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## **“Full” Reserve Study**



**Mercer Park**

**Bellevue, WA**

**Report #: 11700-0**

**For Period Beginning: January 1, 2014**

**Expires: December 31, 2014**

**Date Prepared: May 30, 2013**

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## **Hello, and welcome to your Reserve Study!**

**T**his Report is a valuable budget planning tool, for with it you control the future of your association. It contains all the fundamental information needed to understand your current and future Reserve obligations, the most significant expenditures your association will face.

**W**ith respect to Reserves, this Report will tell you “where you are”, and “where to go from here”.

**In this Report, you will find...**

- 1) A List of What you're Reserving For**
- 2) An Evaluation of your Reserve Fund Size and Strength**
- 3) A Recommended Multi-Year Reserve Funding Plan**

### **More Questions?**

Visit our website at [www.ReserveStudy.com](http://www.ReserveStudy.com) or call us at:

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## 3- Minute Executive Summary

**Association:** Mercer Park **Assoc. #: 11700-0**  
**Location:** Bellevue, WA  
**# of Units:** 122  
**Report Period:** January 1, 2014 through December 31, 2014

**Results as-of 1/1/2014:**

<b>Projected Starting Reserve Balance:</b> .....	<b>\$951,920</b>
<b>Fully Funded Reserve Balance:</b> .....	<b>\$1,859,568</b>
<b>Average Reserve Deficit (Surplus) Per Unit:</b> .....	<b>\$7,440</b>
<b>Percent Funded:</b> .....	<b>51.2%</b>
<b>100% Full Funding 2014 Monthly Reserve Contribution</b> .....	<b>\$14,400</b>
<b>Baseline Contribution (min to maintain reserves above \$0)</b> .....	<b>\$13,000</b>
<b>Recommended 2014 Special Assessment for Reserves:</b> .....	<b>\$0</b>
<b>Most Recent Reserve Contribution Rate:</b> .....	<b>\$10,756</b>

**Economic Assumptions:**

**Net Annual “After Tax” Interest Earnings Accruing to Reserves**..... 1.00%  
**Annual Inflation Rate** ..... 3.00%

- **The information in this Reserve Study is based on our site inspection on May 6, 2013 and meets or exceeds all requirements of the RCW. This Reserve Study was prepared by a credentialed Reserve Specialist (RS).**
- **Your Reserve Fund is currently 51.2% Funded. Comparatively, the 70-130% level is where associations statistically enjoy fiscal stability with low risk of special assessment and/or deferred maintenance.**
- **Based on this starting point and your anticipated future expenses, our recommendation is to increase your Monthly Reserve Contributions to within the 70% to 100% Full Funding range as noted above (Tables and charts herein reflect Full Funding as our recommended contribution). Full and 70% contribution rates are designed to achieve the stated funding objective by the end of our 30-year report scope.**
- **See photo pages for detailed component information and the basis of our assumptions.**

**Table 1: Executive Summary** **11700-0**

# Component	Useful Life (yrs)	Rem. Useful Life (yrs)	Current Average Cost	Future Average Cost
<b>Grounds / Site</b>				
120 Asphalt - Resurface	30	5	\$147,500	\$170,993
121 Asphalt - Seal/Repair	5	0	\$20,500	\$23,765
147 Trash Enclosures - Repair/Replace	10	5	\$9,000	\$10,433
160 Pole Lights - Replace	25	1	\$3,500	\$3,605
200 Entry Sign/Monument - Replace	20	15	\$3,000	\$4,674
<b>Clubhouse</b>				
434 Clubhouse Flooring - Replace	15	8	\$4,800	\$6,080
435 Clubhouse Int Walls - Repaint	15	8	\$4,800	\$6,080
436 Clubhouse Kitchen - Refurbish	30	8	\$5,000	\$6,334
440 Clubhouse Bathrooms - Refurbish	30	8	\$2,600	\$3,294
454 Clubhouse Furniture - Replace	15	8	\$7,500	\$9,501
<b>Building Exteriors</b>				
500 Roof: Asphalt Shingles - Replace	30	8	\$412,500	\$522,543
515 Chimney Covers & Flue Caps -Replace	30	8	\$51,450	\$65,175
520 Siding: Vinyl - Repair/Replace	40	16	\$1,280,000	\$2,054,024
521 Siding: Vinyl - Clean/Inspect	2	0	\$17,000	\$18,035
525 Exterior Surfaces- Paint/Caulk	8	3	\$61,000	\$66,656
535 Windows, Sliders - Repair/Replace	40	16	\$556,500	\$893,019
545 Decks: Elastomeric - Replace	12	0	\$28,000	\$39,921
546 Decks: Sheet Vinyl -Repair/Replace	12	6	\$28,000	\$33,433
550 Deck Rail - Repair/Replace	30	6	\$132,000	\$157,615
590 Entry Stair/Landing- Repair	12	0	\$44,800	\$63,874
<b>Building Interiors</b>				
755 Bathroom - Refurbish	30	8	\$4,000	\$5,067
780 Exercise Equipment - Replace	5	3	\$3,500	\$3,825
<b>Systems</b>				
900 Plumbing - Repair/Replace	N/A	0	\$0	\$0
23 Total Funded Components				

**Note: For additional information about each component, read the photograph pages.**

**A reserve-funding minimum threshold of \$2,500 is suggested for your association (expenses below this level suggested to be handled with operating and maintenance budget).**

**Yellow highlighted** components with a Useful Life of 0 years and a Remaining Useful Life of 0 years (UL:0 and RUL:0) indicates the component (plumbing) was considered per RCW 64.34.382 but did not meet National Reserve Study Standards (NRSS) criteria for reserve funding (see page 2) in the judgment of the Reserve Specialist.

**Yellow highlighted** components with a Useful Life of 1 or more years and Remaining Useful Life of 0 years (UL: >1 and RUL:0), are anticipated to occur in the initial year.

## **Introduction**

A Reserve Study is the art and science of anticipating, and preparing for, an association's major common area repair and replacement expenses. Partially art, because in this field we are making projections about the future. Partially science, because our work is a process of research and analysis along well defined methodologies.

In this Report you will find the Reserve Component List (what you are reserving for). It contains our estimates for Useful Life, Remaining Useful Life, and the current repair or replacement cost for each major component the association is obligated to maintain. Based on that List and your starting balance we computed the association's Reserve Fund Strength (measured as "Percent Funded"), and created a recommended multi-year Reserve Funding Plan to offset future Reserve expenses.

As the physical assets age and deteriorate, it is important to accumulate financial assets to keep the two "in balance". A stable Reserve Funding Plan that offsets the irregular Reserve expenses will ensure that each owner pays their own "fair share" of ongoing common area deterioration.

## **Methodology**

First we establish what the projected expenses are, then we determine the association's financial status and create a Funding Plan. For this "Full" Reserve Study, we started with a review of your Governing Documents, recent Reserve expenditures, an evaluation of how expenditures are handled (ongoing maintenance vs Reserves), and research into any well-established association precedents. We performed an on-site inspection to quantify and evaluate your common areas, creating your Reserve Component List "from scratch".

### *Which Physical Assets are Covered by Reserves?*

There is a national-standard four-part test to determine which expenses should be funded through Reserves. First, it must be a common area maintenance responsibility. Second, the component must have a limited life. Third, the limited life must be predictable (or it by definition is a “surprise” which cannot be accurately anticipated). Fourth, the component must be above a minimum threshold cost. This limits Reserve Components to major, predictable expenses. Within this framework, it is inappropriate to include “lifetime” components, unpredictable expenses (such as damage due to fire, flood, or earthquake), and expenses more appropriately handled from the Operational Budget or as an insured loss.

### *How are Useful Life and Remaining Useful Life established?*

- 1) Visual Inspection (observed wear and age)
- 2) Association Reserves database of experience
- 3) Client Component History
- 4) Vendor Evaluation and Recommendation

### *How are Cost Estimates Established?*

In this order...

- 1) Client Cost History
- 2) Comparison to Association Reserves database of work done at similar associations
- 3) Vendor Recommendations
- 4) Reliable National Industry cost estimating guidebooks



### *How much Reserves are enough?*

Your Reserve cash Balance can measure reserves, but the true measure is whether the funds are adequate. Adequacy is measured in a two-step process:

- 1) Calculate the association's Fully Funded Balance (FFB).
- 2) Compare to the Reserve Fund Balance, and express as a percentage.

The FFB grows as assets age and the Reserve needs of the association increase, but shrinks when projects are accomplished and the Reserve needs of the association decrease. The Fully Funded Balance changes each year, and is a moving but predictable target.

Special assessments and deferred maintenance are common when the Percent Funded is below 30%. While the 100% point is Ideal, a Reserve Fund in the 70% -130% range is considered "strong" because in this range cash flow problems are rare.

Measuring your Reserves by Percent Funded tells how well prepared your association is for upcoming Reserve expenses. New buyers should be very aware of this important disclosure!

*How much should we contribute?*

There are four Funding Principles that we balance in developing your Reserve Funding Plan. Our first objective is to design a plan that provides you with sufficient cash to perform your Reserve projects on time. A stable contribution rate is desirable because it is a hallmark of a proactive plan.

Reserve contributions that are evenly distributed over the owners, over the years, enable each owner to pay their “fair share” of the association’s Reserve expenses (this means we recommend special assessments only when all other options have been exhausted). And finally, we develop a plan that is fiscally responsible and “safe” for Boardmembers to recommend to their association.

*What is our Recommended Funding Goal?*

Maintaining the Reserve Fund at a level equal to the physical deterioration that has occurred is called “Full Funding” the Reserves (100% Funded). As each asset ages and becomes “used up”, the Reserve Fund grows proportionally. **This is simple, responsible, and our recommendation.** As stated previously, associations in the 100% range rarely experience special assessments or deferred maintenance.

Allowing the Reserves to fall close to zero, but not below zero, is called Baseline Funding. In these associations, deterioration occurs without matching Reserve contributions. With a low Percent Funded, special assessments and deferred maintenance are common.

Threshold Funding is the title of all other objectives randomly selected between Baseline Funding and Full Funding.

## Site Inspection Notes

During our site visit on May 6, 2013, we started with a meeting which included Barbara Sheppard. In the meeting we discussed the history of recent reserve projects and maintenance projects. We also discussed current plans for any upcoming reserve projects. We then began our limited visual review with the clubhouse.

Mercer Park provided us with access to most components. No access was provided to the clubhouse office room. We visually reviewed a limited sample of each visible component. We compiled a photographic inventory of each component, and noted the general type, material, and condition, as well as it's exposure to the elements. We measured and calculated the area of numerous components, and quantified other components, in order to project total costs using a per unit cost basis.

We were not able to view the plumbing, drainage, and electrical systems, since the vast majority of these systems are not readily viewable, and a reserve study conducts only a limited visual review.

### Notes:

Washington state law (RCW 19.27.530) requires carbon monoxide alarms in each dwelling unit in the state of Washington, as of January 1, 2013. Here is a link to the Seattle Fire department's web site where they explain the state law. <http://www.seattle.gov/fire/fmo/firecode/firecode.htm>

### Projected Expenses

The figure below shows the array of the projected future expenses at your association. This figure clearly shows the near term and future expenses that your association will face. Note the projected expenses in 2030, made up primarily of window and siding replacement.

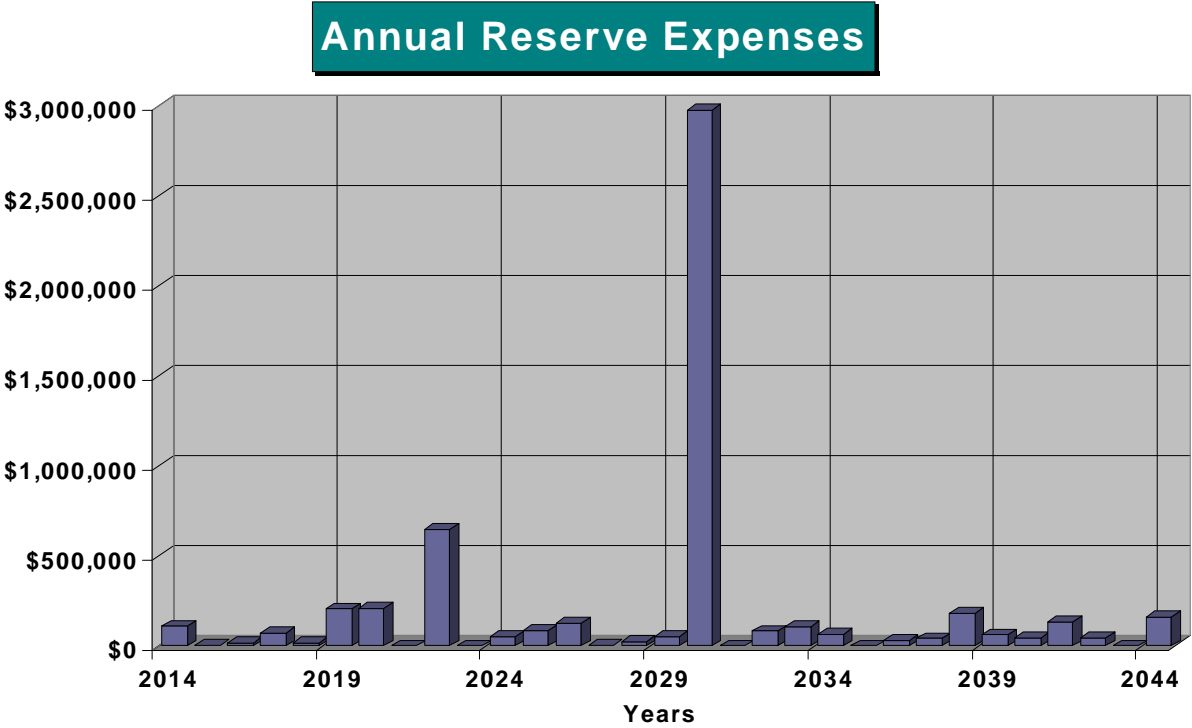


figure 1

A summary of this information is shown in Table 4, while details of the projects that make up this information are shown in Table 5. Since this is a projection about future events that may or may not take place as anticipated, we feel more certain about “near-term” projects than those many years away. While this Reserve Study is a one-year document, it is based on 30 years worth of looking forward into the future.

### Reserve Fund Status

The starting point for our financial analysis is your Reserve Fund balance, projected to be \$951,920 as-of the start of your Fiscal Year on January 1, 2014. Your property manager, Len Gonzales, provided this projected balance.

As of January 1, 2014, your Fully Funded Balance is computed to be \$1,859,568 (see Table 3). This figure represents the deteriorated value of your common area components. Comparing your Reserve Balance to your Fully Funded Balance indicates your Reserves are 51% Funded. As indicated earlier in the Executive Summary, this represents a fair status.

### Recommended Funding Plan

Based on your current Percent Funded and your projected cash flow requirements, we are recommending Reserve contributions of \$14,400/month this Fiscal Year. This represents the first year of the 30-year Funding Plan shown below. This same information is shown numerically in both Table 4 and Table 5.

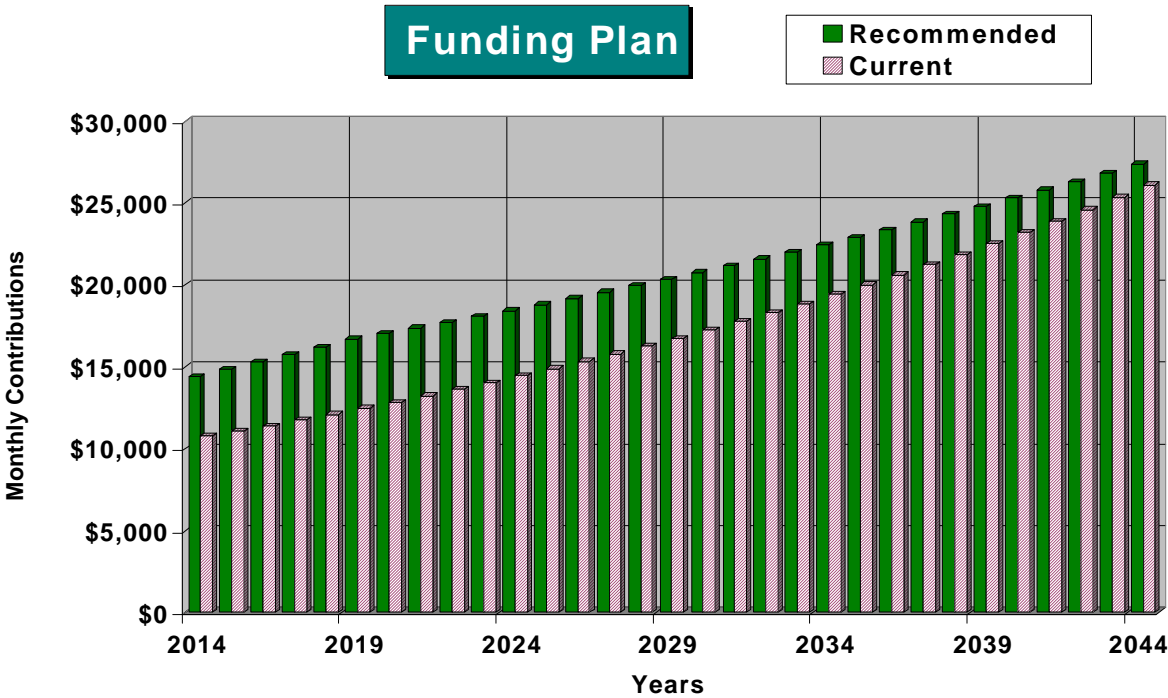


Figure 2

The following chart shows your Reserve balance under our recommended Funding Plan and your current Funding Plan, and your always-changing Fully Funded Balance target.

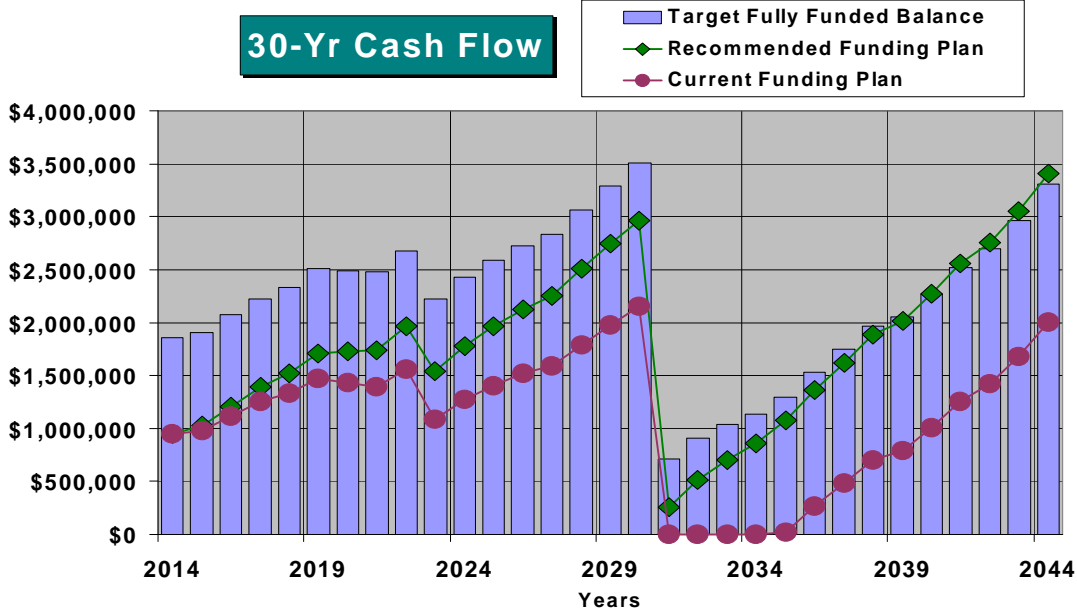


Figure 3

In this figure it is easy to see how your Reserve Fund gradually draws closer to the Fully Funded (100%) level.

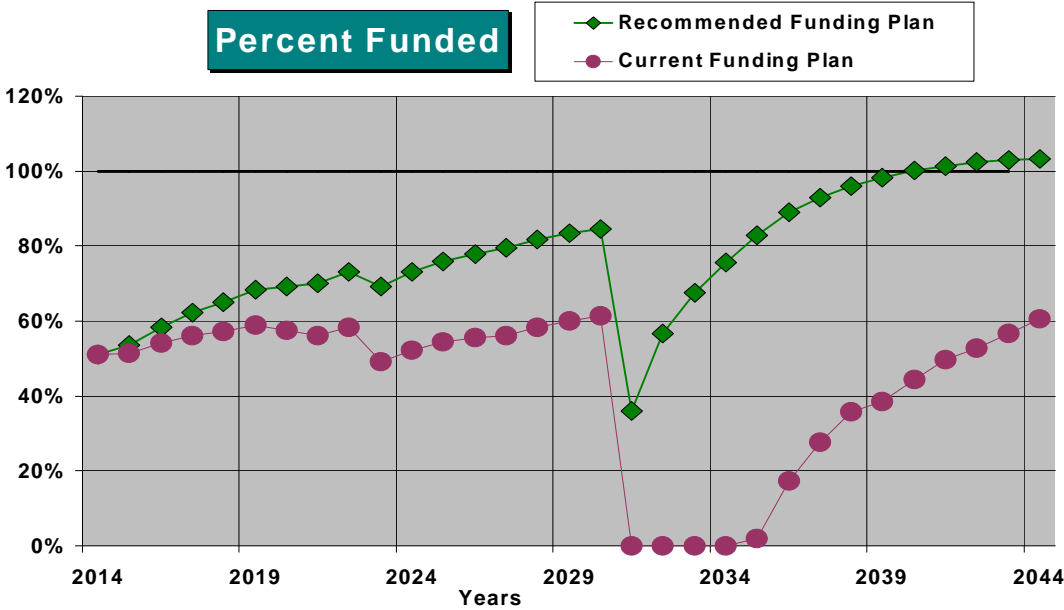


Figure 4

## Table Descriptions

The tabular information in this Report is broken down into five tables.

Table 1 summarizes your funded Reserve Components, and is part of the Executive Report summary that appeared earlier in this Report.

Table 2 provides the main component description, life, and cost factors for all components determined to be appropriate for Reserve designation. This table represents the core information from which all other tables are derived.

Table 3 is presented primarily as an accounting summary page. The results of the individual line item Fully Funded Balance computations are shown. These individual quantities are summed to arrive at the Fully Funded Balance for the association as of the start date of the Report. The figures in the Current Fund Balance column and the Monthly Reserve Contribution column show our distribution throughout the line items. If the association is underfunded, Reserve Funds are distributed first to components with a short Remaining Useful Life. If the association's Reserve Balance is above 100% Funded, funds are distributed evenly for all components. Contribution rates for each component are a proportionate distribution of the total contribution on the basis of the component's significance to the association (current cost divided by useful life). This presentation is not meant to cause clients to redistribute association funds, it simply presents one way to evenly distribute the total among all the different line items.

Table 4: This table provides a one-page 30-year summary of the cash flowing into and out of the association, compared to the Fully Funded Balance for each year.

Table 5: This table shows the cash flow detail for the next 30 years. This table makes it possible to see what components are projected to require repair or replacement each year, and the size of those individual expenses.

**Table 2: Reserve Component List Detail**
**11700-0**

# Component	Quantity	Useful Life	Rem. Useful Life	Best Cost	Current Worst Cost
<b>Grounds / Site</b>					
120 Asphalt - Resurface	~ 82,000 Sq Ft	30	5	\$131,000	\$164,000
121 Asphalt - Seal/Repair	~ 82,000 Sq Ft	5	0	\$16,400	\$24,600
147 Trash Enclosures - Repair/Replace	(8), 8 ft x 12 ft	10	5	\$7,200	\$10,800
160 Pole Lights - Replace	(2) wood assemblies	25	1	\$3,000	\$4,000
200 Entry Sign/Monument - Replace	(2) plastic	20	15	\$2,000	\$4,000
<b>Clubhouse</b>					
434 Clubhouse Flooring - Replace	~ 80 Sq Yds	15	8	\$4,000	\$5,600
435 Clubhouse Int Walls - Repaint	~ 6,600 Sq Ft	15	8	\$4,000	\$5,600
436 Clubhouse Kitchen - Refurbish	~ 15 Sq Ft	30	8	\$4,000	\$6,000
440 Clubhouse Bathrooms - Refurbish	(4) bathrooms	30	8	\$2,000	\$3,200
454 Clubhouse Furniture - Replace	Numerous assorted pieces	15	8	\$5,000	\$10,000
<b>Building Exteriors</b>					
500 Roof: Asphalt Shingles - Replace	~ 110,000 Sq Ft	30	8	\$385,000	\$440,000
515 Chimney Covers & Flue Caps -Replace	~ (50) covers, (122) caps	30	8	\$40,900	\$62,000
520 Siding: Vinyl - Repair/Replace	~ 122,000 GSF	40	16	\$1,100,000	\$1,460,000
521 Siding: Vinyl - Clean/Inspect	~ 122,000 GSF	2	0	\$15,000	\$19,000
525 Exterior Surfaces- Paint/Caulk	Limited GSF	8	3	\$48,800	\$73,200
535 Windows, Sliders - Repair/Replace	~ (530) windows	40	16	\$477,000	\$636,000
545 Decks: Elastomeric - Replace	~ 50% of 4,000 Sq Ft	12	0	\$24,000	\$32,000
546 Decks: Sheet Vinyl -Repair/Replace	~ 50% of 4,000 Sq Ft	12	6	\$24,000	\$32,000
550 Deck Rail - Repair/Replace	~ 4,400 Lin Ft	30	6	\$110,000	\$154,000
590 Entry Stair/Landing- Repair	~ 3,200 Sq Ft	12	0	\$38,400	\$51,200
<b>Building Interiors</b>					
755 Bathroom - Refurbish	(4) bathrooms	30	8	\$2,000	\$6,000
780 Exercise Equipment - Replace	Assorted pieces	5	3	\$3,000	\$4,000
<b>Systems</b>					
900 Plumbing - Repair/Replace	Supply, drain systems	N/A	0	\$0	\$0
23 Total Funded Components					



**Table 3: Contribution and Fund Breakdown**
**11700-0**

# Component	Useful Life	Rem. Useful Life	Current (Avg) Cost	Fully Funded Balance	Current Fund Balance	Reserve Contributions
<b>Grounds / Site</b>						
120 Asphalt - Resurface	30	5	\$147,500	\$122,917	\$122,916.67	\$689.15
121 Asphalt - Seal/Repair	5	0	\$20,500	\$20,500	\$20,500.00	\$574.68
147 Trash Enclosures - Repair/Replace	10	5	\$9,000	\$4,500	\$4,500.00	\$126.15
160 Pole Lights - Replace	25	1	\$3,500	\$3,360	\$3,360.00	\$19.62
200 Entry Sign/Monument - Replace	20	15	\$3,000	\$750	\$750.00	\$21.02
<b>Clubhouse</b>						
434 Clubhouse Flooring - Replace	15	8	\$4,800	\$2,240	\$2,240.00	\$44.85
435 Clubhouse Int Walls - Repaint	15	8	\$4,800	\$2,240	\$2,240.00	\$44.85
436 Clubhouse Kitchen - Refurbish	30	8	\$5,000	\$3,667	\$3,666.67	\$23.36
440 Clubhouse Bathrooms - Refurbish	30	8	\$2,600	\$1,907	\$1,906.67	\$12.15
454 Clubhouse Furniture - Replace	15	8	\$7,500	\$3,500	\$3,500.00	\$70.08
<b>Building Exteriors</b>						
500 Roof: Asphalt Shingles - Replace	30	8	\$412,500	\$302,500	\$302,500.00	\$1,927.27
515 Chimney Covers & Flue Caps -Replace	30	8	\$51,450	\$37,730	\$37,730.00	\$240.38
520 Siding: Vinyl - Repair/Replace	40	16	\$1,280,000	\$768,000	\$194,251.67	\$4,485.29
521 Siding: Vinyl - Clean/Inspect	2	0	\$17,000	\$17,000	\$17,000.00	\$1,191.41
525 Exterior Surfaces- Paint/Caulk	8	3	\$61,000	\$38,125	\$38,125.00	\$1,068.76
535 Windows, Sliders - Repair/Replace	40	16	\$556,500	\$333,900	\$0.00	\$1,950.05
545 Decks: Elastomeric - Replace	12	0	\$28,000	\$28,000	\$28,000.00	\$327.05
546 Decks: Sheet Vinyl -Repair/Replace	12	6	\$28,000	\$14,000	\$14,000.00	\$327.05
550 Deck Rail - Repair/Replace	30	6	\$132,000	\$105,600	\$105,600.00	\$616.73
590 Entry Stair/Landing- Repair	12	0	\$44,800	\$44,800	\$44,800.00	\$523.28
<b>Building Interiors</b>						
755 Bathroom - Refurbish	30	8	\$4,000	\$2,933	\$2,933.33	\$18.69
780 Exercise Equipment - Replace	5	3	\$3,500	\$1,400	\$1,400.00	\$98.12
<b>Systems</b>						
900 Plumbing - Repair/Replace	N/A	0	\$0	\$0	\$0.00	\$0.00
23 Total Funded Components				\$1,859,568	\$951,920	\$14,400

**Table 4: 30-Year Reserve Plan Summary**

**11700-0**

**Fiscal Year Beginning: 01/01/14**

**Interest:**

**1.0%**

**Inflation:**

**3.0%**

Year	Starting Reserve Balance	Fully Funded Balance	Percent Funded	Rating	Annual Reserve Contribs.	Loans or Special Assmts	Interest Income	Projected Reserve Expenses
2014	\$951,920	\$1,859,568	51.2%	Fair	\$172,800	\$0	\$9,877	\$110,300
2015	\$1,024,297	\$1,907,564	53.7%	Fair	\$177,984	\$0	\$11,166	\$3,605
2016	\$1,209,842	\$2,070,071	58.4%	Fair	\$183,324	\$0	\$12,984	\$18,035
2017	\$1,388,114	\$2,225,858	62.4%	Fair	\$188,823	\$0	\$14,539	\$70,481
2018	\$1,520,996	\$2,335,669	65.1%	Fair	\$194,488	\$0	\$16,161	\$19,134
2019	\$1,712,511	\$2,505,130	68.4%	Fair	\$200,323	\$0	\$17,179	\$205,192
2020	\$1,724,821	\$2,491,609	69.2%	Fair	\$204,329	\$0	\$17,292	\$211,347
2021	\$1,735,095	\$2,475,022	70.1%	Strong	\$208,416	\$0	\$18,478	\$0
2022	\$1,961,989	\$2,679,415	73.2%	Strong	\$212,584	\$0	\$17,513	\$650,043
2023	\$1,542,042	\$2,224,300	69.3%	Fair	\$216,836	\$0	\$16,580	\$0
2024	\$1,775,458	\$2,429,097	73.1%	Strong	\$221,172	\$0	\$18,694	\$50,397
2025	\$1,964,928	\$2,592,272	75.8%	Strong	\$225,596	\$0	\$20,449	\$84,438
2026	\$2,126,534	\$2,729,546	77.9%	Strong	\$230,108	\$0	\$21,876	\$128,033
2027	\$2,250,484	\$2,830,429	79.5%	Strong	\$234,710	\$0	\$23,761	\$5,140
2028	\$2,503,815	\$3,065,445	81.7%	Strong	\$239,404	\$0	\$26,227	\$25,714
2029	\$2,743,732	\$3,290,982	83.4%	Strong	\$244,192	\$0	\$28,536	\$50,634
2030	\$2,965,825	\$3,502,419	84.7%	Strong	\$249,076	\$0	\$16,106	\$2,974,323
2031	\$256,684	\$713,745	36.0%	Fair	\$254,057	\$0	\$3,855	\$0
2032	\$514,596	\$910,058	56.5%	Fair	\$259,139	\$0	\$6,057	\$82,568
2033	\$697,223	\$1,032,463	67.5%	Fair	\$264,321	\$0	\$7,795	\$106,964
2034	\$862,375	\$1,138,816	75.7%	Strong	\$269,608	\$0	\$9,677	\$67,729
2035	\$1,073,931	\$1,294,339	83.0%	Strong	\$275,000	\$0	\$12,170	\$0
2036	\$1,361,101	\$1,530,021	89.0%	Strong	\$280,500	\$0	\$14,919	\$32,574
2037	\$1,623,946	\$1,745,129	93.1%	Strong	\$286,110	\$0	\$17,547	\$40,656
2038	\$1,886,947	\$1,964,448	96.1%	Strong	\$291,832	\$0	\$19,505	\$182,545
2039	\$2,015,740	\$2,050,466	98.3%	Strong	\$297,669	\$0	\$21,435	\$61,766
2040	\$2,273,077	\$2,269,920	100.1%	Strong	\$303,622	\$0	\$24,138	\$44,210
2041	\$2,556,627	\$2,520,687	101.4%	Strong	\$309,695	\$0	\$26,559	\$135,499
2042	\$2,757,382	\$2,691,796	102.4%	Strong	\$315,888	\$0	\$29,052	\$46,903
2043	\$3,055,420	\$2,966,345	103.0%	Strong	\$322,206	\$0	\$32,313	\$0

**Table 5: 30-Year Income/Expense Detail (yrs 0 through 4)**

**11700-0**

Fiscal Year	2014	2015	2016	2017	2018
Starting Reserve Balance	\$951,920	\$1,024,297	\$1,209,842	\$1,388,114	\$1,520,996
Annual Reserve Contribution	\$172,800	\$177,984	\$183,324	\$188,823	\$194,488
Planned Special Assessments	\$0	\$0	\$0	\$0	\$0
Interest Earnings	\$9,877	\$11,166	\$12,984	\$14,539	\$16,161
<b>Total Income</b>	<b>\$1,134,597</b>	<b>\$1,213,447</b>	<b>\$1,406,150</b>	<b>\$1,591,477</b>	<b>\$1,731,645</b>

# Component

**Grounds / Site**

120 Asphalt - Resurface	\$0	\$0	\$0	\$0	\$0
121 Asphalt - Seal/Repair	\$20,500	\$0	\$0	\$0	\$0
147 Trash Enclosures - Repair/Replace	\$0	\$0	\$0	\$0	\$0
160 Pole Lights - Replace	\$0	\$3,605	\$0	\$0	\$0
200 Entry Sign/Monument - Replace	\$0	\$0	\$0	\$0	\$0

**Clubhouse**

434 Clubhouse Flooring - Replace	\$0	\$0	\$0	\$0	\$0
435 Clubhouse Int Walls - Repaint	\$0	\$0	\$0	\$0	\$0
436 Clubhouse Kitchen - Refurbish	\$0	\$0	\$0	\$0	\$0
440 Clubhouse Bathrooms - Refurbish	\$0	\$0	\$0	\$0	\$0
454 Clubhouse Furniture - Replace	\$0	\$0	\$0	\$0	\$0

**Building Exteriors**

500 Roof: Asphalt Shingles - Replace	\$0	\$0	\$0	\$0	\$0
515 Chimney Covers & Flue Caps -Replace	\$0	\$0	\$0	\$0	\$0
520 Siding: Vinyl - Repair/Replace	\$0	\$0	\$0	\$0	\$0
521 Siding: Vinyl - Clean/Inspect	\$17,000	\$0	\$18,035	\$0	\$19,134
525 Exterior Surfaces- Paint/Caulk	\$0	\$0	\$0	\$66,656	\$0
535 Windows, Sliders - Repair/Replace	\$0	\$0	\$0	\$0	\$0
545 Decks: Elastomeric - Replace	\$28,000	\$0	\$0	\$0	\$0
546 Decks: Sheet Vinyl -Repair/Replace	\$0	\$0	\$0	\$0	\$0
550 Deck Rail - Repair/Replace	\$0	\$0	\$0	\$0	\$0
590 Entry Stair/Landing- Repair	\$44,800	\$0	\$0	\$0	\$0

**Building Interiors**

755 Bathroom - Refurbish	\$0	\$0	\$0	\$0	\$0
780 Exercise Equipment - Replace	\$0	\$0	\$0	\$3,825	\$0

**Systems**

900 Plumbing - Repair/Replace	\$0	\$0	\$0	\$0	\$0
<b>Total Expenses</b>	<b>\$110,300</b>	<b>\$3,605</b>	<b>\$18,035</b>	<b>\$70,481</b>	<b>\$19,134</b>

**Table 5: 30-Year Income/Expense Detail (yrs 0 through 4) 11700-0**

Fiscal Year	2014	2015	2016	2017	2018
Ending Reserve Balance:	\$1,024,297	\$1,209,842	\$1,388,114	\$1,520,996	\$1,712,511

**Table 5: 30-Year Income/Expense Detail (yrs 5 through 9)****11700-0**

Fiscal Year	2019	2020	2021	2022	2023
Starting Reserve Balance	\$1,712,511	\$1,724,821	\$1,735,095	\$1,961,989	\$1,542,042
Annual Reserve Contribution	\$200,323	\$204,329	\$208,416	\$212,584	\$216,836
Planned Special Assessments	\$0	\$0	\$0	\$0	\$0
Interest Earnings	\$17,179	\$17,292	\$18,478	\$17,513	\$16,580
<b>Total Income</b>	<b>\$1,930,013</b>	<b>\$1,946,443</b>	<b>\$1,961,989</b>	<b>\$2,192,085</b>	<b>\$1,775,458</b>

# Component

**Grounds / Site**

120 Asphalt - Resurface	\$170,993	\$0	\$0	\$0	\$0
121 Asphalt - Seal/Repair	\$23,765	\$0	\$0	\$0	\$0
147 Trash Enclosures - Repair/Replace	\$10,433	\$0	\$0	\$0	\$0
160 Pole Lights - Replace	\$0	\$0	\$0	\$0	\$0
200 Entry Sign/Monument - Replace	\$0	\$0	\$0	\$0	\$0

**Clubhouse**

434 Clubhouse Flooring - Replace	\$0	\$0	\$0	\$6,080	\$0
435 Clubhouse Int Walls - Repaint	\$0	\$0	\$0	\$6,080	\$0
436 Clubhouse Kitchen - Refurbish	\$0	\$0	\$0	\$6,334	\$0
440 Clubhouse Bathrooms - Refurbish	\$0	\$0	\$0	\$3,294	\$0
454 Clubhouse Furniture - Replace	\$0	\$0	\$0	\$9,501	\$0

**Building Exteriors**

500 Roof: Asphalt Shingles - Replace	\$0	\$0	\$0	\$522,543	\$0
515 Chimney Covers & Flue Caps -Replace	\$0	\$0	\$0	\$65,175	\$0
520 Siding: Vinyl - Repair/Replace	\$0	\$0	\$0	\$0	\$0
521 Siding: Vinyl - Clean/Inspect	\$0	\$20,299	\$0	\$21,535	\$0
525 Exterior Surfaces- Paint/Caulk	\$0	\$0	\$0	\$0	\$0
535 Windows, Sliders - Repair/Replace	\$0	\$0	\$0	\$0	\$0
545 Decks: Elastomeric - Replace	\$0	\$0	\$0	\$0	\$0
546 Decks: Sheet Vinyl -Repair/Replace	\$0	\$33,433	\$0	\$0	\$0
550 Deck Rail - Repair/Replace	\$0	\$157,615	\$0	\$0	\$0
590 Entry Stair/Landing- Repair	\$0	\$0	\$0	\$0	\$0

**Building Interiors**

755 Bathroom - Refurbish	\$0	\$0	\$0	\$5,067	\$0
780 Exercise Equipment - Replace	\$0	\$0	\$0	\$4,434	\$0

**Systems**

900 Plumbing - Repair/Replace	\$0	\$0	\$0	\$0	\$0
<b>Total Expenses</b>	<b>\$205,192</b>	<b>\$211,347</b>	<b>\$0</b>	<b>\$650,043</b>	<b>\$0</b>

**Table 5: 30-Year Income/Expense Detail (yrs 5 through 9) 11700-0**

Fiscal Year	2019	2020	2021	2022	2023
Ending Reserve Balance:	\$1,724,821	\$1,735,095	\$1,961,989	\$1,542,042	\$1,775,458

**Table 5: 30-Year Income/Expense Detail (yrs 10 through 14)**

**11700-0**

Fiscal Year	2024	2025	2026	2027	2028
Starting Reserve Balance	\$1,775,458	\$1,964,928	\$2,126,534	\$2,250,484	\$2,503,815
Annual Reserve Contribution	\$221,172	\$225,596	\$230,108	\$234,710	\$239,404
Planned Special Assessments	\$0	\$0	\$0	\$0	\$0
Interest Earnings	\$18,694	\$20,449	\$21,876	\$23,761	\$26,227
<b>Total Income</b>	<b>\$2,015,324</b>	<b>\$2,210,972</b>	<b>\$2,378,517</b>	<b>\$2,508,955</b>	<b>\$2,769,446</b>

# Component

**Grounds / Site**

120 Asphalt - Resurface	\$0	\$0	\$0	\$0	\$0
121 Asphalt - Seal/Repair	\$27,550	\$0	\$0	\$0	\$0
147 Trash Enclosures - Repair/Replace	\$0	\$0	\$0	\$0	\$0
160 Pole Lights - Replace	\$0	\$0	\$0	\$0	\$0
200 Entry Sign/Monument - Replace	\$0	\$0	\$0	\$0	\$0

**Clubhouse**

434 Clubhouse Flooring - Replace	\$0	\$0	\$0	\$0	\$0
435 Clubhouse Int Walls - Repaint	\$0	\$0	\$0	\$0	\$0
436 Clubhouse Kitchen - Refurbish	\$0	\$0	\$0	\$0	\$0
440 Clubhouse Bathrooms - Refurbish	\$0	\$0	\$0	\$0	\$0
454 Clubhouse Furniture - Replace	\$0	\$0	\$0	\$0	\$0

**Building Exteriors**

500 Roof: Asphalt Shingles - Replace	\$0	\$0	\$0	\$0	\$0
515 Chimney Covers & Flue Caps -Replace	\$0	\$0	\$0	\$0	\$0
520 Siding: Vinyl - Repair/Replace	\$0	\$0	\$0	\$0	\$0
521 Siding: Vinyl - Clean/Inspect	\$22,847	\$0	\$24,238	\$0	\$25,714
525 Exterior Surfaces- Paint/Caulk	\$0	\$84,438	\$0	\$0	\$0
535 Windows, Sliders - Repair/Replace	\$0	\$0	\$0	\$0	\$0
545 Decks: Elastomeric - Replace	\$0	\$0	\$39,921	\$0	\$0
546 Decks: Sheet Vinyl -Repair/Replace	\$0	\$0	\$0	\$0	\$0
550 Deck Rail - Repair/Replace	\$0	\$0	\$0	\$0	\$0
590 Entry Stair/Landing- Repair	\$0	\$0	\$63,874	\$0	\$0

**Building Interiors**

755 Bathroom - Refurbish	\$0	\$0	\$0	\$0	\$0
780 Exercise Equipment - Replace	\$0	\$0	\$0	\$5,140	\$0

**Systems**

900 Plumbing - Repair/Replace	\$0	\$0	\$0	\$0	\$0
<b>Total Expenses</b>	<b>\$50,397</b>	<b>\$84,438</b>	<b>\$128,033</b>	<b>\$5,140</b>	<b>\$25,714</b>

**Table 5: 30-Year Income/Expense Detail (yrs 10 through 14) 11700-0**

Fiscal Year	2024	2025	2026	2027	2028
Ending Reserve Balance:	\$1,964,928	\$2,126,534	\$2,250,484	\$2,503,815	\$2,743,732



**Table 5: 30-Year Income/Expense Detail (yrs 15 through 19)**

**11700-0**

Fiscal Year	2029	2030	2031	2032	2033
Starting Reserve Balance	\$2,743,732	\$2,965,825	\$256,684	\$514,596	\$697,223
Annual Reserve Contribution	\$244,192	\$249,076	\$254,057	\$259,139	\$264,321
Planned Special Assessments	\$0	\$0	\$0	\$0	\$0
Interest Earnings	\$28,536	\$16,106	\$3,855	\$6,057	\$7,795
<b>Total Income</b>	<b>\$3,016,459</b>	<b>\$3,231,007</b>	<b>\$514,596</b>	<b>\$779,791</b>	<b>\$969,339</b>

# Component

**Grounds / Site**

120 Asphalt - Resurface	\$0	\$0	\$0	\$0	\$0
121 Asphalt - Seal/Repair	\$31,938	\$0	\$0	\$0	\$0
147 Trash Enclosures - Repair/Replace	\$14,022	\$0	\$0	\$0	\$0
160 Pole Lights - Replace	\$0	\$0	\$0	\$0	\$0
200 Entry Sign/Monument - Replace	\$4,674	\$0	\$0	\$0	\$0

**Clubhouse**

434 Clubhouse Flooring - Replace	\$0	\$0	\$0	\$0	\$0
435 Clubhouse Int Walls - Repaint	\$0	\$0	\$0	\$0	\$0
436 Clubhouse Kitchen - Refurbish	\$0	\$0	\$0	\$0	\$0
440 Clubhouse Bathrooms - Refurbish	\$0	\$0	\$0	\$0	\$0
454 Clubhouse Furniture - Replace	\$0	\$0	\$0	\$0	\$0

**Building Exteriors**

500 Roof: Asphalt Shingles - Replace	\$0	\$0	\$0	\$0	\$0
515 Chimney Covers & Flue Caps -Replace	\$0	\$0	\$0	\$0	\$0
520 Siding: Vinyl - Repair/Replace	\$0	\$2,054,024	\$0	\$0	\$0
521 Siding: Vinyl - Clean/Inspect	\$0	\$27,280	\$0	\$28,941	\$0
525 Exterior Surfaces- Paint/Caulk	\$0	\$0	\$0	\$0	\$106,964
535 Windows, Sliders - Repair/Replace	\$0	\$893,019	\$0	\$0	\$0
545 Decks: Elastomeric - Replace	\$0	\$0	\$0	\$0	\$0
546 Decks: Sheet Vinyl -Repair/Replace	\$0	\$0	\$0	\$47,668	\$0
550 Deck Rail - Repair/Replace	\$0	\$0	\$0	\$0	\$0
590 Entry Stair/Landing- Repair	\$0	\$0	\$0	\$0	\$0

**Building Interiors**

755 Bathroom - Refurbish	\$0	\$0	\$0	\$0	\$0
780 Exercise Equipment - Replace	\$0	\$0	\$0	\$5,959	\$0

**Systems**

900 Plumbing - Repair/Replace	\$0	\$0	\$0	\$0	\$0
<b>Total Expenses</b>	<b>\$50,634</b>	<b>\$2,974,323</b>	<b>\$0</b>	<b>\$82,568</b>	<b>\$106,964</b>

**Table 5: 30-Year Income/Expense Detail (yrs 15 through 19)** **11700-0**

Fiscal Year	2029	2030	2031	2032	2033
Ending Reserve Balance:	\$2,965,825	\$256,684	\$514,596	\$697,223	\$862,375

**Table 5: 30-Year Income/Expense Detail (yrs 20 through 24)**

**11700-0**

Fiscal Year	2034	2035	2036	2037	2038
Starting Reserve Balance	\$862,375	\$1,073,931	\$1,361,101	\$1,623,946	\$1,886,947
Annual Reserve Contribution	\$269,608	\$275,000	\$280,500	\$286,110	\$291,832
Planned Special Assessments	\$0	\$0	\$0	\$0	\$0
Interest Earnings	\$9,677	\$12,170	\$14,919	\$17,547	\$19,505
<b>Total Income</b>	<b>\$1,141,660</b>	<b>\$1,361,101</b>	<b>\$1,656,520</b>	<b>\$1,927,603</b>	<b>\$2,198,285</b>

# Component

**Grounds / Site**

120 Asphalt - Resurface	\$0	\$0	\$0	\$0	\$0
121 Asphalt - Seal/Repair	\$37,025	\$0	\$0	\$0	\$0
147 Trash Enclosures - Repair/Replace	\$0	\$0	\$0	\$0	\$0
160 Pole Lights - Replace	\$0	\$0	\$0	\$0	\$0
200 Entry Sign/Monument - Replace	\$0	\$0	\$0	\$0	\$0

**Clubhouse**

434 Clubhouse Flooring - Replace	\$0	\$0	\$0	\$9,473	\$0
435 Clubhouse Int Walls - Repaint	\$0	\$0	\$0	\$9,473	\$0
436 Clubhouse Kitchen - Refurbish	\$0	\$0	\$0	\$0	\$0
440 Clubhouse Bathrooms - Refurbish	\$0	\$0	\$0	\$0	\$0
454 Clubhouse Furniture - Replace	\$0	\$0	\$0	\$14,802	\$0

**Building Exteriors**

500 Roof: Asphalt Shingles - Replace	\$0	\$0	\$0	\$0	\$0
515 Chimney Covers & Flue Caps -Replace	\$0	\$0	\$0	\$0	\$0
520 Siding: Vinyl - Repair/Replace	\$0	\$0	\$0	\$0	\$0
521 Siding: Vinyl - Clean/Inspect	\$30,704	\$0	\$32,574	\$0	\$34,557
525 Exterior Surfaces- Paint/Caulk	\$0	\$0	\$0	\$0	\$0
535 Windows, Sliders - Repair/Replace	\$0	\$0	\$0	\$0	\$0
545 Decks: Elastomeric - Replace	\$0	\$0	\$0	\$0	\$56,918
546 Decks: Sheet Vinyl -Repair/Replace	\$0	\$0	\$0	\$0	\$0
550 Deck Rail - Repair/Replace	\$0	\$0	\$0	\$0	\$0
590 Entry Stair/Landing- Repair	\$0	\$0	\$0	\$0	\$91,069

**Building Interiors**

755 Bathroom - Refurbish	\$0	\$0	\$0	\$0	\$0
780 Exercise Equipment - Replace	\$0	\$0	\$0	\$6,908	\$0

**Systems**

900 Plumbing - Repair/Replace	\$0	\$0	\$0	\$0	\$0
<b>Total Expenses</b>	<b>\$67,729</b>	<b>\$0</b>	<b>\$32,574</b>	<b>\$40,656</b>	<b>\$182,545</b>

<b>Table 5: 30-Year Income/Expense Detail (yrs 20 through 24)</b>					<b>11700-0</b>
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Fiscal Year	2034	2035	2036	2037	2038
Ending Reserve Balance:	\$1,073,931	\$1,361,101	\$1,623,946	\$1,886,947	\$2,015,740

**Table 5: 30-Year Income/Expense Detail (yrs 25 through 29)****11700-0**

Fiscal Year	2039	2040	2041	2042	2043
Starting Reserve Balance	\$2,015,740	\$2,273,077	\$2,556,627	\$2,757,382	\$3,055,420
Annual Reserve Contribution	\$297,669	\$303,622	\$309,695	\$315,888	\$322,206
Planned Special Assessments	\$0	\$0	\$0	\$0	\$0
Interest Earnings	\$21,435	\$24,138	\$26,559	\$29,052	\$32,313
<b>Total Income</b>	<b>\$2,334,843</b>	<b>\$2,600,837</b>	<b>\$2,892,881</b>	<b>\$3,102,322</b>	<b>\$3,409,939</b>

# Component

**Grounds / Site**

120 Asphalt - Resurface	\$0	\$0	\$0	\$0	\$0
121 Asphalt - Seal/Repair	\$42,922	\$0	\$0	\$0	\$0
147 Trash Enclosures - Repair/Replace	\$18,844	\$0	\$0	\$0	\$0
160 Pole Lights - Replace	\$0	\$7,548	\$0	\$0	\$0
200 Entry Sign/Monument - Replace	\$0	\$0	\$0	\$0	\$0

**Clubhouse**

434 Clubhouse Flooring - Replace	\$0	\$0	\$0	\$0	\$0
435 Clubhouse Int Walls - Repaint	\$0	\$0	\$0	\$0	\$0
436 Clubhouse Kitchen - Refurbish	\$0	\$0	\$0	\$0	\$0
440 Clubhouse Bathrooms - Refurbish	\$0	\$0	\$0	\$0	\$0
454 Clubhouse Furniture - Replace	\$0	\$0	\$0	\$0	\$0

**Building Exteriors**

500 Roof: Asphalt Shingles - Replace	\$0	\$0	\$0	\$0	\$0
515 Chimney Covers & Flue Caps -Replace	\$0	\$0	\$0	\$0	\$0
520 Siding: Vinyl - Repair/Replace	\$0	\$0	\$0	\$0	\$0
521 Siding: Vinyl - Clean/Inspect	\$0	\$36,662	\$0	\$38,895	\$0
525 Exterior Surfaces- Paint/Caulk	\$0	\$0	\$135,499	\$0	\$0
535 Windows, Sliders - Repair/Replace	\$0	\$0	\$0	\$0	\$0
545 Decks: Elastomeric - Replace	\$0	\$0	\$0	\$0	\$0
546 Decks: Sheet Vinyl -Repair/Replace	\$0	\$0	\$0	\$0	\$0
550 Deck Rail - Repair/Replace	\$0	\$0	\$0	\$0	\$0
590 Entry Stair/Landing- Repair	\$0	\$0	\$0	\$0	\$0

**Building Interiors**

755 Bathroom - Refurbish	\$0	\$0	\$0	\$0	\$0
780 Exercise Equipment - Replace	\$0	\$0	\$0	\$8,008	\$0

**Systems**

900 Plumbing - Repair/Replace	\$0	\$0	\$0	\$0	\$0
<b>Total Expenses</b>	<b>\$61,766</b>	<b>\$44,210</b>	<b>\$135,499</b>	<b>\$46,903</b>	<b>\$0</b>

<b>Table 5: 30-Year Income/Expense Detail (yrs 25 through 29)</b>					<b>11700-0</b>
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Fiscal Year	2039	2040	2041	2042	2043
Ending Reserve Balance:	\$2,273,077	\$2,556,627	\$2,757,382	\$3,055,420	\$3,409,939

## Accuracy, Limitations, and Disclosures

Washington disclosure, per RCW 64.34.382:

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.

Because we have no control over future events, we cannot claim that all the events we anticipate will occur as planned. We expect that inflationary trends will continue, and we expect that financial institutions will provide interest earnings on funds on-deposit. We believe that reasonable estimates for these figures are much more accurate than ignoring these economic realities. The things we can control are measurements, which we attempt to establish within 5% accuracy. Your starting Reserve Balance and current Reserve interest earnings are also numbers that can be identified with a high degree of certainty. These figures have been provided to us, and were not confirmed by our independent research. Our projections assume a stable economic environment and lack of natural disasters.

Because both the physical status and financial status of the association change each year, this Reserve Study is by nature a "one-year" document. This information can and should be adjusted annually as part of the Reserve Study Update process so that more accurate estimates can be reflected in the Reserve plan. Reality often differs from even the best assumptions due to changing economic factors, physical factors, or ownership expectations. Because many years of financial preparation help the preparation for large expenses, this Report shows expenses for the next 30 years. We fully expect a number of adjustments will be necessary through the interim years to both the cost and timing of distant expense projections. It is our recommendation and that of the American Institute of Certified Public Accountants (AICPA) that your Reserve Study be updated annually.

Association Reserves, Inc., and its employees have no ownership, management, or other business relationships with the client other than this Reserve Study engagement. James D. Talaga R.S., company president, is a credentialed Reserve Specialist (#66). All work done by Association Reserves is performed under his Responsible Charge. There are no material issues to our knowledge that have not been disclosed to the client that would cause a distortion of the association's situation.

We have relied upon the client to provide the current (or projected) Reserve Balance, the estimated net-after-tax current rate of interest earnings, and to indicate if those earnings accrue to the Reserve Fund. In addition, we have considered the association's representation of current and historical Reserve projects reliable, and we have considered the representations made by its vendors and suppliers to also be accurate and reliable.

Component quantities indicated in this Report were developed by Association Reserves unless otherwise noted in our "Site Inspection Notes" comments. No destructive or intrusive testing was performed, nor should the site inspection be assumed to be anything other than for budget purposes.



## Terms and Definitions

<b>BTU</b>	British Thermal Unit (a standard unit of energy)
<b>DIA</b>	Diameter
<b>GSF</b>	Gross Square Feet (area)
<b>GSY</b>	Gross Square Yards (area)
<b>HP</b>	Horsepower
<b>LF</b>	Linear Feet (length)

**Effective Age:** The difference between Useful Life and Remaining Useful Life. Note that this is not necessarily equivalent to the chronological age of the component.

**Fully Funded Balance (FFB):** The Reserve Balance that is in direct proportion to the fraction of life “used up” of the current Repair or Replacement cost. This benchmark balance represents the value of the deterioration of the Reserve Components. This number is calculated for each component, then summed together for an association total.

$$\text{FFB} = (\text{Current Cost} \times \text{Effective Age}) / \text{Useful Life}$$

**Inflation:** Cost factors are adjusted for inflation at the rate defined in the Executive Summary and compounded annually. These increasing costs can be seen as you follow the recurring cycles of a component on Table 5.

**Interest:** Interest earnings on Reserve Funds are calculated using the average balance for the year (taking into account income and expenses through the year) and compounded monthly using the rate defined in the Executive Summary. Annual interest earning assumption appears in the Executive Summary, page ii.

**Percent Funded:** The ratio, at a particular point in time (typically the beginning of the Fiscal Year), of the actual (or projected) Reserve Balance to the Fully Funded Balance, expressed as a percentage.

**Remaining Useful Life:** The estimated time, in years, that a common area component can be expected to continue to serve its intended function.

**Useful Life:** The estimated time, in years, that a common area component can be expected to serve its intended function.

## Photographic Inventory Appendix

The primary purpose of the photographic appendix is to provide the reader with the basis of our funding assumptions resulting from our physical analysis and subsequent research. The photographs herein represent a wide range of elements that were observed and measured against National Reserve Study Standards to determine if they meet the criteria for reserve funding:

- 1) Common area maintenance, repair & replacement responsibility
- 2) Components must have a limited life
- 3) Life limit must be predictable
- 4) Above a minimum threshold cost (board's discretion – typically ½ to 1% of annual operating expenses).

Some components are recommended for reserve funding, while others are not. The components that meet these criteria in our judgment are shown with corresponding maintenance, repair or replacement cycles to the left of the photo (UL = Useful Life or how often the project is expected to occur, RUL = Remaining Useful Life or how many years from our reporting period) and a representative market cost range termed “Best Cost” and “Worst Cost” below the photo. There are many factors that can result in a wide variety of potential costs; we are attempting to represent a market average for budget purposes. Where there is no UL, the component is expected to be a one-time expense. Where no pricing, the component deemed inappropriate for Reserve Funding.

Client: 11700A Mercer Park

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**Comp #:** 100 Concrete - Repair/Replace

Quantity: Moderate Sq Ft

Location: Sidewalks, and patios, etc.

Evaluation: We noted fair condition with no significant damage/deterioration observed. Previous repairs (grinding down of trip hazards) to concrete were observed. No trip hazards were observed.

In our experience, larger repair/replacement expenses can emerge as the community ages. No predictable large scale costs at this time. Funding may be added to a future reserve study. No reserve funding suggested at this time.

Repair any trip and fall hazards (1/2" or larger displacement) immediately to ensure safety. As routine maintenance, inspect regularly, pressure wash for appearance and repair promptly as needed to prevent water penetrating into the base and causing further damage. Monitor tree roots nearby; consult with arborist for best practice.



Useful Life:

Remaining Life:

Best Case:

Worst Case:

Cost Source:

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Client: 11700A Mercer Park

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**Comp #:** 102 Concrete Curb - Repair/Replace

**Quantity:** Extensive Lin Ft

**Location:** Adjacent to roadway and parking areas

**Evaluation:** We noted generally fair condition and appearance with some limited cracked or broken curb observed.

Costs for periodic partial repairs are projected to be too small for reserve funding. No reserve funding suggested.

As routine maintenance, inspect regularly, pressure wash for appearance and repair locally as needed using general maintenance & repair funds.

Useful Life:

Remaining Life:



Best Case:

Worst Case:

Cost Source:

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Client: 11700A Mercer Park

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**Comp #:** 110 Stair - Repair/Replace

**Quantity:** (1) wood stair

**Location:** South end of proeprty at west side

**Evaluation:** Wood stair appeared in fair condition noted with no significant damage/deterioration noted.

With ordinary care and maintenance there is no predictable expectation for total replacement. However, in our experience as the community continues to age, some periodic larger repair needs will likely emerge. Costs for periodic partial repairs are projected to be too small for reserve funding (use maintenance funds). No reserve funding suggested.

As routine maintenance, inspect regularly and perform any needed local repairs promptly as general maintenance expense. Ensure that tread connections are tight, secure and slip resistant. Paint components regularly along with building exteriors.



Useful Life:

Remaining Life:

Best Case:

Worst Case:

Cost Source:

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Client: 11700A Mercer Park

**Comp #:** 120 Asphalt - Resurface

Quantity: ~ 82,000 Sq Ft

Location: Roadway, parking areas of association

Evaluation: Generally fair condition, with some wear and cracking, but no widespread systemic problems observed during our limited visual review.

Useful life below assumes regular seal coating. Lack of seal coating can greatly decrease the useful life, and resurfacing is typically one of the larger costs items in the reserve study.

Regular cycles of seal coating (see component #121) including local repairs as needed, are recommended to attain the full useful life and are a cost effective option for maintaining asphalt. As routine maintenance, keep surface clean and free of debris, ensure that drains are free flowing, repair cracks and clean oil stains promptly. Assuming proactive maintenance, plan to resurface (grind, overlay) at roughly the time frame below.

Useful Life:  
30 years

Remaining Life:  
5 years



Best Case: \$131,000.00

\$1.60/Sq Ft, Lower allowance to resurface (overlay)

Worst Case: \$164,000.00

\$2.00/Sq Ft, Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History



Client: 11700A Mercer Park

**Comp #:** 121 Asphalt - Seal/Repair

Quantity: ~ 82,000 Sq Ft

Location: Roadway, parking areas of association

Evaluation: Generally the surface of the asphalt appeared to be in poor condition, as it had mostly worn off. Loss of bitumen between aggregate was observed.

Regular cycles of seal coating (along with any needed repair) has proven to be the best program, in our opinion, for the long term care of lower traffic asphalt areas such as these, and are factored below.

The State of Washington, Department of Transportation recommends regular cycles of seal coating (they use the term bituminous surface treatment, BST) for the long-term care of asphalt paving with low traffic and low speed. The primary reason to seal coat asphalt pavement is to protect the pavement from the deteriorating effects of sun and water. When asphalt pavement is exposed, the asphalt oxidizes, or hardens. This causes the pavement to become more brittle. As a result, the pavement will be more likely to crack, because it is unable to bend and flex when subjected to traffic and temperature changes. A seal coat combats this situation by providing a waterproof membrane, which not only slows down the oxidation process but also helps the pavement to shed water, preventing it from entering the base material. Seal coat also provides uniform appearance, concealing the inevitable patching and repairs, which accumulate over time. Seal coat ultimately extends useful life of asphalt, postponing the asphalt resurfacing, which can be one of the larger cost items in the reserve study. See component #120 for asphalt resurfacing costs.

Repair asphalt before seal coating. Surface preparation and dry weather, during and following application, is key to lasting performance. The ideal conditions are a warm, sunny day with low humidity. Rain can cause major problems when seal coating. Seal coating should never be done when showers are threatening. Apply two coats of flood application of quality asphalt emulsion. Incorporate any striping and curb repair into this project. Fill cracks and clean oil stains promptly in between cycles as routine maintenance. For reference see <http://www.pavementinteractive.org/article/bituminous-surface-treatments/>  
<http://www.pavementinteractive.org/article/pavement-evaluationpavement-management/>

For a general overview of Asphalt Seal Coat Treatments review this website:  
<http://www.fs.fed.us/eng/pubs/html/99771201/99771201.htm>

Useful Life:  
5 years

Remaining Life:  
0 years



Best Case: \$16,400.00

\$0.20/Sq Ft, Lower allowance to clean/seal/stripe

Worst Case: \$24,600.00

\$0.30/Sq Ft, Higher allowance, more repairs, etc.

Cost Source: ARI Cost Database: Similar Project Cost History

Client: 11700A Mercer Park

**Comp #:** 147 **Trash Enclosures - Repair/Replace**

**Quantity:** (8), 8 ft x 12 ft

**Location:** Scattered common area locations adjacent to parking areas

**Evaluation:** Trash enclosure typically had painted wood fence on three sides. The fourth side was a chain link gate with plastic slats. Fair condition noted with no significant damage/deterioration observed.

Clean, paint and inspect as general maintenance item or along with larger building projects, not as separate reserve project. Due to high use/abuse, plan to replace as shown here.



Useful Life:  
10 years

Remaining Life:  
5 years

Best Case: \$7,200.00

\$800/ea (x9), Lower allowance to repair/replace

Worst Case: \$10,800.00

\$1,200/ea (x9), Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History



Client: 11700A Mercer Park

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**Comp #:** 156 Rockeries - Repair/Replace

Quantity: Extensive Lin Ft

Location: Scattered common area locations

Evaluation: Our visual observations of rockery walls were limited, but no substantial and widespread deterioration, or large obvious signs of movement were noted. A proper analysis of a rockery wall is beyond the scope of a reserve study. No information regarding its construction was available to us, which could include how it was installed, including if drainage (critical) was provided, and if the drainage is still fully functioning.

At this time, no large-scale repairs or replacement are predictable. Funding can be added to a future reserve study if conditions dictate. No basis for reserve funding at this time.

Inspect regularly, including drainage, and repair as needed. Evaluate drainage to prevent large-scale problems, see component # 182 Drainage/Strom water for additional information.

If movement or other problems are observed or suspected, consult with civil or geo-technical engineer, landscape architect for evaluation and repair scope.

Useful Life:

Remaining Life:



Best Case:

Worst Case:

Cost Source:

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Client: 11700A Mercer Park

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**Comp #:** 160 Pole Lights - Replace

Quantity: (2) wood assemblies

Location: Along roads/parking areas

Evaluation: Fair condition noted with no significant damage/deterioration observed or reported to us. Painted surface appeared in poor condition with one area with extensive peeling was noted during our limited visual review. Observed during daylight hours; assumed to be in functional operating condition.

Best to plan for large scale replacement at roughly the time frame below for cost efficiency and consistent quality/appearance throughout association.

As routine maintenance, inspect, repair/change bulbs as needed.

Useful Life:  
25 years

Remaining Life:  
1 years



Best Case: \$3,000.00

\$1,500/ea (x2), Lower allowance to replace; installed

Worst Case: \$4,000.00

\$2,000/ea (x2), Higher allowance, more elaborate fixtures, etc.

Cost Source: ARI Cost Database: Similar Project Cost History

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Client: 11700A Mercer Park

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**Comp #:** 162 Exterior Lights - Replace

Quantity: Numerous metal assemblies

Location: Throughout common areas

Evaluation: Assorted exterior light fixtures appeared in fair condition.

No predictable large scale replacement at this time. No reserve funding suggested.

Observed during daylight hours and assumed to be in functional operating condition. As routine maintenance, inspect, repair/change bulbs as needed.

Useful Life:

Remaining Life:



Best Case:

Worst Case:

Cost Source:

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Client: 11700A Mercer Park

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Comp #: 170 Landscape - Refurbish

Quantity: Moderate areas

Location: Common area open space tracts throughout community

Evaluation: Moderate, mature landscape area. The Board reports that landscaping is funded out of operational budget.

The Association did not request an allowance be included in the reserves for projects in the future. No reserve funding suggested.

This component can be used to supplement the operation landscape budget for larger cost projects that occur less frequently than annually. These type of projects can include tree trimming, major replanting, and bark or mulch replacement.

NOTE: Some areas of planting beds are within six inches of the siding. Building code requires minimum of six inch clearance between ground and the siding to help prevent insect and water damage of the structural wood walls beneath the siding. We suggest having the landscapers re-grade adjacent to the building as required to obtain a minimum of six inches clear, although eight inches to a foot would be better.



Useful Life:

Remaining Life:

Best Case:

Worst Case:

Cost Source:

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Client: 11700A Mercer Park

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**Comp #:** 175 Irrigation System - Repair/Replace

Quantity: Common irrigation

Location: Throughout common area landscaping

Evaluation: Our visual observation of the irrigation system was limited to a few visible sprinkler heads. Since the majority of the irrigation system is located beneath the soil, we could not view it, or evaluate its condition. At the time of this study, no information (plans and/or specifications) was provided to us regarding the extent of the irrigation system. No large-scale problems were reported during our study.

No predictable large-scale costs at this time. No basis for reserve funding at this time.

As routine maintenance, inspect, test system and repair as needed from operating budget. Follow proper winterization and re-energize procedures. If properly installed and bedded without defect, the lines could last for many years. Controls for the system can vary greatly in number, cost, and life expectancy. Without additional information these costs are not predictable. Other elements (i.e. sprinkler heads, valves) within this system are generally lower cost and have a failure rate that is difficult to predict. These elements are better suited to be handled through the maintenance and operating budget, not reserves.



Useful Life:

Remaining Life:

Best Case:

Worst Case:

Cost Source:

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Client: 11700A Mercer Park

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**Comp #:** 182 **Drainage/Stormwater Sys - Maintain**

**Quantity:** Common drainage

**Location:** Common areas, hidden

**Evaluation:** The vast majority of the drainage systems is located below ground and is not readily viewable. A reserve study conducts only a limited visual review, so observation was very limited and no evaluation of the drainage system was possible. No problems were reported to us. No information was available to us, which described the extents or specifications of the current systems.

No predictable time frame for large-scale repairs/replacement at this time. No reserve funding suggested.

As routine maintenance, inspect regularly, keep drains and grates free of debris and free flowing to ensure water drains as intended. Evaluation of drainage can include visual review of the interior of the drain lines by video using a remote miniature camera. Clean out the drain lines as often as needed, to prevent a decrease in drainage capacity. Repair as needed. Utilize mobile evacuator service if needed.



Useful Life:

Remaining Life:

Best Case:

Worst Case:

Cost Source:

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Client: 11700A Mercer Park

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**Comp #:** 195 **Water Feature - Refurbish**

Quantity: Bed, pump, etc.

Location: Common area

Evaluation: Water feature was operational during our limited visual review. No specific problems observed or reported to us.

Pumps typically have unpredictable service life and possibility to rebuild; individually lower cost and difficult to predict timing thus does not merit reserve funding. Beds appear to be low maintenance with no predictable large scale refurbishing anticipated at this time. Overall, no components in this area appearing to merit large scale reserve funding.

Water features tend to be problematic. If problems become known and estimates for repairs are given, they can be added to a future reserve study. We recommend regular professional inspections to ensure waterproofing measures and prompt repair as needed.



Useful Life:

Remaining Life:

Best Case:

Worst Case:

Cost Source:

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Client: 11700A Mercer Park

**Comp #:** 200 **Entry Sign/Monument - Replace**

Quantity: (2) plastic

Location: Entry location

Evaluation: Vinyl signs appeared to be in good, legible condition with no significant damage/deterioration noted. Mercer Park reported they were installed in about May 2009.

Plan to replace at the interval below based on typical deterioration caused by constant exposure. Funding allowance here can vary significantly depending on style/type desired.

As routine maintenance, inspect regularly, clean/touch up for appearance and repair from operating budget.

Useful Life:  
20 years

Remaining Life:  
15 years



Best Case: \$2,000.00  
Lower allowance to replace

Worst Case: \$4,000.00  
Higher allowance; more elaborate, better quality

Cost Source: ARI Cost Database: Similar Project Cost History



Client: 11700A Mercer Park

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**Comp #:** 330 Clubhouse Mailboxes - Replace

Quantity: ~ (122) boxes

Location: Clubhouse, main area

Evaluation: Generally very good condition with no significant damage noted. Mailboxes were installed (indoors) in 2012.

These durable metal components when housed within an enclosed lobby such as this will typically have a functional life cycle beyond the scope of this reserve study.

As routine maintenance, inspect regularly, clean by wiping down for appearance, change lock cylinders, lubricate hinges and repair as needed from operating budget.

Useful Life:

Remaining Life:



Best Case:

Worst Case:

Cost Source:

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Client: 11700A Mercer Park

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**Comp #:** 434 Clubhouse Flooring - Replace

Quantity: ~ 80 Sq Yds

Location: Clubhouse

Evaluation: Carpeting was noted to be intact and in generally good condition.

Plan to replace at the time frame below, best timed after repainting (see separate component). Wide variety of type and quality available; a mid-range funding allowance is factored below for planning purposes.

As part of ongoing maintenance program, vacuum regularly and professionally clean as needed.

Useful Life:  
15 years

Remaining Life:  
8 years



Best Case: \$4,000.00

\$50/Sq Yd, Lower allowance to replace, installed

Worst Case: \$5,600.00

\$70/Sq Yd, Higher allowance; upgraded

Cost Source: ARI Cost Database: Similar Project Cost History

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Client: 11700A Mercer Park

**Comp #: 435 Clubhouse Int Walls - Repaint**

Quantity: ~ 6,600 Sq Ft

Location: Clubhouse interio walls and ceilings

Evaluation: Painted surfaces were observed to be in generally fair condition.

Timing below is used for financial planning purposes. Actual scope and timing of painting project is at the Board's discretion.

Regular cycles of painting are recommended to maintain appearance; best timed just prior to carpet replacement (component #700). Keep touchup paint on site for painting between major paint projects.



Useful Life:  
15 years

Remaining Life:  
8 years

Best Case: \$4,000.00

\$1.00/Sq Ft, Lower allowance to repaint

Worst Case: \$5,600.00

\$1.20/Sq Ft, Higher allowance to repaint

Cost Source: ARI Cost Database: Similar Project Cost History

Client: 11700A Mercer Park

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Comp #: 436 Clubhouse Kitchen - Refurbish

Quantity: ~ 15 Sq Ft

Location: Kitchen area

Evaluation: Generally fair condition with no significant damage or deterioration observed at this time.

Simple, durable materials typically have an extended useful life, however, many communities choose to refurbish the kitchen periodically for aesthetic updating; these may include kitchen cabinets (reface), sinks, counter tops, etc. Reserve funding suggested at level indicated below.

Useful Life:  
30 years

Remaining Life:  
8 years



Best Case: \$4,000.00

Lower allowance to refurbish

Worst Case: \$6,000.00

Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

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Client: 11700A Mercer Park

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**Comp #:** 438 Clubhouse Appliances - Replace

Quantity: (2) Dishwasher, sm refrig

Location: Kitchen area

Evaluation: Generally fair condition of appliances noted, and although we did not test. No problems reported. Assumed to be in functional, operating condition.

With the refrigerator being a small under counter, the costs of replacement is projected to be too small for reserve funding. Replace as needed using general maintenance funds. No reserve funding suggested.

Repair and replace as needed.

Useful Life:

Remaining Life:



Best Case:

Worst Case:

Cost Source:

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Client: 11700A Mercer Park

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Comp #: 440 Clubhouse Bathrooms - Refurbish

Quantity: (4) bathrooms

Location: Clubhouse

Evaluation: Fair condition noted with no significant damage/deterioration noted.

Prudent planning suggests setting aside funds for periodic large scale refurbishing which may include items such as: plumbing fixtures, vanity area, lighting, flooring, ventilation, accessories, décor, etc.

As routine maintenance, inspect regularly, perform any needed local repairs promptly utilizing general operating funds.



Useful Life:

30 years

Remaining Life:

8 years

Best Case: \$2,000.00

\$500/ea (x4), Lower allowance to refurbish

Worst Case: \$3,200.00

\$800/ea (x4), Higher allowance; more extensive, better finishes

Cost Source: ARI Cost Database: Similar Project Cost History

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Client: 11700A Mercer Park

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Comp #: 442 Clubhouse Showers - Refurbish

Quantity: (2) Showers

Location: Shower at first floor bathrooms

Evaluation: Fair condition noted of shower facilities with no significant damage/deterioration noted.

With tile material no predictable large scale repairs are projected at this time. See previous component for bathroom refurbish.

Clean regularly and repair as needed.

Useful Life:

Remaining Life:



Best Case:

Worst Case:

Cost Source:

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Client: 11700A Mercer Park

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**Comp #:** 448 Clubhouse Int. Lights - Replace

Quantity: (3) chandelier fixtures

Location: Interior areas

Evaluation: Assorted styles appear to be functional and in fair condition.

With ordinary care and maintenance, there is no predictable expectation to replace all at once or in large scale at these protected interior locations. Evaluate needs each year and replace individual fixtures locally as needed using general maintenance and repair funds. If association desires aesthetic upgrade which merits reserve funding, include within reserve study updates.

As routine maintenance, inspect, repair/change bulbs as needed.

Useful Life:

Remaining Life:



Best Case:

Worst Case:

Cost Source:

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Client: 11700A Mercer Park

**Comp #:** 454 Clubhouse Furniture - Replace

Quantity: Numerous assorted pieces

Location: Throughout clubhouse interiors

Evaluation: Overall fair condition of furniture/furnishings. Mercer Park reported replacing the furniture in about 2005.

This component suggests setting aside funding for periodic replacement / refurbishment of furnishings in order to maintain a quality aesthetic appeal at these highly visible common areas. Typical replacements from similar communities include sofas, chairs, wall décor, tables, etc. There are a wide variety of types and materials available with a mid-range funding allowance factored here. Follow roughly the time frame below.

Useful Life:  
15 years

Remaining Life:  
8 years



Best Case: \$5,000.00

Lower allowance for replacement/updating

Worst Case: \$10,000.00

Higher allowance

Cost Source: ARI Cost Database: Similar Project Cost History

Client: 11700A Mercer Park

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**Comp #:** 500 **Roof: Asphalt Shingles - Replace**

Quantity: ~ 110,000 Sq Ft

Location: Rooftop of building

Evaluation: Roofing was laminated shingles with closed cut valley. What we believed to be ventilation (the lack of which can greatly reduce useful life) was observed at eave and ridge. Ridge venting appeared to be provided by continuous ridge vents and some gable end louvers. Eave venting appeared to be provided at the roof surface. It appeared that one-half of a ridge vent (shed) was installed at the roof surface (typically eave venting is installed on the underside of the soffit). This shed venting at the roof surface was most likely added after original construction. Visible portions of roof flashing were observed at the headwall, and sidewall conditions. Debris and moss was observed on many of the roof surfaces.

Plan for replacement at roughly the time frame indicated below. Costs below include replacing with a similar shingle to what is currently in place. We suggest that the best value (lowest life cycle cost) might be to spend about \$2/square foot more and install a 40 to 50-year shingle.

Roofing is typically a long-lived component if it was properly installed and is properly maintained. As routine maintenance, many manufacturers recommend inspections at least twice annually (once in the fall, before the rainy season, and again in the spring) and after large storm events. Promptly replace any damaged/missing sections or any other repair needed to ensure waterproof integrity of roof. Keep roof surface, gutters and downspouts clear and free of moss or debris.

Moss growth can decrease the life of the roofing shingles and should be removed sooner than later.

Cleaning the moss off the roof with high-pressure water can damage the roof, and greatly decrease its life. Many roofing consultants only allow air cleaning in order to prevent the damage that can be caused by water pressure washing. Another option is liquid applied fungicide (moss killer), which can be used instead of power washing the moss off the shingles. Moss roots grow into the shingles. Killing the moss in-place, with a fungicide, allows the roots to gradually release from the shingles. After roots have died and released, then the moss can be removed (with broom or very low pressure water) taking care to not damage the shingles. Never use high-pressure water to remove moss as the high-pressure can loosen granular surface of shingles, erode the shingle surface, which greatly reduces the remaining useful life.

There is a wealth of information available through Roofing Organizations such as:

National Roofing Contractors Association (NRCA) <http://www.nrca.net>.

Roof Consultant Institute (RCI) <http://www.rci-online.org/> and

Western States Roofing Contractors Association (WSRCA) <http://www.wsrca.com/>

The National Roofing Contractors Association (NRCA) has some very good information on their web site, particularly the page for consumers. <http://www.nrca.net/consumer/>

One very important point that they address is roof warranties, which they discuss in the maintenance section and here: <http://www.nrca.net/consumer/warranties.aspx>

Their maintenance section is here: <http://www.nrca.net/consumer/maintenance.aspx>

NRCA discusses selecting a contractor here: <http://www.nrca.net/consumer/steep.aspx>

Here is a brochure on the lifecycle of roofing by Certainteed, who manufactures roof shingles: <http://www.certainteed.com/resources/LifeCycle.pdf>

At time of re-roof we recommend that you hire a professional consultant (Architect, Engineer, roof or building envelope consultant) to evaluate the existing roof, design, specify the new roof, help bid the project, help select the best bidder, and observe construction to increase likelihood of proper installation. We recommend all Associations hire qualified consultants whenever they are considering having work performed on any building envelope (waterproof) components including roof, walls, windows, decks, exterior painting and caulking/sealant.

Client: 11700A Mercer Park

Useful Life:  
30 years

Remaining Life:  
8 years



Best Case: \$385,000.00

\$3.50/Sq Ft, Lower allowance to remove and replace roof

Worst Case: \$440,000.00

\$4.00/Sq Ft, Higher allowance; upgrades, underlying repair needs, metal work, etc...

Cost Source: ARI Cost Database: Similar Project Cost History

**Comp #: 515 Chimney Covers & Flue Caps -Replace**

Quantity: ~ (50) covers, (122) caps

Location: Rooftop of buildings

Evaluation: Observation of top of chimney was limited to viewing from distance. Flue caps appeared in fair condition. No observation of chimney cap was undertaken during our limited visual review.

We typically include replacement cycle timed to coincide with re-roofing. Review condition of chimney caps and flue caps with consultant while evaluating the roofing project.

As routine maintenance, inspect and clean during roof maintenance. Repair locally as needed. Assuming proactive maintenance, plan for total replacement at roughly the time frame indicated below.

Useful Life:  
30 years

Remaining Life:  
8 years



Best Case: \$40,900.00

\$500/ea chimney cover and \$130/ea flue cap, Lower allowance to replace

Worst Case: \$62,000.00

\$800/ea chimney cover and \$180/ea flue cap, Higher allowance to replace

Cost Source: ARI Cost Database: Similar Project Cost History

Client: 11700A Mercer Park

Comp #: 520 Siding: Vinyl - Repair/Replace

Quantity: ~ 122,000 GSF

Location: Exterior walls

Evaluation: Vinyl siding was a horizontal clapboard. Horizontal clapboard had an five inch exposure. Generally the siding was in fair condition, with no missing pieces, damage or unusual wear. No view of the critical underlying waterproofing was available as part of our limited visual review.

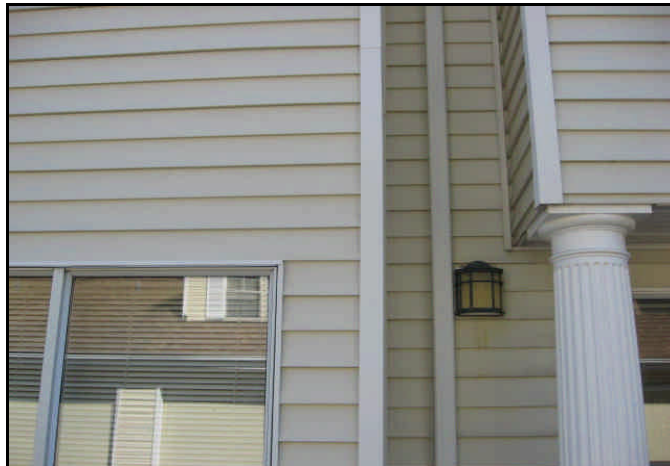
A limited useful life is used below for financial planning purposes. Evaluate the siding, and the critical underlying waterproofing (building paper or house wrap), as the remaining useful life approaches zero years. Adjust remaining useful life as dictated by the evaluation of performance of the underlying waterproofing. Align with window replacement for cost efficiencies.

The underlying waterproofing is critical to keeping the water out of the structural wood framing. As the building ages, the waterproofing will deteriorate, and can drop below the level needed to keep the water out of the underling structure. Replacing the underlying waterproofing and flashing is projected to require replacement of the vinyl siding. Vinyl siding will typically fade over the years, and when replacing pieces, it may be difficult to match the faded color.

Note: cost below is for siding and underlayment only. Professional architectural details and specifications, general contractor's oversight and coordination, and repair of underlying wood structural framing damage from water infiltration, etc... can add significantly to project cost. Association should conduct research and define scope of work / material specifications well in advance of this and all similar large-scale projects.

Useful Life:  
40 years

Remaining Life:  
16 years



Best Case: \$1,100,000.00

Worst Case: \$1,460,000.00

\$9.00/Sq Ft, Lower allowance to replace

\$12.00/Sq Ft, Higher allowance to replace

Cost Source: ARI Cost Database: Similar Project Cost History

Client: 11700A Mercer Park

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Comp #: 521 Siding: Vinyl - Clean/Inspect

Quantity: ~ 122,000 GSF

Location: Exterior walls

Evaluation: No moss growth and organic staining was observed on the siding that was sampled for this reserve study. Mercer park reports attempt by Board to wash siding every 2 years.

Cost for power washing is factored below. Timing of washing, if any is at the board's discretion.

Clean vinyl siding as needed to maintain appearances. When washing be careful to not spray high-pressure water beneath the vinyl. Two types of washing are typically available. Power washing is the least expensive. Hand washing is also available. In our experience, the condos have both types of washing reported that they preferred the hand washing, as it was a better job even though it costs more.



Useful Life:  
2 years

Remaining Life:  
0 years

Best Case: \$15,000.00  
Lower allowance to clean

Worst Case: \$19,000.00  
Higher allowance to clean

Cost Source: ARI Cost Database: Similar Project Cost History

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Client: 11700A Mercer Park

**Comp #:** 525 Exterior Surfaces- Paint/Caulk

Quantity: Limited GSF

Location: Ext wood trim (roof fascia, deck fascia, door trim, garage doors, entry doors, stair stringers, and rails/fence

Evaluation: The painted surface of the wood trim appeared in fair condition with no peeling or blistering of the painted observed. Siding material was vinyl which typically does not require painting. Mercer Park reported some exterior miscellaneous / touch-up painting in the Summer of 2012.

Useful life below is estimated for financial planning purposes. Evaluate and adjust remaining useful life, as it approaches zero years.

Repair areas as needed prior to painting/caulking. As routine maintenance, inspect regularly (including sealants, if any) repair locally and touch-up paint as needed. Typical Northwest paint cycles vary greatly depending upon many factors including; type of material painted, surface preparations, quality of primer/paint/stain, application methods, weather conditions during application, moisture beneath paint, and exposure to weather conditions.

Additional information on painting is available through:  
American Coatings Association at <http://www.paint.org/> and  
Master Paint Institute at <http://www.paintinfo.com/>

Useful Life:  
8 years

Remaining Life:  
3 years



Best Case: \$48,800.00

\$400/dwelling (x122), lower allowance to prep and paint

Worst Case: \$73,200.00

\$600/dwelling (x122), higher allowance, more prep work

Cost Source: ARI Cost Database: Similar Project Cost History



Client: 11700A Mercer Park

**Comp #: 535 Windows, Sliders - Repair/Replace**

Quantity: ~ (530) windows

Location: Exterior walls

Evaluation: Windows were metal frames with mostly horizontal sliders, and fixed operation. Head flashing was observed. Weep holes, at exterior lower corners, were observed to be clear, in the few windows sampled for our study.

No observation of the critical underlying waterproofing details and flashing was part of our limited visual review. The underlying details and flashing are critical to maintaining the waterproofing and preventing structural damage from water infiltration.

For financial planning purposes a limited useful life is used below. Evaluate as aging becomes more apparent and adjust life accordingly. Many factors effect useful life including quality of window (design pressure rating) installed, waterproofing and flashing details, and exposure to wind driven rain. Those same variables, along with glazing and frame materials can also greatly affect the costs.

Inspect regularly, including sealant, if any, and repair as needed. Keep weep holes free and clear to allow proper drainage of water that gets into window frame. Do not block (caulk or seal) gap at top of head flashing, as this allows water that gets behind the siding, to drain out.

At time of window replacement we recommend that you hire a professional consultant (Architect, Engineer, building envelope consultant) to evaluate the existing windows, design and specify new installation requirements, help bid the project, help select best bidder, and observe construction to increase the likelihood of proper installation. We recommend all Associations hire qualified consultants whenever they are considering having work performed on any building envelope components (roof, walls, windows, decks, exterior painting and caulking/sealant).

Note: cost below is for window replacement only. Professional architectural details and specifications, general contractor's oversight and coordination, and repair of underlying wood structural framing damage from water infiltration, etc... can add significantly to project cost. Association should conduct research and define scope of work / material specifications well in advance of this and all similar large-scale projects.

Useful Life:  
40 years

Remaining Life:  
16 years



Best Case: \$477,000.00  
\$900/window, lower allowance to replace

Worst Case: \$636,000.00  
\$1,200/window, higher allowance to replace;  
upgraded

Cost Source: ARI Cost Database: Similar Project Cost History

Client: 11700A Mercer Park

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**Comp #:** 538 **Doors: Exterior - Maintain/Repair**

Quantity: ~ (122) doors

Location: Exterior walls

Evaluation: Exterior entry doors were wood with wood frames. Doors typically had a screen door. Doors appeared in fair condition. No wide spread problems were observed.

No predictable large-scale repair or replacement of doors. No reserve funding suggested.

Individual unit entry doors are expected to receive limited use (wear and tear). Door painting is included as part component #525. Inspect periodically and repair as needed to maintain appearance, security and operation with maintenance funds. Touch up paint as needed between painting cycles.



Useful Life:

Remaining Life:

Best Case:

Worst Case:

Cost Source:

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Client: 11700A Mercer Park

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**Comp #:** 545 **Decks:** Elastomeric - Replace

Quantity: ~ 50% of 4,000 Sq Ft

Location: Adjacent to dwelling units

Evaluation: One deck was accessed for sampling during our limited visual review. It has an elastomeric coating. The adjacent deck had a sheet vinyl waterproof membrane. Slope was not verified for positive drainage. Drip edge of deck was open. Vertical portion of drip edge flashing was observed. Coating was observed turned up the wall about an inches (before the vinyl siding blocked our view). Soffit was perforated vinyl.

Mercer park reports they are replacing the elastomeric coating with a pvc sheet membrane. Mercer Park reported the elastomeric decks have not been recoated. Since elastomeric requires recoating every six years, and it has been about 20 years since they were installed, we have used a remaining useful life of 0 years.

Useful Life:  
12 years

Remaining Life:  
0 years



Best Case: \$24,000.00

\$12/Sq Ft (x 2,000), Lower allowance to replace with pvc membrane

Worst Case: \$32,000.00

\$16/Sq Ft (x 2,000), Higher allowance to replace

Cost Source: ARI Cost Database: Similar Project Cost History

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Client: 11700A Mercer Park

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**Comp #:** 546 **Decks: Sheet Vinyl -Repair/Replace**

Quantity: ~ 50% of 4,000 Sq Ft

Location: Adjacent to dwelling units

Evaluation: One deck was accessed for sampling during our limited visual review. It has an elastomeric coating. The adjacent deck had a sheet vinyl waterproof membrane. Vinyl membranes on the decks were reported to be used starting in about 2008. See component # 545 for typical notes. Replacement cycles factored below.

Useful Life:  
12 years

Remaining Life:  
6 years



Best Case: \$24,000.00

\$12/Sq Ft (x 2,000), Lower allowance to replace

Worst Case: \$32,000.00

\$16/Sq Ft (x 2,000), Higher allowance to replace

Cost Source: ARI Cost Database: Similar Project Cost History

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Client: 11700A Mercer Park

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**Comp #:** 550 Deck Rail - Repair/Replace

Quantity: ~ 4,400 Lin Ft

Location: Adjacent to decks and entry stairs

Evaluation: Generally the painted, wood rails appeared in fair condition. Rails were attached through the waterproof surface of the deck.

We suggest reserve funding for regular intervals of total replacement as indicated below. Evaluate rail system as remaining useful life approaches zero years and adjust life accordingly.

As routine maintenance, railing connections should be inspected at least annually for structural and/or waterproofing issues. Repair promptly as needed using general operating/maintenance funds.



Useful Life:  
30 years

Remaining Life:  
6 years

Best Case: \$110,000.00

\$25/Lin Ft, Lower allowance to replace

Worst Case: \$154,000.00

\$35/Lin Ft, Higher allowance to replace

Cost Source: ARI Cost Database: Similar Project Cost History

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Client: 11700A Mercer Park

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Comp #: 590 Entry Stair/Landing- Repair

Quantity: ~ 3,200 Sq Ft

Location: Entry side of buildings

Evaluation: Building entries stairs appeared in varying condition. Some areas had indoor/outdoor carpeting and other stair areas (landings, ramps) had an elastomeric coating. Mercer Park reported they have no history of recoating the elastomeric coating. Mercer Park also reports they are in the process of changing to a vinyl sheet membrane waterproofing.

As routine maintenance, inspect regularly to ensure safety and stability; repair promptly as needed using general operating funds. Treat corroded metal connector under the treads to extend useful life. Costs below assume the frame is still usable and only fabric is replaced. Actual timing of awning fabric replacement is at discretion of the board.

Useful Life:  
12 years

Remaining Life:  
0 years



Best Case: \$38,400.00

\$12/Sq Ft, lower allowance to replace with sheet vinyl

Worst Case: \$51,200.00

\$16/Sq Ft, lower allowance to replace with sheet vinyl

Cost Source: ARI Cost Database: Similar Project Cost History

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Client: 11700A Mercer Park

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**Comp #:** 599 **Building Envelope - Inspection**

**Quantity:** Inspection, report

**Location:** Waterproofing components

**Evaluation:** It is generally known in the industry, that condominium buildings in the Puget Sound area, constructed during the general era as your building (1985-2005), have a high incidence of needing repairs due to water infiltration.

Many Associations are required, by their declarations, to have annual inspections by a qualified Architect or Engineer to assess the physical condition of the building envelope enclosure. The building envelope inspection typically covers the roofs, decks, siding, windows, doors, sealants/caulking, and flashings. Although your Associations governing documents do not appear to have such a requirement, we strongly recommend the Board provide for periodic building envelope inspections, funded from the operating budget, to ensure weatherproofing and structural integrity are maintained.

Two of the factors that generally affect the potential for water infiltration are, exposure to wind driven rains, and the height of the building. Winds tend to be typically out of the south and west. Protection from winds can be in the form of large roof overhangs or decks. Taller buildings are generally exposed to higher wind at the upper levels.

Provide more frequent inspection as the buildings age and the waterproofing deteriorates. Building envelope inspections can be either visual or intrusive. An intrusive investigation, where finish materials are removed to view and better understand the underlying waterproof systems and their performance, should be of greater benefit, since a visual review provides only a limited amount of information.

Useful Life:

Remaining Life:



Best Case:

Worst Case:

Cost Source:

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Client: 11700A Mercer Park

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**Comp #:** 600 Garages - Maintain/Repair

Quantity: ~ (112) parking spaces

Location: Parking structures, attached and detached

Evaluation: The components (roofing siding) of the garage structures is included as part of components # 500 Roofing and #520 Siding: Vinyl.

No separate reserve funding required.



Useful Life:

Remaining Life:

Best Case:

Worst Case:

Cost Source:

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Client: 11700A Mercer Park

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**Comp #:** 605 **Garage Doors - Repair/Replace**

Quantity: ~ (112) wood dr 8ft x 7ft

Location: Parking garages

Evaluation: Painted, wood door appeared in fair condition with no damage or significant repair history reported. Painting of doors is included in component # 525 Exterior Surfaces. No separate reserve funding suggested.

Single car garage door are not predictable for large scale repairs. Repair as needed using general maintenance funds.

Regular maintenance, inspection and service as needed is recommended for maximum life.

Useful Life:

Remaining Life:



Best Case:

Worst Case:

Cost Source:

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Client: 11700A Mercer Park

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**Comp #:** 755 Bathroom - Refurbish

Quantity: (4) bathrooms

Location: Restrooms at clubhouse

Evaluation: Bathroom appeared in fair condition.

Prudent planning suggests setting aside funds for periodic large scale refurbishing which may include items such as: plumbing fixtures, vanity area, lighting, flooring, ventilation, accessories, décor, etc... Actual timing and scope of refurbishment is at the Board's discretion.

As routine maintenance, inspect regularly, perform any needed local repairs promptly utilizing general operating funds.



Useful Life:  
30 years

Remaining Life:  
8 years

Best Case: \$2,000.00

\$500/each, lower allowance to refurbish

Worst Case: \$6,000.00

\$1,500/each, higher allowance; more extensive, elaborate

Cost Source: ARI Cost Database: Similar Project Cost History

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Client: 11700A Mercer Park

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Comp #: 758 Sauna & Steam - Refurbish

Quantity: ~ 8 ft x 8 ft

Location: Club house, first floor

Evaluation: Generally fair and functional condition.

Light usage reported, so we do not anticipate a predictable project to refurbish within the foreseeable future. Treat any repairs as general maintenance in year of occurrence.

Inspect heater regularly and test for performance, repair promptly to ensure safety. Clean periodically as needed. Light sanding can freshen appearance.

Useful Life:

Remaining Life:



Best Case:

Worst Case:

Cost Source:

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Client: 11700A Mercer Park

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**Comp #:** 780 Exercise Equipment - Replace

Quantity: Assorted pieces

Location: Clubhouse

Evaluation: Varying condition and ages as replacement done as needed, not typically all at once.

No expectation of total simultaneous replacement at this time, however, we suggest setting aside funding for partial replacement at the interval indicated below.

Inspect regularly, clean for appearance, maintain and repair promptly as needed from operating budget to ensure safety.



Useful Life:

5 years

Remaining Life:

3 years

Best Case: \$3,000.00

Lower allowance to replace damaged or broken equipment

Worst Case: \$4,000.00

Higher allowance, more or upgraded pieces

Cost Source: ARI Cost Database: Similar Project Cost History

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Client: 11700A Mercer Park

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**Comp #:** 780 Office Furniture - Replace

Quantity: Desk, chairs, etc...

Location: Clubhouse office

Evaluation: No viewing of office furniture and equipment was undertaken as part of our limited visual review.

Small office with minimal furniture that should function for extended period if not damaged or abused. Anticipate periodic replacement will be funded as general operating/maintenance expense. No reserve funding suggested



Useful Life:

Remaining Life:

Best Case:

Worst Case:

Cost Source:

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Client: 11700A Mercer Park

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**Comp #:** 900 Plumbing - Repair/Replace

Quantity: Supply, drain systems

Location: Throughout common areas of association

Evaluation: The vast majority of the plumbing system was not visible for our review. A reserve study conducts only a limited visual review. No testing was conducted. No problems were observed or reported.

If patterns of significant repair expenses emerge, funding may be incorporated into reserve study updates to supplement the operating budget. No basis for reserve funding at this time.

Some types of piping used historically are known to be life limited. Manufacturing defects become apparent from time to time and certain site conditions (e.g. galvanic corrosion, certain minerals in contact with piping, chemical reactions, etc...) can contribute to premature deterioration of plumbing system. The Association reported no known large-scale systemic or defective problems with the plumbing system. If there are concerns about possible problems, have a qualified plumber provide an overview of your system design, materials, and any areas of high risk.

Typically, if installed per architectural specifications and local building codes, without defect, there is no predictable time frame for large-scale repair/replacement expenses within the scope of our report. Treat minor repairs as ongoing maintenance expense. If leaks, poor flow, sediments, defective material and/or installation become evident, have qualified plumber and / or engineer inspect closely and develop scope of any repair/replacement needed.



Useful Life:  
0 years

Remaining Life:  
0 years

Best Case: \$0.00

Worst Case: \$0.00

Cost Source: ARI Cost Database: Similar Project Cost History

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Client: 11700A Mercer Park

**Comp #:** 905 Electrical System - Repair/Replace

Quantity: Main, branch systems

Location: Throughout common areas of association

Evaluation: Analysis of electrical system(s) beyond visual inspection is not within the scope of a reserve study. No reported problems at this time.

Typically, if installed per architectural specifications and local building codes, there is no predictable time frame for large scale repair/replacement expenses within the scope of our report. Service life typically lasts well beyond rated life of components. Treat minor repairs as ongoing maintenance expense. Periodic inspections of distribution system by qualified electrician are wise to clean and tighten, exercise breakers, etc... Some associations employ infrared or other testing methodologies to ward off trouble spots and potential hazards. A good resource book available for purchase is NFPA 70B Recommended Practices for Electrical Equipment Maintenance. Funding may be incorporated into future reserve study updates if conditions dictate. No basis for reserve funding at this time.

Some electrical system components used historically are known to be life limited. Manufacturing defects become apparent from time to time and certain site conditions can contribute to premature deterioration of system components.

Useful Life:

Remaining Life:



Best Case:

Worst Case:

Cost Source:

Client: 11700A Mercer Park

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**Comp #:** 965 Fire Alarm Panel - Replace

Quantity: Central fire system

Location: Reported at only some of the buildings

Evaluation: One fire panel was observed during our limited visual review. Mercer Park reported that only some of the buildings have fire panels. Quantity of fire panels was not known.

Have your vendor quantify the number of fire panels and put together a repair or upgrading plan. Funding, if needed, can be added to a future reserve study when costs become known.

Manufacturers can periodically discontinue support of panel and parts / service availability may therefore be limited in coming years. ADA work will likely need to be performed periodically (e.g. strobes) and devices (e.g. speakers, detectors) in common areas and units as well. Research and experience suggests planning for replacement at roughly the time frame below. Begin formulation of specifications and obtain allowances in advance of need - replace proactively to ensure safety.

Useful Life:

Remaining Life:



Best Case:

Worst Case:

Cost Source:

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Client: 11700A Mercer Park

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Comp #: 999 Reserve Study - Update

Quantity: Annual update

Location: Common areas of association

Evaluation: Per Washington law (RCW), reserve studies are to be updated annually, with site inspections by an independent reserve study professional to occur no less than every three years to assess changes in condition (i.e., physical, economic, governmental, etc...) and the resulting effect on the community's long-term reserve plan. Most appropriately factored within operating budget, not as reserve component.

Useful Life:

Remaining Life:



Best Case:

Worst Case:

Cost Source:

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