
UPDATED CAPITAL RESERVE ANALYSIS
FOR
AVOCET NEIGHBORHOOD
NORCROSS, GEORGIA

PREPARED FOR:

AVOCET NEIGHBORHOOD HOMEOWNERS ASSOCIATION
C/O ACCESS MANAGEMENT GROUP
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I. CAPITAL RESERVE DETERMINATION

A. METHODOLOGY AND ASSUMPTIONS

A Capital Reserve Analysis is a report giving an estimate of the amount of money which must be put aside to replace or restore the common elements and building components that will require replacement before the community's use expires. Typically, the items included are limited to those with a useful life of 30 years or less.

The commonly accepted guidelines as established by governing statutes, the Community Associations Institute, and our engineering judgment and experience have been used as a basis for the reserve schedule in this report. The schedule, when implemented in conjunction with a well-planned preventive maintenance program, will provide adequate funds for the replacement of the community's common elements as they reach the end of their useful lives. In order to assure that this schedule remains current, a reassessment of the existing condition and replacement costs for each item is necessary at a regular interval as recommended within the report. Updating of the schedule, reduction of the useful lives, and inflation of the replacement costs may be executed with the benefit of re-inspection. The schedule must also be adjusted as common elements are added or modified.

It is important to note that a reserve item is a common element component that will require replacement on a recurring basis using a similar cost item. If an upgrade is necessitated due to a cost change or other extraordinary reason, the cost over and above the replacement cost is considered to be a capital improvement rather than a capital replacement. Capital improvements should not be funded from the reserves. After it has been upgraded, the item will then become part of the reserve schedule.

Method of Accounting

The Method used in the Capital Reserve Analysis is the "Cash Flow" Method and the funding plan utilized is the Baseline Funding. The goal of this funding method is to keep the reserve cash balance above zero. This means that while each individual component may not be fully funded, the reserve balance does not drop below zero during the projected period.

Level of Service

This reserve analysis was completed utilizing a Level II, Full Service Study as defined under the National Reserve Standards that have been adopted by the Community Association Institute. The common component inventory was established based on information provided by the association's representative, field measurements and/or drawing take-offs. The Full Service Study includes a review of the common property components and preparation of this report.

B. SUMMARY OF REPLACEMENT RESERVE NEEDS

1. TECHNICAL DEFINITIONS

This page is a summary of each of the different categories within the detailed schedule. It shows the total dollar amounts for each category and is based on the full funding of each item.

Following are descriptions of the different variables, which are shown on the reserve schedule in the order in which they appear.

Description

This column on the schedule lists all of the components for which we recommend that reserves be accumulated. The basis for the selection of these items includes:

- Review of the governing documents regarding the common and limited common elements.
- Review of all available maintenance contracts.
- The type of component and its anticipated full useful life and condition.
- A review of applicable statutes dealing with reserve requirements.

Quantity

The quantities which are used as a basis for this report are calculated from field measurements and drawings which have been supplied to Ray Engineering, Inc. Ray Engineering, Inc. has not made extensive as-built measurements, and the quantities used are based primarily on the reference materials provided.

Unit Cost

The construction and replacement costs used in this report are based primarily on the various publications written by the R.S. Means Company. These are listed in the Bibliography.

Reserve Requirements Present Dollars

This is calculated by multiplying the “quantity” by the “unit costs.”

Existing Reserve Fund

This is an allocation of the total existing reserve funds to the individual line items using a weighing factor which is based on the total “reserve requirement present dollars,” the “estimated remaining life,” and other factors. An existing budget was submitted to Ray Engineering, Inc. This budget was used in developing our reserve Analysis.

Estimated Useful Life

The useful life values that are part of this report come from a variety of sources, some of which are listed in the Bibliography. In order to ensure that all items attain their anticipated useful lives, it is imperative that a well-planned maintenance schedule be adhered to. If an existing item is replaced with an upgraded product, the estimated remaining life has been listed for the new product.

Estimated Remaining Life

The estimated remaining life is based on both the age of the component and the results of the field inspections conducted in May 2011.

Annual Reserve Funding

The reserve requirement present value was converted to the future value for the time in which each replacement will occur. A 3% compounded inflation rate has been assumed. The future value was then converted to an annual reserve fund value. The arithmetic calculations and formulas are indicated later in this report.

C. EXECUTIVE SUMMARY

The Avocet Neighborhood consists of 218 single-family homes with a central amenity area. It is the Consultant's understanding that the development was started in 1994 and the pool, upper tennis courts and bath house were installed in 1994 and the lower tennis courts and clubhouse were installed in 1997.

The property is located off South Old Peachtree Road in unincorporated Gwinnett County, Georgia. The common areas and amenities include a stone wall and monument entry signage, clubhouse, tot pool and main pool with surrounding concrete pool deck, four lighted tennis courts, playground, two gazebos, detention ponds, surface parking lot and landscaped common areas.

This reserve analysis was completed utilizing the "Full" level of service, which included a review of the property and preparation of this report. This reserve analysis is prepared for the fiscal year starting on January 1, 2011. It is our understanding that the reserve account for the community has a balance of approximately \$68,000 with an annual contribution of \$33,000 which is equivalent to \$151.38 per home per year. Based on the Capital Reserve Analysis, the current annual contribution for reserves has been found to be adequate to provide for the future expenses as projected by this analysis. It is our recommendation that the annual contribution be increased to \$40,000, beginning in 2020, and continuing through 2030. The \$40,000 annual contribution should then be sufficient through the end of the term of this analysis. If funded as recommended, sufficient funds should be available to maintain projected future expenses as shown in the "Cost and Funding Recap" included as part of this analysis

D. REPLACEMENT RESERVE REQUIREMENTS

SCHEDULE I

Sitework

SCHEDULE II

Exterior/Interior Building Maintenance

SCHEDULE III

Electrical/Mechanical Maintenance

YEAR BY YEAR FUNDING RECAP - ALL ITEMS

COST AND FUNDING RECAP

ITEMIZED PROJECT COSTS BY YEAR

PROJECT NAME	AVOCET NEIGHBORHOOD - 2011
INFLATION RATE	3.00%
YIELD ON RESERVE FUNDS	1.00%
BEGINNING YEAR OF FUNDING	2011
PLANNING HORIZON	20 yrs

**SCHEDULE 1a
AVOCET NEIGHBORHOOD - 2011
SITEWORK ITEMS - PRELIMINARY DATA**

	Sitework Item Description	Units of Measure	Number of Units	Cost per Unit	Total Cost in Current Dollars	Estimated Useful Life	Estimated Remaining Life	Notes
1	Amenity Area Parking Lot - Repair/Seal Coat	SY	2600	\$1.75	\$4,550	6	2	2
2	Amenity Area Parking Lot - 1-1/2" Overlay	SY	2600	\$12.00	\$31,200	25	6	2
3	Concrete Sidewalks and Curb - Repair/Replace	Allow	1	\$1,000.00	\$1,000	6	3	3
4	Wood Cross Tie Retaining Wall - Maintain	Allow	1	\$1,500.00	\$1,500	7	5	4
5	Entry Signage - Maintain/Repair	L.S.	1	\$3,000.00	\$3,000	8	6	5
6	Main and Kiddie Pool - Replaster	L.S.	1	\$22,000.00	\$22,000	8	2	6
7	Pool Deck - Resurface	L.S.	1	\$18,000.00	\$18,000	12	2	7
8	Pool Accessories - Replace	Allow	1	\$1,000.00	\$1,000	5	2	8
9	Pool Furniture - Partial Replacement	Allow	1	\$3,000.00	\$3,000	5	1	9
10	Pool Fence - Repair/Paint	L.S.	1	\$3,500.00	\$3,500	8	2	10
11	Tennis Courts - Replace Lower Courts	Ea.	2	\$23,000.00	\$46,000	20	17	11
12	Tennis Courts - Replace Upper Courts	Ea.	2	\$23,000.00	\$46,000	20	2	11
13	Tennis Courts - Resurface Lower Courts	Ea.	2	\$4,000.00	\$8,000	8	5	11
14	Tennis Courts - Resurface Upper Courts	Ea.	2	\$4,000.00	\$8,000	8	10	11
15	Playground Equipment - Replace	L.S.	1	\$15,000.00	\$15,000	12	9	12
16	Overall Drainage - Maintain	Allow	1	\$3,000.00	\$3,000	5	3	13
17	Upper Detention Pond - Clean/Maintain	L.S.	1	\$15,000.00	\$15,000	12	9	14
18	Lower Detention Pond - Clean/Maintain	L.S.	1	\$15,000.00	\$15,000	12	8	14
19	Wood Fence - Paint/Maintain	L.S.	1	\$1,500.00	\$1,500	8	3	1
20	Gazebos - Floor Replacement	Ea.	2	\$4,000.00	\$8,000	20	16	15
21	Gazebos - Paint	Ea.	2	\$2,000.00	\$4,000	7	6	15
22	Tennis Court Wind Screens - Replace	L.S.	1	\$3,500.00	\$3,500	8	3	1
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**SCHEDULE Ib
 AVOCET NEIGHBORHOOD - 2011
 SITENETWORK ITEMS - REPLACEMENT COST & FUNDING DATA**

Sitework Item Description	First Replacement			Second Replacement			Third Replacement			Fourth Replacement		
	Yr Replaced	Adjusted Cost if Inflation is 3.00%	Annual Funding Thru Yr Replaced	Yr Replaced	Adjusted Cost if Inflation is 3.00%	Annual Funding Thru Yr Replaced	Yr Replaced	Adjusted Cost if Inflation is 3.00%	Annual Funding Thru Yr Replaced	Yr Replaced	Adjusted Cost if Inflation is 3.00%	Annual Funding Thru Yr Replaced
1 Amenity Area Parking Lot - Repair/Seal Coat	2013	4827	1609	2019	5764	961	2025	6882	1147	2031		
2 Amenity Area Parking Lot - 1-1/2" Overlay	2017	37254	5322	2042			2067			2092		
3 Concrete Sidewalks and Curb - Repair/Replace	2014	1093	273	2020	1305	217	2026	1558	260	2032		
4 Wood Cross Tie Retaining Wall - Maintain	2016	1739	290	2023	2139	306	2030	2630	376	2037		
5 Entry Signage - Maintain/Repair	2017	3582	512	2025	4538	567	2033			2041		
6 Main and Kiddie Pool - Replaster	2013	23340	7780	2021	29566	3696	2029	37454	4682	2037		
7 Pool Deck - Resurface	2013	19096	6365	2025	27227	2269	2037			2049		
8 Pool Accessories - Replace	2013	1061	354	2018	1230	246	2023	1426	285	2028	1653	331
9 Pool Furniture - Partial Replacement	2012	3090	1545	2017	3582	716	2022	4153	831	2027	4814	963
10 Pool Fence - Repair/Paint	2013	3713	1238	2021	4704	588	2029	5959	745	2037		
11 Tennis Courts - Replace Lower Courts	2028	76031	4224	2048			2068			2088		
12 Tennis Courts - Replace Upper Courts	2013	48801	16267	2033			2053			2073		
13 Tennis Courts - Resurface Lower Courts	2016	9274	1546	2024	11748	1469	2032			2040		
14 Tennis Courts - Resurface Upper Courts	2021	10751	977	2029	13619	1702	2037			2045		
15 Playground Equipment - Replace	2020	19572	1957	2032			2044			2056		
16 Overall Drainage - Maintain	2014	3278	820	2019	3800	760	2024	4406	881	2029	5107	1021
17 Upper Detention Pond - Clean/Maintain	2020	19572	1957	2032			2044			2056		
18 Lower Detention Pond - Clean/Maintain	2019	19002	2111	2031			2043			2055		
19 Wood Fence - Paint/Maintain	2014	1639	410	2022	2076	260	2030	2630	329	2038		
20 Gazebos - Floor Replacement	2027	12838	755	2047			2067			2087		
21 Gazebos - Paint	2017	4776	682	2024	5874	839	2031			2038		
22 Tennis Court Wind Screens - Replace	2014	3825	956	2022	4845	606	2030	6137	767	2038		
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**SCHEDULE IIa
 AVOCET NEIGHBORHOOD - 2011
 EXTERIOR/INTERIOR BUILDING MAINTENANCE ITEMS
 PRELIMINARY DATA**

	Exterior/Interior Building Maintenance Item Description	Units of Measure	Number of Units	Cost per Unit	Total Cost in Current Dollars	Estimated Useful Life	Estimated Remaining Life	Notes
1	Clubhouse Roof - Paint/Maintain	L.S.	1	\$4,500.00	\$4,500	20	5	16
2	Clubhouse Exterior - Paint	L.S.	1	\$4,500.00	\$4,500	7	5	17
3	Clubhouse Interior - Paint	L.S.	1	\$3,000.00	\$3,000	8	7	18
4	Clubhouse Carpet - Replace	L.S.	1	\$3,000.00	\$3,000	8	7	18
5	Clubhouse Furnishings - Partial Replacement	Allow	1	\$5,000.00	\$5,000	9	8	18
6	Clubhouse Appliances - Partial Replacement	Allow	1	\$1,500.00	\$1,500	7	6	18
7	Clubhouse Bathrooms - Upgrade	Ea.	2	\$7,000.00	\$14,000	15	14	19
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**SCHEDULE Iib
 AVOCET NEIGHBORHOOD - 2011
 EXTERIOR/INTERIOR BUILDING MAINTENANCE ITEMS - REPLACEMENT COST & FUNDING DATA**

Exterior/Interior Building Maintenance Item Description	First Replacement			Second Replacement			Third Replacement			Fourth Replacement		
	Yr Replaced	Adjusted Cost if Inflation is 3.00%	Annual Funding Thru Yr Replaced	Yr Replaced	Adjusted Cost if Inflation is 3.00%	Annual Funding Thru Yr Replaced	Yr Replaced	Adjusted Cost if Inflation is 3.00%	Annual Funding Thru Yr Replaced	Yr Replaced	Adjusted Cost if Inflation is 3.00%	Annual Funding Thru Yr Replaced
1 Clubhouse Roof - Paint/Maintain	2016	5217	869	2036			2056			2076		
2 Clubhouse Exterior - Paint	2016	5217	869	2023	6416	917	2030	7891	1127	2037		
3 Clubhouse Interior - Paint	2018	3690	461	2026	4674	584	2034			2042		
4 Clubhouse Carpet - Replace	2018	3690	461	2026	4674	584	2034			2042		
5 Clubhouse Furnishings - Partial Replacement	2019	6334	704	2028	8264	918	2037			2046		
6 Clubhouse Appliances - Partial Replacement	2017	1791	256	2024	2203	315	2031			2038		
7 Clubhouse Bathrooms - Upgrade	2025	21176	1412	2040			2055			2070		
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**SCHEDULE IIIa
 AVOCET NEIGHBORHOOD - 2011
 ELECTRICAL/MECHANICAL/PLUMBING ITEMS - PRELIMINARY DATA**

	Electrical Mechanical Item Description	Units of Measure	Number of Units	Cost per Unit	Total Cost in Current Dollars	Estimated Useful Life	Estimated Remaining Life	Notes
1	Tot Pool Pump and Filter - Replace	L.S.	1	\$2,500.00	\$2,500	8	3	20
2	Main Pool Pump and Filter - Replace	L.S.	1	\$3,500.00	\$3,500	8	7	20
3	Clubhouse HVAC - Replace Units	Ea.	2	\$5,000.00	\$10,000	15	14	21
4	Clubhouse Electrical Fixtures - Maintain/Replace	Allow	1	\$2,500.00	\$2,500	6	5	22
5	Clubhouse Plumbing Fixtures - Maintain/Replace	Allow	1	\$1,000.00	\$1,000	8	7	23
6	Exterior Site Lighting - Maintain/Replace	Allow	1	\$1,500.00	\$1,500	6	3	1
7	Tennis Court Lights - Replace Lamps	L.S.	1	\$3,800.00	\$3,800	10	1	24
8	Irrigation System - Maintain/Replace Valves & Heads	Allow	1	\$2,000.00	\$2,000	5	2	1
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**SCHEDULE IIIb
 AVOCET NEIGHBORHOOD - 2011
 ELECTRICAL/MECHANICAL/PLUMBING ITEMS - REPLACEMENT COST & FUNDING DATA**

Item Description	First Replacement			Second Replacement			Third Replacement			Fourth Replacement		
	Yr Replaced	Adjusted Cost if Inflation is 3.00%	Annual Funding Thru Yr Replaced	Yr Replaced	Adjusted Cost if Inflation is 3.00%	Annual Funding Thru Yr Replaced	Yr Replaced	Adjusted Cost if Inflation is 3.00%	Annual Funding Thru Yr Replaced	Yr Replaced	Adjusted Cost if Inflation is 3.00%	Annual Funding Thru Yr Replaced
1 Tot Pool Pump and Filter - Replace	2014	2732	683	2022	3461	433	2030	4384	548	2038		
2 Main Pool Pump and Filter - Replace	2018	4305	538	2026	5453	682	2034			2042		
3 Clubhouse HVAC - Replace Units	2025	15126	1008	2040			2055			2070		
4 Clubhouse Electrical Fixtures - Maintain/Replace	2016	2898	483	2022	3461	577	2028	4132	689	2034		
5 Clubhouse Plumbing Fixtures - Maintain/Replace	2018	1230	154	2026	1558	195	2034			2042		
6 Exterior Site Lighting - Maintain/Replace	2014	1639	410	2020	1957	326	2026	2337	389	2032		
7 Tennis Court Lights - Replace Lamps	2012	3914	1957	2022	5260	526	2032			2042		
8 Irrigation System - Maintain/Replace Valves & Heads	2013	2122	707	2018	2460	492	2023	2852	570	2028	3306	661
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**AVOCET NEIGHBORHOOD - 2011
COST & FUNDING RECAP**

Year	Annual Funds	Future Expenses	Net Accumulated Funds
Current Funds			68,000
2011	7,000	0	75,375
2012	33,000	7,004	101,913
2013	33,000	102,960	32,627
2014	33,000	14,205	51,750
2015	33,000	0	85,174
2016	33,000	24,345	94,420
2017	33,000	50,986	77,071
2018	33,000	16,603	94,018
2019	33,000	34,900	92,753
2020	40,000	42,405	91,012
2021	40,000	45,021	86,646
2022	40,000	23,255	104,024
2023	40,000	12,832	131,912
2024	40,000	24,231	148,541
2025	40,000	74,949	114,535
2026	40,000	20,254	135,054
2027	40,000	17,652	158,277
2028	40,000	93,386	105,883
2029	40,000	62,139	84,474
2030	40,000	23,672	101,424

**AVOCET NEIGHBORHOOD - 2011
Itemized Projected Costs by Year**

Year	Job	Cost
Grand Total		\$690,799
2012 Total		7,004
	2012 Pool Furniture - Partial Replacement	3,090
	2012 Tennis Court Lights - Replace Lamps	3,914
2013 Total		102,960
	2013 Amenity Area Parking Lot - Repair/Seal Coat	4,827
	2013 Irrigation System - Maintain/Replace Valves & Heads	2,122
	2013 Main and Kiddie Pool - Replaster	23,340
	2013 Pool Accessories - Replace	1,061
	2013 Pool Deck - Resurface	19,096
	2013 Pool Fence - Repair/Paint	3,713
	2013 Tennis Courts - Replace Upper Courts	48,801
2014 Total		14,205
	2014 Concrete Sidewalks and Curb - Repair/Replace	1,093
	2014 Exterior Site Lighting - Maintain/Replace	1,639
	2014 Overall Drainage - Maintain	3,278
	2014 Tennis Court Wind Screens - Replace	3,825
	2014 Tot Pool Pump and Filter - Replace	2,732
	2014 Wood Fence - Paint/Maintain	1,639
2016 Total		24,345
	2016 Clubhouse Electrical Fixtures - Maintain/Replace	2,898
	2016 Clubhouse Exterior - Paint	5,217
	2016 Clubhouse Roof - Paint/Maintain	5,217
	2016 Tennis Courts - Resurface Lower Courts	9,274
	2016 Wood Cross Tie Retaining Wall - Maintain	1,739
2017 Total		50,986
	2017 Amenity Area Parking Lot - 1-1/2" Overlay	37,254
	2017 Clubhouse Appliances - Partial Replacement	1,791
	2017 Entry Signage - Maintain/Repair	3,582
	2017 Gazebos - Paint	4,776
	2017 Pool Furniture - Partial Replacement	3,582
2018 Total		16,603
	2018 Clubhouse Carpet - Replace	3,690
	2018 Clubhouse Interior - Paint	3,690
	2018 Clubhouse Plumbing Fixtures - Maintain/Replace	1,230
	2018 Irrigation System - Maintain/Replace Valves & Heads	2,460
	2018 Main Pool Pump and Filter - Replace	4,305
	2018 Pool Accessories - Replace	1,230
2019 Total		34,900
	2019 Amenity Area Parking Lot - Repair/Seal Coat	5,764
	2019 Clubhouse Furnishings - Partial Replacement	6,334
	2019 Lower Detention Pond - Clean/Maintain	19,002
	2019 Overall Drainage - Maintain	3,800
2020 Total		42,405
	2020 Concrete Sidewalks and Curb - Repair/Replace	1,305

2020 Exterior Site Lighting - Maintain/Replace	1,957
2020 Playground Equipment - Replace	19,572
2020 Upper Detention Pond - Clean/Maintain	19,572
2021 Total	45,021
2021 Main and Kiddie Pool - Replaster	29,566
2021 Pool Fence - Repair/Paint	4,704
2021 Tennis Courts - Resurface Upper Courts	10,751
2022 Total	23,255
2022 Clubhouse Electrical Fixtures - Maintain/Replace	3,461
2022 Pool Furniture - Partial Replacement	4,153
2022 Tennis Court Lights - Replace Lamps	5,260
2022 Tennis Court Wind Screens - Replace	4,845
2022 Tot Pool Pump and Filter - Replace	3,461
2022 Wood Fence - Paint/Maintain	2,076
2023 Total	12,832
2023 Clubhouse Exterior - Paint	6,416
2023 Irrigation System - Maintain/Replace Valves & Heads	2,852
2023 Pool Accessories - Replace	1,426
2023 Wood Cross Tie Retaining Wall - Maintain	2,139
2024 Total	24,231
2024 Clubhouse Appliances - Partial Replacement	2,203
2024 Gazebos - Paint	5,874
2024 Overall Drainage - Maintain	4,406
2024 Tennis Courts - Resurface Lower Courts	11,748
2025 Total	74,949
2025 Amenity Area Parking Lot - Repair/Seal Coat	6,882
2025 Clubhouse Bathrooms - Upgrade	21,176
2025 Clubhouse HVAC - Replace Units	15,126
2025 Entry Signage - Maintain/Repair	4,538
2025 Pool Deck - Resurface	27,227
2026 Total	20,254
2026 Clubhouse Carpet - Replace	4,674
2026 Clubhouse Interior - Paint	4,674
2026 Clubhouse Plumbing Fixtures - Maintain/Replace	1,558
2026 Concrete Sidewalks and Curb - Repair/Replace	1,558
2026 Exterior Site Lighting - Maintain/Replace	2,337
2026 Main Pool Pump and Filter - Replace	5,453
2027 Total	17,652
2027 Gazebos - Floor Replacement	12,838
2027 Pool Furniture - Partial Replacement	4,814
2028 Total	93,386
2028 Clubhouse Electrical Fixtures - Maintain/Replace	4,132
2028 Clubhouse Furnishings - Partial Replacement	8,264
2028 Irrigation System - Maintain/Replace Valves & Heads	3,306
2028 Pool Accessories - Replace	1,653
2028 Tennis Courts - Replace Lower Courts	76,031
2029 Total	62,139
2029 Main and Kiddie Pool - Replaster	37,454
2029 Overall Drainage - Maintain	5,107
2029 Pool Fence - Repair/Paint	5,959
2029 Tennis Courts - Resurface Upper Courts	13,619
2030 Total	23,672

2030 Clubhouse Exterior - Paint	7,891
2030 Tennis Court Wind Screens - Replace	6,137
2030 Tot Pool Pump and Filter - Replace	4,384
2030 Wood Cross Tie Retaining Wall - Maintain	2,630
2030 Wood Fence - Paint/Maintain	2,630

E. NOTES

The accompanying notes are an integral part of the reserve schedule contained in this report. When reviewing the schedule, please be sure to read all notes pertaining to a particular line item. This will provide the most complete explanation of each line item and will provide any clarification where necessary.

1. These items were found to be in good condition and well maintained. The useful life reflects the age and overall condition of the respective item.
2. The parking lot at the amenity area consists of an asphaltic surface course installed over a graded aggregate base. The thickness of the base and asphalt could not be determined. Our review found the pavement to be in fair condition for its age. We observed several areas where the asphalt is cracked and settled and numerous linear cracks in the pavement. Typically, the estimated useful life of asphalt pavement with limited use, such as the amenity area, is 25 years.

To extend the life of the pavement, we would recommend that the settled and cracked areas of the asphalt surface course be repaired and the surface of the asphalt be sealcoated within the next two years. It can be anticipated that the asphalt will need to be resurfaced with a 1-1/2" surface course within about six years.

3. The concrete sidewalk and curbing were observed to be in good condition and experiencing normal wear and tear. Some minor cracks were observed in the sidewalks and curbs but nothing that, at this time, would create a tripping hazard or drainage problem.

We would recommend that a budget of \$1,000 be established every six years to repair or replace any cracked and damaged sections of concrete curb and sidewalks.

4. From our review, the only wood retaining walls at the property consist of the wood retaining wall that was added at the swimming pool as a part of the pool apron extension. This wall was observed to be in good condition.

We would recommend that \$1,500 be allotted every seven years for maintenance and repair of the wood retaining wall.

5. At the entry to the property is the entry signage with stone walls at both sides of the entry. The signage appears to consist of bronze. Overall the signage and wall were observed to be in good condition with the exception of some minor cracking of the wall and some loose cracked mortar between the stones in the wall.

We recommend that \$3,000 be allotted every eight years for cleaning and repair of the stone wall and monument signage.

6. It is our understanding that the kiddie pool was installed and the main swimming pool was replastered in 2004. Typically, the replastering should have an estimated useful life of eight years; however, from our review, it is our opinion that the main pool and kiddie pool should be replastered within the next two years.

7. It is our understanding that the pool deck was resurfaced in 2004. The surface appeared to be in fair condition with only minor cracks observed.

We recommend that the pool deck be resurfaced within the next two years with a slip resistant surface. Prior to resurfacing all cracks should be sealed.

8. The pool accessories, including the dip nets and poles, signage, handrails and all equipment necessary for the safe operation of the pool, were observed to be in average condition and experiencing normal wear and tear.

We recommend that \$1,000 be allocated every five years, beginning in two years for the replacement of the pool accessories, as needed.

9. Our observation found the pool furniture to be in fair condition.

We recommend that \$3,000 be allotted, beginning next year, for the partial replacement of pool furniture every five years.

10. The pool fence consists of aluminum fence with a baked enamel finish. The pool

fence was observed to be in good condition with the exception of the finish which is beginning to fade. Typically these type fences require very little maintenance with the exception of painting.

We recommend that the pool fence be painted within the next two years.

11. There are a total of four tennis courts at the property, two of the courts are at the lower end of the amenity area and two of the courts are at the upper end of the amenity area. It is our understanding that the lower courts were replaced in 2008 and the upper courts were resurfaced in 2009. Our review revealed several large cracks running through the upper courts. The cracks observed appeared to be a result of settlement of the subbase. It appears that the courts were installed on fill material, which was probably not properly compacted; thus, resulting in the settlement of the fill material and the subsequent cracking of the courts. The replacement of the courts generally consists of the removal of the existing court surface and replacement with a 4" stone base layer topped with a 1-1/2" layer of asphalt and resurfacing of the courts. Included is the replacement of the nets and repair and replacement of the chain link fencing and gates. Once the upper courts are replaced and the cracks mitigated, the upper and lower courts should be resurfaced every seven to eight years.
12. It is our understanding that the playground equipment was replaced since the previous Reserve Analysis. The estimated useful life of this equipment is ten to 12 years.
13. In 2005, a major drainage restoration plan was implemented at the pool area as a result of the pool deck expansion in 2004. This drainage restoration appears to have solved the problem and to be operating properly.

We recommend that \$3,000 be allotted every five years to maintain the drainage at the amenity area. These funds should include the maintenance and clearing of the underground drainage system.

14. It is our understanding that the upper detention pond was cleaned within the last two to three years and all brush and silt were removed and riprap was added to prevent erosion at the drain inlet. The lower pond was reportedly cleaned in

2006.

We recommend that the upper and lower ponds be maintained on a regular basis.

15. At the upper and lower tennis courts are viewing gazebos, which consist of wood-framed open air gazebos with a standing seam metal roof. The gazebos were observed to be in good condition. It is our understanding that the gazebos were painted in 2010.

We would recommend that the gazebos be repaired and painted every seven years.

16. The clubhouse roof consists of a standing seam metal roof with a baked enamel finish. These type roofs have an indefinite life and typically do not need to be replaced. In some cases, the finish on these types of roofs will fade and the standing seam metal may need to be painted.

We recommend that \$4,500 be allotted in five years for the painting and maintenance of the roof.

17. The clubhouse exterior consists of a composite wood siding with wood trim. The siding was observed to be in good condition for its age and it is our understanding that the clubhouse was painted two years ago.

We recommend that the exterior of the clubhouse be power washed and repainted every seven years.

18. It is our understanding that within the last year the interior of the clubhouse was refinished, including drywall repair, painting, floor replacement, new kitchen countertops, furniture and partial appliance replacement.

Below is our recommended schedule for the interior of the clubhouse:

Exterior painting.....Every seven years
Interior painting.....Every eight years
Carpet replacement.....Every eight years
Furniture – Partial replacement.....Every nine years
Appliances – Partial replacement.....Every seven years

-
19. It is our understanding that the bathrooms were upgraded within the last year including replacement of fixtures, cabinet tops, painting, etc.
 20. From our conversations with Aquaguard, it is our understanding that the kiddie pool was installed in 2004 and a new pump and filter were installed at that time. It is also our understanding that the main pool pump and filter were replaced in 2010.
 21. The HVAC at the clubhouse consists of two-split system units with the compressors located at the exterior of the building and the air handlers located in mechanical closets inside the building. It is our understanding that the units were replaced in 2010. The estimated useful life of this equipment is 14 to 16 years depending on their use and maintenance.
 22. During the renovation, the clubhouse electrical fixtures were replaced, and the security system was upgraded.

We recommend that \$2,500 be allotted every six years for repair and replacement of the electrical fixtures and security system in the clubhouse.

23. The plumbing fixtures in the clubhouse include the interior piping, water closets, sinks and faucets. The plumbing fixtures were upgraded during the renovation of the clubhouse and bathrooms.

We would recommend that \$2,000 be allotted every eight years for plumbing fixture repair and replacement.

24. It is our understanding that the lamps in the tennis court lights were replaced in 2004. These lamps typically have an estimated useful life of eight to ten years.

II. RESERVE CASH FLOW ANALYSIS

A. INTRODUCTION

The enclosed chart and graph contain a 20-year cash flow projection of the reserve requirements for the Association. The budget should be adjusted at the end of the 20-year period to readjust for changes in remaining life, inflation, and current costs of replacements. This cash flow analysis is based on the assumption that all of the items that make up the schedule are fully funded. By this we mean that each item will accumulate its full replacement cost during its life span. At the end of this life, each item would be replaced and the funding would start aging for items with a long life. For items with a short useful life, the funding for the first replacement is budgeted in addition to future replacements due to the short life span. The future replacement funding is started in the first year; however, payments are less than the first replacement due to the extended time period allowed to accumulate funds. Taking all of the components that make up the reserve schedule, using this full funding analysis, there is typically an ongoing surplus in the reserve fund. This ensures that the Association will have a surplus at the end of the 10-year period. This is called the "pooling effect" and is represented by the upper line on the cash flow chart, which is designated as the "Net Cumulative Fund." The "Net Cumulative Fund" is calculated by taking the existing amount in the reserve fund at the time the reserve schedule is prepared, adding to it the yearly contribution, and subtracting from it the annual expenditures.

The annual reserve funding required has been calculated by estimating the useful remaining life based on the current condition, age, and all other known factors of each item description. The present value replacement cost was estimated by either past quotations or other listed methods of estimation. The present value replacement cost was then converted to future value using a 3% annual compounded inflation rate. The future cost was calculated for the projected time when replacement will be required.

The future cost was then broken down into annual installments while still considering the 3% compounded annual inflation rate. The monthly reserve funding was calculated by a further breakdown of the annual reserve funding required.

1. Formulas

The following economic formulas were used in our calculations:

DISCOUNTING FACTOR	FUNCTIONAL NOTATION	FORMULA
Single Payment Compound Amount	(F/P, i%, n)	$(1+i)^n \exp n$
Uniform Series Sinking Fund	(A/F, i%, n)	$i/[(1+i)^n - 1]$

2. Definitions

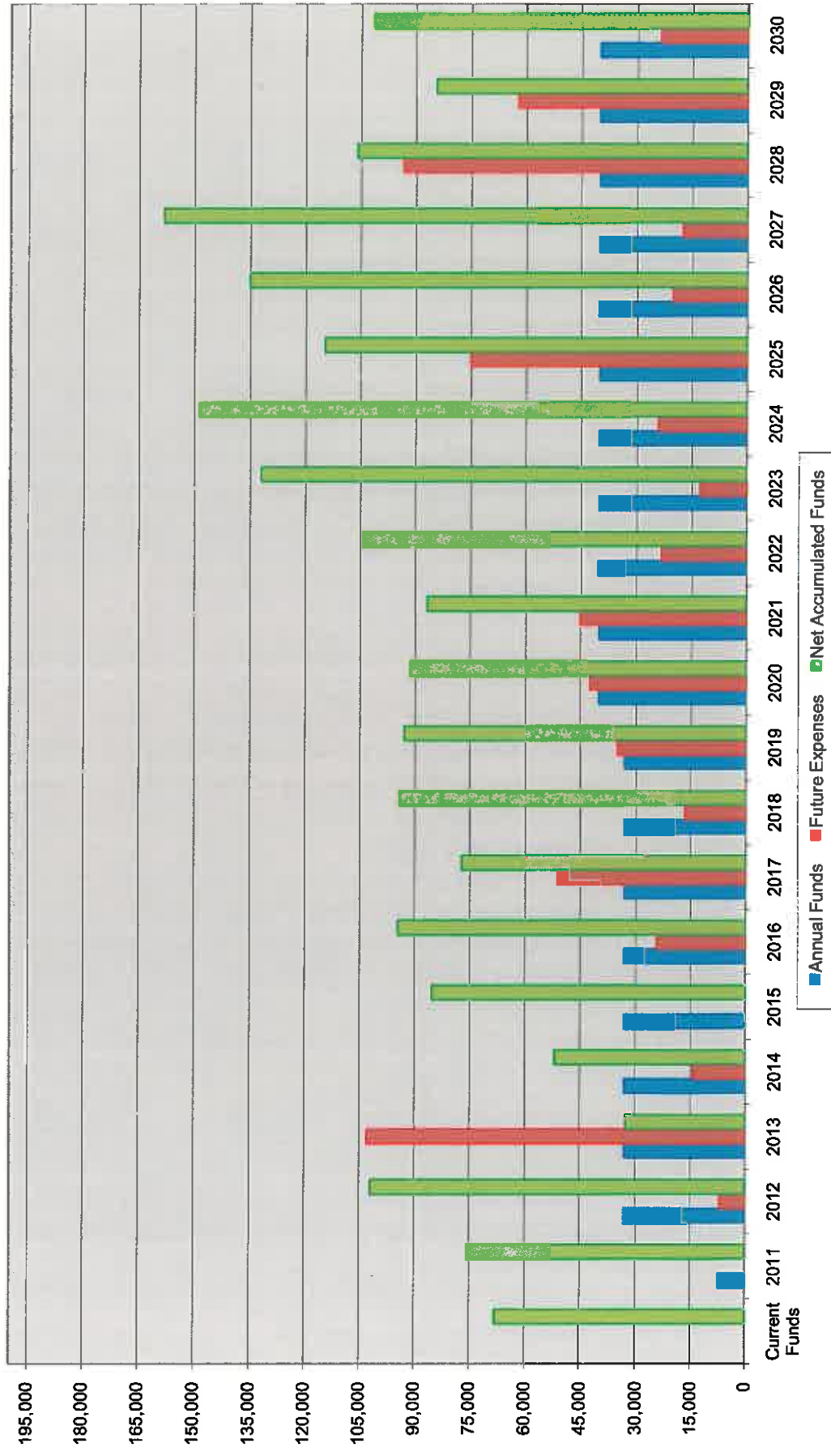
Definitions of the above-mentioned terms are as follows:

TERM	DEFINITION
Single Payment Compound Amount	Conversion of present worth to future value
Uniform Series Sinking Fund	Conversion of future value to annual value
F	Future worth of item in <i>n</i> years from present
P	Present Worth
A	Annual worth
I	Interest rate (1.00% used)
N	# of years until each calculated replacement

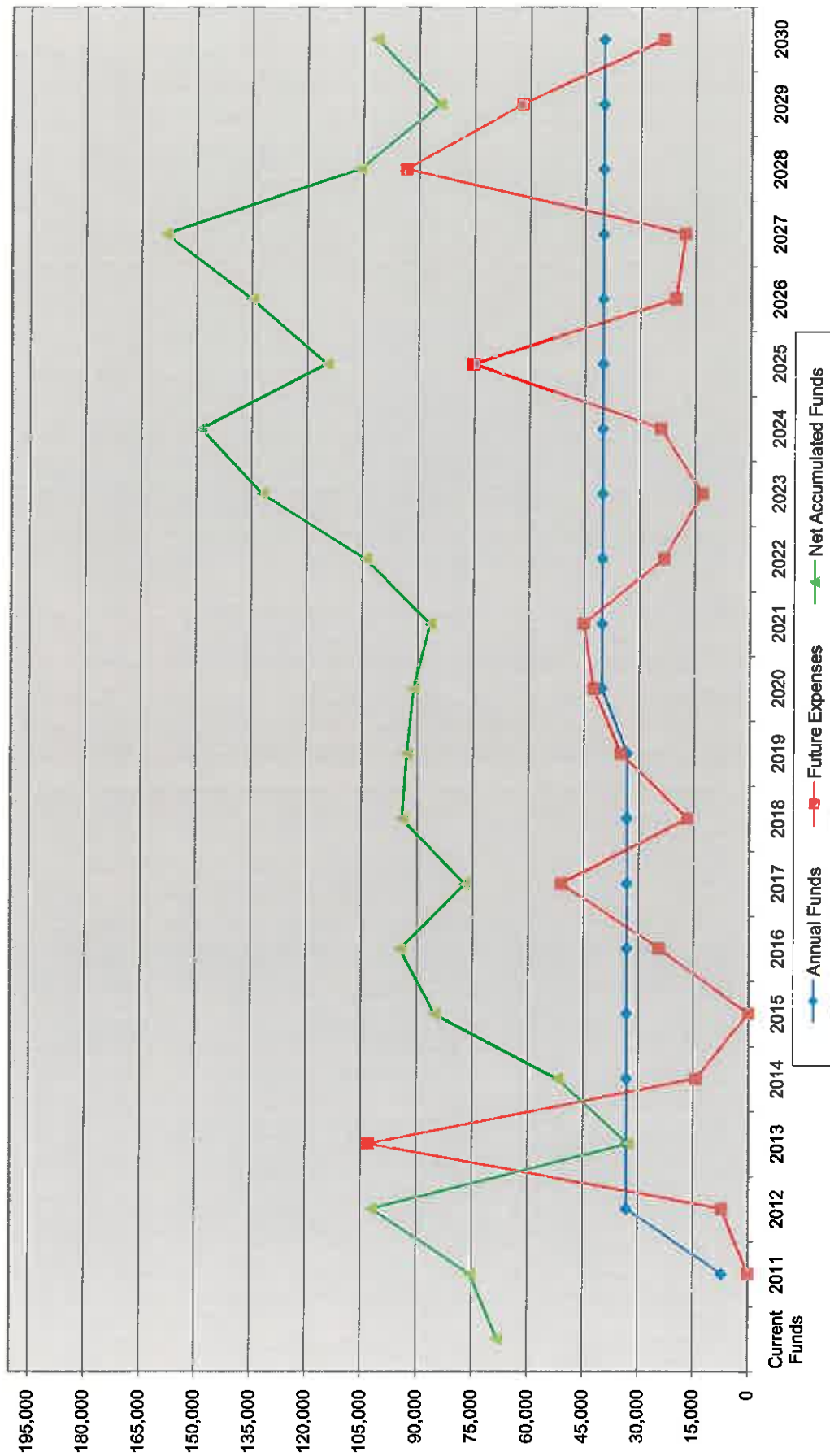
B. PROJECTED CASH FLOW GRAPH AND CHART

The projected cash flow for the Capital Reserve Analysis is illustrated by the bar graph and line chart on the following pages.

AVOCET - PROJECTED CASH FLOW



AVOCET - PROJECTED CASH FLOW



C. RECOMMENDATIONS AND CONCLUSIONS

Based on our review, we would make the following recommendations. The Association should set aside the following amount for the specified year into the reserve fund:

COST AND FUNDING RECAP

Year	Annual Funds	Future Expenses	Net Accumulated Funds
Current Funds			68,000
2011	7,000	0	75,375
2012	33,000	7,004	101,913
2013	33,000	102,960	32,627
2014	33,000	14,205	51,750
2015	33,000	0	85,174
2016	33,000	24,345	94,420
2017	33,000	50,986	77,071
2018	33,000	16,603	94,018
2019	33,000	34,900	92,753
2020	40,000	42,405	91,012
2021	40,000	45,021	86,646
2022	40,000	23,255	104,024
2023	40,000	12,832	131,912
2024	40,000	24,231	148,541
2025	40,000	74,949	114,535
2026	40,000	20,254	135,054
2027	40,000	17,652	158,277
2028	40,000	93,386	105,883
2029	40,000	62,139	84,474
2030	40,000	23,672	101,424

The Association should update the reserve schedule a minimum of once every two years. It is especially important to update the schedule when using average contribution due to the fact that even a minor change in the estimated useful life can have a significant impact on adequate funding.

The Association should review each of the individual line items that make up the reserve schedule to make sure that there is no overlap between what is indicated in the schedule and any other portion of the budget. For example, we may show on the reserve schedule the replacement of fencing, but at the same time, the Association may be replacing the fencing out of their operating budget. If duplication like this exists, the item should either be removed from the reserve schedule or the operation budget. It should not be funded in two different locations.

The Association should review the items on the schedule to assure that their replacement is not covered under a maintenance contract. An example would be reserving for the replacement of mechanical equipment components while the Association has a maintenance contract for the item at the same time. The reserve schedule should be carefully reviewed to be sure that it does not fund the replacement of any portion of any item whose replacement is covered under a maintenance contract.

The Association should review the items on the schedule to be sure that they are all the Association's responsibility. As an example, if we have included site lighting on the reserve schedule, but at the same time the local municipality is responsible for the maintenance and repair of these connections, they should be removed from the schedule.

The Association should review the individual line items on the reserve schedule carefully to determine if a number of the smaller individual components can be consolidated into one line item which can be continuously funded.

For example, if there are five or six components with a total replacement cost of \$1,000 each, rather than reserving the full \$5,000 or \$6,000 dollars for all of these items, the Association may want to consider funding all six components under one line item for a total of \$1,000. Should one of these six items have to be replaced, that line item would have to be brought current within a year or so after its expenditure. By doing this rather than funding the full \$6,000, only a portion of the total would be funded. This would reduce the overall yearly contribution to reserves.

Depending on the size of the overall operating budget, the Association may decide that any line item of less than the given amount will be funded directly through the operating budget rather than through the reserve schedule. If this is the case, any item with the given value or less should be removed from the schedule. The schedule would then be footnoted accordingly.

III. RECOMMENDED MAINTENANCE SCHEDULE (Association's Responsibility)

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

In any case, the proper determination of the useful lives of the items which make up your common elements is critical to the proper updating of the reserve schedule. The items included will only attain their anticipated useful lives if a proper maintenance program is implemented. For this reason, it is recommended that the reserve schedule be updated every two years to assure that all items are being properly maintained.

A. ASPHALT PAVEMENT

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

The inspections should note small cracks or other surface breaks in the pavement. In addition, there are other signs, such as mud or water on the pavement surface or soil erosion along the edges of the pavement, which may indicate possible future problem areas.

Most small cracks or surface breaks can be repaired by sealing them with a good commercial-grade caulk. Areas which have settled and pose a possible trip hazard should be cut out and replaced to prevent a potential liability problem, as well as to prevent further deterioration of the surface. If large areas are observed to be cracking or breaking up, this may be an indication of a problem with the base material and/or subsoils and would require further investigation to determine the cause and proper method of repair.

B. CONCRETE CURBING

Any soil erosion behind the curbing should be noted, and possible problems such as broken pipes, malfunctioning sprinkler heads, and/or improper grading should be investigated and any necessary repairs made.

C. SIDEWALKS

Sidewalks should be inspected at least twice a year (spring and fall). The inspection should note any cracked sections, uneven settlement between sections (which may result in tripping hazards), and surface damage. Undermining of sidewalks (caused by soil erosion) should also be noted. Proper replacement of any sections with the above noted problems is necessary to eliminate safety hazards and potential liability problems. These repairs will also allow the curbing to achieve its full useful life.

D. STORM DRAINAGE SYSTEMS

All storm drainage systems should be routinely inspected to ensure proper operation. Inspections should be scheduled for all facilities after major storms for routine maintenance. In addition, bi-annual structural inspections should be performed. The following are the recommended maintenance schedules for each individual section of a storm system:

1. Catch Basins

All catch basins should be routinely inspected after a major storm to ensure that they are working properly. During these inspections, any sediment buildup or debris should be removed from catch basins to ensure that they continue to function properly.

2. Drainage Swales

The five most prevalent maintenance problems with swales are:

- Weed growth
- Grass maintenance
- Sediment control
- Soil deterioration
- Mosquito control

Drainage swales should be inspected on a routine basis to ensure that they are functioning properly. The grass located within the swales should be mowed on a weekly basis to prevent the accumulation of debris, which may impede the flow of the drainage. The trash racks attached to the outlet structures should be periodically checked and cleaned of debris to prevent blockage. The outlet structures should also be checked for deterioration and/or cracking of concrete.

E. LANDSCAPING

A discussion regarding the preventive maintenance of the landscaped areas of the development would require an entire report. For this reason, it is recommended that a professional service specializing in this area be consulted. It should be noted that landscaping is not included as a reserve schedule item since, with proper maintenance, large-scale replacement should not become necessary.

F. CROSS-TIE WALLS

Retaining wall surfaces should be inspected every spring as part of a preventive maintenance program. Areas should be checked for signs of major cracking, splitting and warping. The retaining walls should be checked for soil erosion behind the retaining wall and undermining of the footings.

G. LAWN SPRINKLER SYSTEM

The preventive maintenance of the lawn sprinkler system would require an extensive report concerning the operation and servicing of the control valve, pumps, sprinkler heads, and water lines. For this reason, it is recommended that a professional sprinkler system contractor be consulted to provide the necessary services to properly maintain the sprinkler system.

H. WOODEN FENCES AND OTHER WOODEN SITE FURNISHINGS

Wooden fences constructed of treated lumber should last a number of years with minimal maintenance. However, these items should be checked at least once a year to ensure that excessive weathering is not occurring. If excessive weathering is occurring, deteriorated members should be replaced, and the entire item should be treated with a preservative material.

Wooden site furnishings constructed of non-treated lumber should be regarded the same as exterior trim. Periodic application of a sealant to all surfaces is vital to preserve the wood. These items should be checked at least once a year to detect any peeling or deterioration. Deteriorated members should be replaced at this time, and resealing should be done as necessary.

I. TOT LOTS

Tot lots should be looked at a minimum of twice a year, with one inspection in the spring and one in the fall. Any splintering or cracking wood should be repaired or replaced as necessary to prevent any injury. Exposed bolts must not have sharp edges. The bolts should not be protruding excessively so as to cause unnecessary injuries.

J. ROOFS • PITCHED

The standard asphalt/fiberglass shingles available on the market today have an expected useful life of 15 - 20 years. Proper maintenance in order to achieve this useful life requires periodic inspections to detect the need for repair or changes in the roof surface. In order to reduce maintenance and replacement costs, it is vital to detect problems when they are minor and prevent them from escalating into major problems.

Roof inspections should be conducted at least twice a year. These inspections should preferably occur in the early fall to prepare for winter and in the spring to assess any winter damage and prepare for the hot summer sun. In addition to these seasonal inspections, the roofs should be carefully checked after violent rain or windstorms or nearby fires or after workmen have been on the roof.

The roof inspections should include:

- Examination of exterior walls for settlement.
- Checking interior walls and the underside of roofs for leakage. This is necessary since the majority of roof problems may not be detected by inspecting the outside roof surface.
- Inspection of the roof surface for missing, loose, lifted, cracked or deteriorated shingles.
- A review of the roof drainage, including any change in the roof and the condition and operation of roof drains, gutters, and scuppers.
- Examination of flashed areas. Most water infiltration problems are caused by flashing defects. Lifted, loose, torn, or missing flashing require immediate repair.
- A review of ventilation, since improper ventilation can cause ice damming conditions and accelerates the deterioration of the roof shingle.

K. GUTTERS AND DOWNSPOUTS

The key to maintaining gutters and downspouts is to make sure they are kept clear of debris. A buildup of leaves and other plant material will block downspouts and prevent proper drainage. If this occurs, trapped water could weigh down the gutters and cause them to loosen or fall. Blocked gutters will also overflow along their length, resulting in the washing away of the mulch and/or soils adjacent to the sides of a building, which could result in premature deterioration of a building's exterior finish over time. Ice damming will also be evident in the winter if gutters are not able to drain.

At least twice a year, the gutters should be cleaned and inspected for damage. This should be done in late spring and late fall. Any loose or misaligned gutters should be corrected at this time to prevent further damage. Splash blocks and downspout extension pipes should also be adjusted to prevent erosion and to direct water away from the building.

As the gutters age, the paint coating will oxidize and dull. When this occurs, an aluminum paint product should be used to restore the finish, or the gutters should be power washed to prevent deterioration.

L. CONCRETE PATIOS

Concrete patios should be inspected twice a year in the fall and spring. Minor cracks or cracks with vertical displacement should be noted and repaired where necessary. Sections should also be inspected for signs of surface deterioration.

Note: Salts used to eliminate ice during winter months can cause concrete to deteriorate. Only products rated safe for use on concrete should be applied for de-icing purposes.

M. BALCONIES/ DECKS

Deck surfaces should be inspected every spring as part of a preventive maintenance program. Areas should be checked for signs of major cracking. Railings and handrails should be inspected for signs of damage. They should also be checked to ensure that they are still sturdy and safe.

N. WOOD RAILINGS

All exterior wood surfaces should be inspected every spring as part of a preventive maintenance program. Areas should be checked for signs of major cracking, splitting and warping. Railings and handrails should be inspected for signs of damage. They should also be checked to ensure that they are still sturdy and safe.

O. WOOD SIDING

The proper maintenance of siding is critical to keeping a building waterproof and weather-tight. Prior to painting, all siding should be checked for delamination or deterioration and should be properly replaced or restored as required. All loose siding should be renailed and caulked prior to painting. All joints and penetrations in the siding should be caulked or sealed. Any loose, damaged, or missing trim should also be restored or replaced during siding restoration. During the siding review, any evidence of termite or pest infestation should be checked and treated as necessary. Lack of maintenance of siding and trim can result in water infiltration problems, as well as a poor appearance.

P. WINDOWS

Window inspections should be conducted a minimum of once a year and should include:

- Checking all fixed and sliding window glazing for seal.

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- Replacing all deteriorated weather-stripping. This includes both the inside and outside perimeters and interlocks.
 - Checking the fixed side of operating windows and sliding doors for defective weather-stripping.
 - Checking the rubber duster sweep at the top and base of sliding window and door interlocks.
 - Checking weep holes in the outside of the window frame for clogging.
 - Checking any defective removable window tracks.
 - Checking the rollers on sliding doors and screens.
 - Repairing or replacing of these items should be completed as necessary.

Q. FLOORS

Preventive maintenance begins as soon as a new floor is laid. The owner should be aware of damage to the tiles and grout to assure that immediate damage is corrected. It is most important to be familiar with the manufacturer's instructions to:

- Protect the surface materials against damage due to the incorrect choice of cleaning materials.
- Protect the surface materials against damage due to the use of the wrong equipment for cleaning.

Carpeting is usually the most susceptible to wear and damage. The basic care for carpet includes:

- Regular vacuuming.
- Prompt removal of spots and stains.
- Report any irregularities in the floor as soon as they are noted.

R. MECHANICAL EQUIPMENT

A well-established plan of preventive maintenance is essential to obtaining the maximum performance and life from your mechanical equipment. All work should be performed by qualified technicians specializing in the particular equipment.

The following guidelines are considered to be minimal procedures for maintaining the equipment:

1. FURNACES

Surrounding Areas:

The flow of combustion and ventilating air must not be obstructed from reaching the furnace. Air openings provided in the casing of the furnace must be kept free of obstructions, which would restrict airflow, thereby affecting efficiency and safe operation of the furnace. Furnaces must have air for proper performance. In addition, warm air furnaces should not be operated in a corrosive atmosphere. Paint solvents, cleaning chemicals, spray propellants, and bleaches should not be used in the vicinity of the furnace during normal operation.

Thermostat:

The thermostat is the heart of a warm air furnace center. Its operation depends on the surrounding air temperatures; therefore, it should be mounted on a draft-free inside wall for best operation. Because the thermostat is sensitive to heat, devices such as radios, televisions, or lamps should not be placed near it. The thermostat also accumulates lint, which affects its accuracy. For best operation, the thermostat should be cleaned annually.

Filters:

The filters remove dust and debris from the air before it is heated and circulated to the living spaces. Filters must be changed when dirty. Inspections of the filters should be made on a monthly basis.

Blowers:

The blower size and speed determine the air volume delivered by the furnace. The blower bearings are permanently lubricated and usually do not require servicing. Annual cleaning of the blower wheel and housing is recommended for maximum air output. It is recommended to consult a qualified service technician for this procedure.

Burners:

Gas burners do not normally require scheduled servicing; however, accumulation of lint may cause a yellowing flame or delay ignition. Either condition indicates that a service call is required. For best operation, burners must be cleaned annually using a brush and vacuum cleaner. It is recommended to consult a qualified service technician for this procedure.

Flue Pipe:

For best operation, these items should be inspected for signs of corrosion and/or deterioration and cleaned, if necessary, at the beginning of each heating season by a qualified service technician.

2. HOT WATER HEATERS

The area near the water heater should be kept free of flammable liquids, such as gasoline, paint thinners, adhesives, and other combustible materials. Make certain that the flow of air to the water heater for adequate combustion (proper burner operation) and ventilation is not obstructed.

A water heater's tank can act as a settling basin for solids suspended in the water. It is, therefore, not uncommon for hard water deposits to accumulate in the bottom of the tank. It is suggested that a few quarts of water be drained from the water heater's tank every month to prevent this condition from occurring.

At least once a year, lift and release the level handle on the temperature pressure relief valve (located near the top of the water heater) to make certain that the valve operates freely, and allow several gallons to flush

through discharge lines. Make certain that the discharge is directed to an open drain.

Visually inspect the burner annually, while firing, and pilot burner flame with the main burner off. If any unusual burner operation is noted, the water heater should be shut off until professional service assistance can be obtained.

The water heater's internal flue should be inspected annually to be certain that it is clean by removing the draft hood and flue baffle. When reinstalling the flue baffle, make certain that it is hung securely by its hanger at the top of the flue. Remove any scale that may have fallen on the burner or flood shield. Reinstall the draft hood. It is recommended that a professional service be consulted for this procedure.

DISCLOSURES

Ray Engineering, Inc. does not have any other involvement with the association, which could result in actual or perceived conflicts of interest.

During our review of the property, visual review and field measurements, as needed, of each common element was performed. No destructive testing or drawing take-offs were performed.

Material issues which, if not disclosed, would cause a distortion of the association's situation.

Information provided by the official representative of the association regarding financial, physical, quantity, or historical issues will be deemed reliable by the consultant.

The Reserve Analysis will be a reflection of information provided to the consultant and assembled for the association's use, not for the purpose of performing an audit, quality/forensic analyses, or background checks of historical records.

Ray Engineering, Inc. did not perform an audit of the current or past budgets of the association.

Information provided to Ray Engineering, Inc. by the association representative about reserve projects will be considered reliable. Any on-site inspection(s) by Ray Engineering, Inc. should not be considered a project audit or quality inspection.

STEVEN W. RAY, P.E., R.S.

PRESIDENT

Mr. Ray received his Bachelor of Science degree in Civil Engineering from Memphis State University. He is a Registered Professional Engineer in several states, has earned certification as a Reserve Specialist as well as a General Contractor with an Unlimited License. Mr. Ray has more than 15 years of experience in the preparation of capital reserve analyses. He is the Owner and President of Ray Engineering, Inc.

LIMITATION OF RESPONSIBILITY

The report represents a statement of the physical condition of the common elements of the property based upon our visual observation, professional analysis and judgment. The report applies only to those portions of the property and/or items and equipment which were capable of being visually observed. Unless specifically stated otherwise, no intrusive testing was performed nor were any materials removed or excavations made for further inspection. Drawings and specifications were available only to the extent described in the report.

The following activities are not included in the scope and are excluded from the scope of the reserve analysis described in the National Reserve Study Standards:

- *Utilities* – Operating condition of any underground system or infrastructure; accessing manholes or utility pits; the reserve analysis does not include any infrastructure with an estimated useful life of more than 30 years, unless specified otherwise in the report;
- *Structural Frame and Building Envelope* – Unless specifically defined in the proposal, entering of crawl, attic or confined space areas (however, the field observer will observe conditions to the extent easily visible from the point of access to the crawl or confined space if the access is at the exterior of the building or common space); determination of previous substructure flooding or water penetration unless easily visible or unless such information is provided;
- *Roofs* – Walking on pitched roofs or any roof areas that appear to be unsafe or roofs with no built-in access; determining roofing design criteria;
- *Plumbing* – Verifying the condition of any pipes underground, behind walls or ceilings; determining adequate pressure and flow rate, verifying pipe size or verifying the point of discharge for underground systems;
- *HVAC* – Observation of fire connections, interiors of chimneys, flues or boiler stacks, or tenant owned or tenant maintained equipment;
- *Electrical* – Removal of any electrical panels or device covers, except if removed by building staff; providing common equipment or tenant owned equipment.
- *Vertical Transportation* – Examining of cable, shears, controllers, motors, inspection

tags or entering elevator/escalator pits;

- *Life Safety/Fire Protection* – Determining NFPA hazard classifications; classifying or testing fire rating of assemblies;
- Preparing engineering calculations to determine any system's components or equipment's adequacy or compliance with any specific or commonly accepted design requirements or building codes; preparing designs or specifications to remedy any physical deficiencies;
- Reporting on the presence or absence of pests or insects unless evidence of such presence is readily apparent during the field observer's walk-through survey or such information is provided to the Consultant;
- Entering or accessing any area of the property deemed by the engineer to pose a threat to the safety of any individual or to the integrity of the building system or material;
- Providing an opinion on the operation of any system or component that is shut down or not properly operating;
- Evaluating any acoustical or insulating characteristics of the property;
- Providing an opinion on matters regarding security and protection of its occupants or users;
- Providing an environmental assessment or opinion of the presence of any environmental issues such as asbestos, hazardous wastes, toxic materials, radon or the location of designated wetlands, unless specifically defined within the scope of work;
- Any representations regarding the status of ADA Title III Compliance.

The report is not a compliance inspection or certification for past or present governmental codes or regulations of any kind. Any reference made to codes in this report is to assist in identification of a specific problem.

GLOSSARY OF TERMS

<u>Abbreviation</u>	<u>Definition</u>	<u>Abbreviation</u>	<u>Definition</u>
Avg.	Average	Lg.	Long Length
B.F.	Board Feet	L.S.	Lump Sum
Bit/Bitum.	Bituminous	Maint.	Maintenance
Bldg.	Building	Mat., Mat'l	Material
Brk.	Brick	Max	Maximum
Cal	Calculated	MBF	Thousand Board Feet
C.C.F.	Hundred Cubic Feet	M.C.F.	Thousand Cubic Feet
C.F.	Cubic Feet	Min.	Minimum
C.L.F.	Hundred Linear Feet	Misc.	Miscellaneous
Col.	Column	M.L.F.	Thousand Linear Feet
Conc.	Concrete	M.S.F.	Thousand Square Feet
Cont.	Continuous, continued	M.S.Y.	Thousand Square Yards
C.S.F.	Hundred Square Feet	NA	Not applicable/available
Cu. Ft.	Cubic Feet	No.	Number
C.Y.	Cubic Yard, 27 cubic feet	O.C.	On Center
DHW	Domestic Hot Water	P.E.	Professional Engineer
Diam.	Diameter	Ply.	Plywood
Ea.	Each	Pr.	Pair
Est.	Estimated	PVC	Polyvinyl Chloride
Ext.	Exterior	Pvmt.	Pavement
Fig.	Figure	Quan. Qty.	Quantity
Fin.	Finished	R.C.P.	Reinforced Concrete Pipe
Fixt	Fixture	Reinf.	Reinforced
Flr.	Floor	Req'd	Required
FRP	Fiberglass Reinforced Plastic	Sch., Sched.	Schedule
Ft.	Foot, Feet	S.F.	Square Foot
Galv.	Galvanized	Sq.	Square, 100 Square Feet
Ht.	Height	Std.	Standard
Htrs.	Heaters	Sys.	System
HVAC	Heating, Ventilation, A/C	S.Y.	Square Yard
HW	Hot Water	T&G	Tongue & Groove
In.	Inch	Th, Thk.	Thick
Int.	Interior	Tot.	Total
Inst.	Installation	Unfin.	Unfinished
Insul.	Insulation	V.C.T.	Vinyl Composition Tile
lb.	Pound	Vent.	Ventilator
L.F.	Linear Foot	Yd.	Yard

BIBLIOGRAPHY

Architectural Drawings
by N/A

Declaration of Covenants, Conditions, and Restrictions
by N/A

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Mechanical Cost Data
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