
16.2	Exterior Lighting	20	7	\$7,200	48	EA					
17.1	Fire Alarm System	20	7	\$16,000	8	EA					
20.1	Reserve Study	3	3	\$2,500	1	EA	2,500			2,500	
Total Expenses By Year							\$117,400	\$3,600	\$3,000	\$75,960	\$29,750
Construction Cost Escalation							1.43	1.47	1.51	1.56	1.60
Total Expenses (Escalated)							\$167,384	\$5,287	\$4,538	\$118,343	\$47,740

"THRESHOLD" RESERVE FUNDING OPTION

Annual Reserve beginning in	2017	\$51,100			
Total Expenses (Escalated)			2028	2029	2030
Beginning Reserve Balance			\$167,384	\$5,287	\$4,538
Interest Earned on Reserve Balance			\$430,511	\$335,309	\$404,693
Recommended Reserve Contribution Adjusted For Inflation			1447	1815	2201
Year End Balance (Adjusted For Inflation)			70734	72856	75042
Year End Balance (expressed in current year dollars)			\$235,179	\$275,577	\$315,617

"MINIMUM" RESERVE FUNDING OPTION

Annual Reserve beginning in	2017	\$48,100			
Total Expenses (Escalated)			2028	2029	2030
Beginning Reserve Balance			\$167,384	\$5,287	\$4,538
Interest Earned on Reserve Balance			\$391,078	\$291,505	\$356,372
Recommended Reserve Contribution Adjusted For Inflation			1230	1574	1935
Year End Balance (Adjusted For Inflation)			66582	68579	70636
Year End Balance (expressed in current year dollars)			\$291,505	\$356,372	\$424,406

"FULLY FUNDED" RESERVE FUNDING OPTION

Annual Reserve beginning in	2017	\$55,500			
Total Expenses (Escalated)			2028	2029	2030
Beginning Reserve Balance			\$167,384	\$5,287	\$4,538
Interest Earned on Reserve Balance			\$488,348	\$399,554	\$475,565
Recommended Reserve Contribution Adjusted For Inflation			1765	2168	2591
Year End Balance (Adjusted For Inflation)			76825	79130	81504
Year End Balance (expressed in current year dollars)			\$399,554	\$475,565	\$555,122

Appendix B: Reserve Calculation Spreadsheet - Projected Cost Over 30 Years

Reserve Study Input Data & Reserve Option Calculations - DRAFT				
Name: Parkside @ Woodbridge	Reserve Balance:	10/31/2016	\$108,300	
Date: December 7, 2016	Interest on Reserves		0.55%	
By: M. Arndt	Construction Escalation		3.00%	
	Inflation Rate CPI		3.00%	

Projected Cost Per Year

No.	Component	Life Cycle Years	Remaining Years	Cost/Cycle	Quantity	Unit	17 2033	18 2034	19 2035	20 2036	21 2037
2.1	Concrete Pavement	5	1	\$12,750	11,400	GSF					
2.1.1	Asphalt Pavement	7	1	\$1,860	3,100	SF					12,750
2.1.2	Concrete Curbs	7	1	\$1,000	400	LF					
2.2	Landscaping	6	2	\$3,000	1	LS				3,000	
2.3	Retaining Walls	20	7	\$2,200	~600	SF					
2.4	Top Lattice Fences	20	7	\$4,100	100	LF					
2.5	White Picket Fences	15	1	\$20,000	825	LF					
2.6	Mailboxes	25	12	\$2,400	2	EA					
5.1	Exterior Handrails	30	17	\$1,800	60	LF	1,800				
6.4	Elastomeric Deck Coatings	7	1	\$4,640	580	SF					
7.1	Exterior Sidewall - Panel & Plank	50	37	\$0	41,000	GSF					
7.1.1	Exterior Sidewall - Shingles	30	17	\$10,000	15	SQ	10,000				
7.2	Masonry	40	27	\$3,000	1	LS					
7.3	Roofing	25	12	\$115,500	343	SQ	4,200				
7.4	Gutters & Downspouts	30	17	\$20,790	3,900	LF	20,790				
8.1	Doors	10	3	\$2,000	24	EA					
8.1.1	Fireroom Doors	20	7	\$4,000	8	EA					
8.2	Garage Doors	20	7	\$24,000		EA					
8.3	Windows & Sliders	35	22	\$339,200	424	EA					
9.1	Exterior Painting	7	1	\$66,000	43,000	GSF					
10.1	Chimneys	25	12	\$9,600	3,860	LF					
15.1	Plumbing	10	7	\$2,000	1	LS	2,000				
15.2	Irrigation	10	7	\$2,000	1	LS	2,000				
15.3	Drainage	50	37	\$0	1	LS					
15.4	Sewer	30	17	\$10,000	1	LS	10,000				
16.1	Electrical	10	3	\$1,600	8	EA					
16.2	Exterior Lighting	20	7	\$7,200	48	EA					
17.1	Fire Alarm System	20	7	\$16,000	8	EA					
20.1	Reserve Study	3	3	\$2,500	1	EA		2,500			2,500
Total Expenses By Year							\$50,790	\$2,500	\$0	\$3,000	\$15,250
Construction Cost Escalation							1.65	1.70	1.75	1.81	1.86
Total Expenses (Escalated)							\$83,948	\$4,256	\$0	\$5,418	\$28,369

"THRESHOLD" RESERVE FUNDING OPTION

Annual Reserve beginning in	2017	\$51,100			
Total Expenses (Escalated)			2033	2034	2035
Beginning Reserve Balance			\$83,948	\$4,256	\$0
Interest Earned on Reserve Balance			472344	472532	555312
Recommended Reserve Contribution Adjusted For Inflation			2136	2576	3054
Year End Balance (Adjusted For Inflation)			82000	84461	86994
Year End Balance (expressed in current year dollars)			\$285,890	\$326,188	\$368,040

"MINIMUM" RESERVE FUNDING OPTION

Annual Reserve beginning in	2017	\$48,100			
Total Expenses (Escalated)			2033	2034	2035
Beginning Reserve Balance			\$83,948	\$4,256	\$0
Interest Earned on Reserve Balance			409530	404559	482006
Recommended Reserve Contribution Adjusted For Inflation			1791	2202	2651
Year End Balance (Adjusted For Inflation)			77186	79502	81887
Year End Balance (expressed in current year dollars)			\$404,559	\$482,006	\$566,544

"FULLY FUNDED" RESERVE FUNDING OPTION

Annual Reserve beginning in	2017	\$55,500			
Total Expenses (Escalated)			2033	2034	2035
Beginning Reserve Balance			\$83,948	\$4,256	\$0
Interest Earned on Reserve Balance			564471	572227	662828
Recommended Reserve Contribution Adjusted For Inflation			2643	3124	3646
Year End Balance (Adjusted For Inflation)			89061	91733	94485
Year End Balance (expressed in current year dollars)			\$572,227	\$662,828	\$760,959

Appendix B: Reserve Calculation Spreadsheet - Projected Cost Over 30 Years

Reserve Study Input Data & Reserve Option Calculations - DRAFT				
Name: Parkside @ Woodbridge	Reserve Balance:	10/31/2016	\$108,300	
Date: December 7, 2016	Interest on Reserves		0.55%	
By: M. Arndt	Construction Escalation		3.00%	
	Inflation Rate CPI		3.00%	

Projected Cost Per Year

No.	Component	Life Cycle Years	Remaining Years	Cost/Cycle	Quantity	Unit	22 2038	23 2039	24 2040	25 2041	26 2042
2.1	Concrete Pavement	5	1	\$12,750	11,400	GSF					
2.1.1	Asphalt Pavement	7	1	\$1,860	3,100	SF	1,860				9,750
2.1.2	Concrete Curbs	7	1	\$1,000	400	LF	1,000				
2.2	Landscaping	6	2	\$3,000	1	LS					3,000
2.3	Retaining Walls	20	7	\$2,200	~600	SF					
2.4	Top Lattice Fences	20	7	\$4,100	100	LF					
2.5	White Picket Fences	15	1	\$20,000	825	LF					
2.6	Mailboxes	25	12	\$2,400	2	EA					
5.1	Exterior Handrails	30	17	\$1,800	60	LF					
6.4	Elastomeric Deck Coatings	7	1	\$4,640	580	SF	4,600				
7.1	Exterior Sidewall - Panel & Plank	50	37	\$0	41,000	GSF					
7.1.1	Exterior Sidewall - Shingles	30	17	\$10,000	15	SQ					
7.2	Masonry	40	27	\$3,000	1	LS					
7.3	Roofing	25	12	\$115,500	343	SQ	4,200				
7.4	Gutters & Downspouts	30	17	\$20,790	3,900	LF					
8.1	Doors	10	3	\$2,000	24	EA		2,000			
8.1.1	Fireroom Doors	20	7	\$4,000	8	EA					
8.2	Garage Doors	20	7	\$24,000		EA					
8.3	Windows & Sliders	35	22	\$339,200	424	EA	339,200				
9.1	Exterior Painting	7	1	\$66,000	43,000	GSF	66,000				
10.1	Chimneys	25	12	\$9,600	3,860	LF					
15.1	Plumbing	10	7	\$2,000	1	LS					
15.2	Irrigation	10	7	\$2,000	1	LS					
15.3	Drainage	50	37	\$0	1	LS					
15.4	Sewer	30	17	\$10,000	1	LS					
16.1	Electrical	10	3	\$1,600	8	EA		1,600			
16.2	Exterior Lighting	20	7	\$7,200	48	EA					
17.1	Fire Alarm System	20	7	\$16,000	8	EA					
20.1	Reserve Study	3	3	\$2,500	1	EA			2,500		
Total Expenses By Year							\$416,860	\$3,600	\$2,500	\$0	\$12,750
Construction Cost Escalation							1.92	1.97	2.03	2.09	2.16
Total Expenses (Escalated)							\$798,747	\$7,105	\$5,082	\$0	\$27,497

"THRESHOLD" RESERVE FUNDING OPTION

Annual Reserve beginning in	2017	\$51,100					
Total Expenses (Escalated)			2038	2039	2040	2041	2042
Beginning Reserve Balance			\$798,747	\$7,105	\$5,082	\$0	\$27,497
Interest Earned on Reserve Balance			800865	97191	188494	285271	390716
Recommended Reserve Contribution Adjusted For Inflation			12	495	1009	1569	1998
			95061	97913	100850	103876	106992
Year End Balance (Adjusted For Inflation)			\$97,191	\$188,494	\$285,271	\$390,716	\$472,209
Year End Balance (expressed in current year dollars)			\$50,723	\$95,509	\$140,335	\$186,608	\$218,961

"MINIMUM" RESERVE FUNDING OPTION

Annual Reserve beginning in	2017	\$48,100					
Total Expenses (Escalated)			2038	2039	2040	2041	2042
Beginning Reserve Balance			\$798,747	\$7,105	\$5,082	\$0	\$27,497
Interest Earned on Reserve Balance			710471	1205	86264	176558	275307
Recommended Reserve Contribution Adjusted For Inflation			0	0	447	971	1363
Year End Balance (Adjusted For Inflation)			89480	92165	94930	97777	100711
Year End Balance (expressed in current year dollars)			\$1,205	\$86,264	\$176,558	\$275,307	\$349,884
			\$629	\$43,709	\$86,855	\$131,488	\$162,239

"FULLY FUNDED" RESERVE FUNDING OPTION

Annual Reserve beginning in		2017	\$55,500					
Total Expenses (Escalated)				2038	2039	2040	2041	2042
Beginning Reserve Balance				\$798,747	\$7,105	\$5,082	\$0	\$27,497
Interest Earned on Reserve Balance				933442	238683	339195	445485	560755
Recommended Reserve Contribution Adjusted For Inflation				741	1274	1838	2450	2933
Year End Balance (Adjusted For Inflation)				103246	106344	109534	112820	116205
Year End Balance (expressed in current year dollars)				\$238,683	\$339,195	\$445,485	\$560,755	\$652,396

Appendix B: Reserve Calculation Spreadsheet - Projected Cost Over 30 Years

Reserve Study Input Data & Reserve Option Calculations - DRAFT			
Name: Parkside @ Woodbridge	Reserve Balance:	10/31/2016	\$108,300
Date: December 7, 2016	Interest on Reserves		0.55%
By: M. Arndt	Construction Escalation		3.00%
	Inflation Rate CPI		3.00%

Projected Cost Per Year

No.	Component	Life Cycle Years	Remaining Years	Cost/Cycle	Quantity	Unit	27 2043	28 2044	29 2045	30 2046
2.1	Concrete Pavement	5	1	\$12,750	11,400	GSF				
2.1.1	Asphalt Pavement	7	1	\$1,860	3,100	SF		2,000		
2.1.2	Concrete Curbs	7	1	\$1,000	400	LF			1,860	
2.2	Landscaping	6	2	\$3,000	1	LS			1,000	
2.3	Retaining Walls	20	7	\$2,200	~600	SF	2,200			
2.4	Top Lattice Fences	20	7	\$4,100	100	LF	4,100			
2.5	White Picket Fences	15	1	\$20,000	825	LF				
2.6	Mailboxes	25	12	\$2,400	2	EA				
5.1	Exterior Handrails	30	17	\$1,800	60	LF				
6.4	Elastomeric Deck Coatings	7	1	\$4,640	580	SF			4,600	
7.1	Exterior Sidewall - Panel & Plank	50	37	\$0	41,000	GSF				
7.1.1	Exterior Sidewall - Shingles	30	17	\$10,000	15	SQ				
7.2	Masonry	40	27	\$3,000	1	LS	3,000			
7.3	Roofing	25	12	\$115,500	343	SQ	4,200			
7.4	Gutters & Downspouts	30	17	\$20,790	3,900	LF				
8.1	Doors	10	3	\$2,000	24	EA				
8.1.1	Fireroom Doors	20	7	\$4,000	8	EA	4,000			
8.2	Garage Doors	20	7	\$24,000		EA	24,000			
8.3	Windows & Sliders	35	22	\$339,200	424	EA				
9.1	Exterior Painting	7	1	\$66,000	43,000	GSF			66,000	
10.1	Chimneys	25	12	\$9,600	3,860	LF				
15.1	Plumbing	10	7	\$2,000	1	LS	2,000			
15.2	Irrigation	10	7	\$2,000	1	LS	2,000			
15.3	Drainage	50	37	\$0	1	LS				
15.4	Sewer	30	17	\$10,000	1	LS				
16.1	Electrical	10	3	\$1,600	8	EA				
16.2	Exterior Lighting	20	7	\$7,200	48	EA	7,200			
17.1	Fire Alarm System	20	7	\$16,000	8	EA	16,000			
20.1	Reserve Study	3	3	\$2,500	1	EA	2,500			2,500
Total Expenses By Year							\$71,200	\$2,000	\$73,460	\$2,500
Construction Cost Escalation							2.22	2.29	2.36	2.43
Total Expenses (Escalated)							\$158,156	\$4,576	\$173,113	\$6,068

"THRESHOLD" RESERVE FUNDING OPTION

Annual Reserve beginning in	2017	\$51,100	2043	2044	2045	2046
Total Expenses (Escalated)			\$158,156	\$4,576	\$173,113	\$6,068
Beginning Reserve Balance			472209	425983	537232	483035
Interest Earned on Reserve Balance			1727	2318	2003	2623
Recommended Reserve Contribution Adjusted For Inflation			110202	113508	116913	120420
Year End Balance (Adjusted For Inflation)			\$425,983	\$537,232	\$483,035	\$600,011
Year End Balance (expressed in current year dollars)			\$191,773	\$234,812	\$204,974	\$247,196

"MINIMUM" RESERVE FUNDING OPTION

Annual Reserve beginning in	2017	\$48,100	2043	2044	2045	2046
Total Expenses (Escalated)			\$158,156	\$4,576	\$173,113	\$6,068
Beginning Reserve Balance			349884	296515	400389	338575
Interest Earned on Reserve Balance			1055	1606	1250	1829
Recommended Reserve Contribution Adjusted For Inflation			103732	106844	110049	113351
Year End Balance (Adjusted For Inflation)			\$296,515	\$400,389	\$338,575	\$447,686
Year End Balance (expressed in current year dollars)			\$133,488	\$175,001	\$143,673	\$184,441

"FULLY FUNDED" RESERVE FUNDING OPTION

Annual Reserve beginning in	2017	\$55,500	2043	2044	2045	2046
Total Expenses (Escalated)			\$158,156	\$4,576	\$173,113	\$6,068
Beginning Reserve Balance			652396	616650	738722	695699
Interest Earned on Reserve Balance			2718	3366	3111	3793
Recommended Reserve Contribution Adjusted For Inflation			119691	123282	126980	130789
Year End Balance (Adjusted For Inflation)			\$616,650	\$738,722	\$695,699	\$824,213
Year End Balance (expressed in current year dollars)			\$277,609	\$322,878	\$295,217	\$339,565