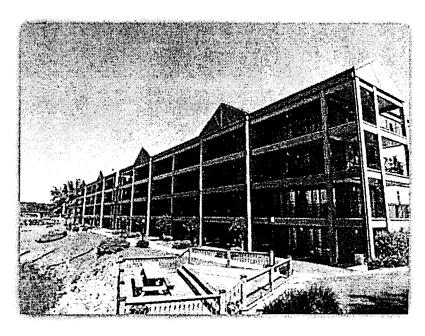


Office: (888) 927-7865 Fax: (813) 200-8448 Contact@customreserves.com 5470 E Busch Blvd., Unit 171 Tampa, FL 33617

Waterford Association, Inc.

FULL RESERVE STUDY REPORT



For 30-Year Projection Period Beginning January 1, 2017

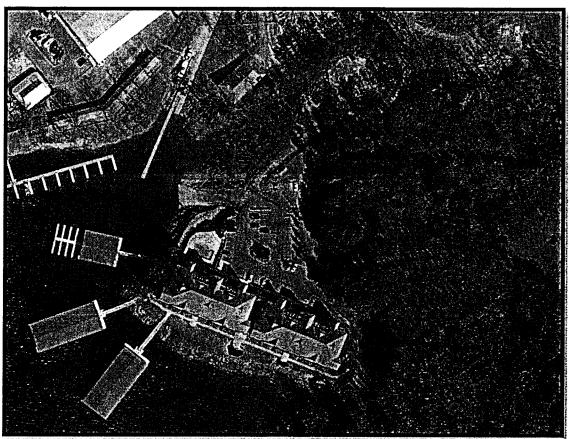
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Table of Contents

Property Overview	3
Executive Summary	4
Financial Analysis	5
Property Component Inventory	7
Reserve Expenses	Appendix A
Condition Assessment	9
Photographs	Appendix B
Expense Chart and Comparison Graph	18
Cash Flow Funding Plan	Appendix C
Terms and Definitions	19
Disclosures and Limitations	21
Credentials	21

PROPERTY OVERVIEW





CRANE HILL, AL LATITUDE: 34° 1'49.41"N LONGITUDE: 87° 3'16.53"W

EXECUTIVE SUMMARY

A site visit was conducted on May 3, 2017. There were 27 common area components identified that require reserve funding during the noninvasive, visual inspection of the community. Supplemental information to the physical inspection typically includes the following sources:

- 1. Association board members, management and staff
- 2. Client's vendors
- 3. Declaration
- 4. Maintenance records of the reserve components where available
- 5. Project plans where available

Waterford Association, Inc. (Waterford) is an apartment style development located in Crane Hill, Alabama and is responsible for the common elements shared by 48 property owners within two buildings. Waterford was established in 2007. The development contains building services, exterior building, pool and property site components.

A Reserve Study comprises two parts:

Physical Analysis

- Component Inventory
- Condition Assessment
- Estimated Useful Life
- Remaining Useful Life
- Replacement Cost

Financial Analysis

- Fund Status
- Funding Plan

The intention of the Reserve Study is to forecast the Association's ability to repair or replace major components as they wear out in future years. This Reserve Study complies with or exceeds all applicable statutes and national standards.

FINANCIAL ANALYSIS

This Reserve Study provides the 30-year cash flow analysis or pooling method to project and illustrate the reserve funding plan. The unaudited cash status of the reserve fund, as of March 31, 2017, as reported by Management and the Board is \$92,031.80. Waterford budgeted \$10,000 for Reserves in the fiscal year FY¹ 2017. Additional reserve contributions of \$5,750 and \$11,500 are also budget for the remaining of 2017 and 2018 respectively.

The cash flow method of developing a reserve funding plan is where the reserve contributions are designed to offset the variable annual reserve expenses. Different reserve funding plans are tested against the anticipated schedule of reserve expenses until the desired adequate or sufficient funding goal is achieved.

The cash flow recommended 2018 reserve contribution is \$44,000. In addition, \$15,000 is also recommended from 2019 through 2021 to fund for EIFS repairs. The Association can then budget annual inflationary increases thereafter. The following table depicts the next 30 years of cash flow recommended contributions from Appendix C:

	Recommended		Recommended
Year	Contribution	Year	Contribution
2018	\$55,500	2033	\$82,800
2019	\$60,100	2034	\$84,800
2020	\$61,200	2035	\$86,800
2021	\$62,300	2036	\$88,900
2022	\$63,800	2037	\$91,000
2023	\$65,300	2038	\$93,200
2024	\$66,900	2039	\$95,400
2025	\$68,500	2040	\$97,700
2026	\$70,100	2041	\$100,000
2027	\$71,800	2042	\$102,400
2028	\$73,500	2043	\$104,900
2029	\$75,300	2044	\$107,400
2030	\$77,100	2045	\$110,000
2031	\$79,000	2046	\$112,600
2032	\$80,900	2047	\$115,300

¹ FY 2017 starts January 1, 2017 and ends December 31, 2017.

The funding goal of the cash flow analysis is to keep the reserve balance above a sufficient, not excessive threshold when reserves are needed the most due to one or more years of significant expenses. This threshold or risk year falls in 2042 due to replacement of the metal roofs and railings. The age and long-lived components of the property are considered in the accumulated year 2047 ending reserves of \$204,292.

External market factors incorporated in this Reserve Study are an inflation rate of 2.4% based on the Consumer Price Index published by the Bureau of Labor Statistics and interest rate of 0.5%. Most community association bylaws provide that Association funds shall be held in a bank, with FDIC or similar insurance to cover all funds.

The actual timing of the events depicted may not occur exactly as projected. However, items that are within a high degree of accuracy are measurements, pricing and interest on reserves. Internal changes such as deferred or accelerated projects, interest and inflation rates are likely. Updates to the Reserve Study incorporate these changes. To ensure equity in the adopted funding plan, ongoing annual Board reviews and an update of this Reserve Study with an on-site visit is recommended anywhere from two- to three-years depending on the complexity of the community and changes in external market factors. It is recommended by the American Institute of Certified Public Accountants (AICPA) that your Reserve Study be updated annually.

A Condominium Association needs to be on an approved list for an individual to obtain a Federal Housing Administration (FHA) insured loan. The FHA requirement is that Reserve contributions represent at least 10% of the total budget. Associations claiming an exception will need to show lower recommended contributions with a professional Reserve Study less than a year old. However, typically 10% of the total budget is not adequate.

PROPERTY COMPONENT INVENTORY

The analysis began by separating the property components into specific areas of responsibility for replacement and repair. These classes of property are as follows:

- 1. Reserve Components are defined by the following:
 - Association responsibility
 - Limited useful life expectancies
 - Predictable remaining useful life expectancies
 - Replacement cost above a minimum threshold
- 2. Long-Lived Components are defined as those items without predictable remaining useful life expectancies:
 - Foundations
 - Staircases, Metal (Dependent on Periodic Maintenance)
 - Structural Frames
- 3. Operating Budget Components or money provided for repairs and replacements relating but not limited to:
 - General maintenance to the common elements
 - Expenses less than \$3,000
 - Curbing, Concrete
 - Fire Protection System, Common
 - Flag
 - Furniture, Pool
 - Gate, Boat Ramp
 - Grills
 - Heaters, Elevator Rooms, Pool House
 - Infrequent Replacements
 - Irrigation System
 - Landscape
 - Picnic Table
 - Pipes, Subsurface Utilities, Sewer and Water
 - Rest Room, Renovations
 - Sidewalks, Concrete
 - Soffits, Vinyl
 - Sump Pump
 - Waste Stations
 - Other Repairs normally funded through the Operating Budget

A contingency is intended to provide a hedge for unforeseen events. There is no set rule for the amount of contingency to be set aside other than the use of common sense based on experience.

4. Home Owner Components:

- Balcony and Patio Fixtures
- Doors
- Heating, Ventilating and Air Conditioning (HVAC) Equipment
- Interiors
- Light Fixtures, Balconies and Patios
- Windows

5. Other Property Components:

- Lift Station
- Septic System

The following 11X17 spreadsheets depict the reserve components, quantities, useful lives projected costs and estimated times of replacements for the next 30 years in Appendix A with a narrative condition assessment to follow.

CONDITION ASSESSMENT

The condition assessment of this Full Reserve Study includes narratives that describe the reserve components, documents specific problems and conditions based on representative samples.

Building Services Components

- 1. **Elevator Cab Finishes** The Association maintains an elevator for each of the two buildings. The cab finishes comprise tile floors, lighted ceiling and wood panel walls. The cab finishes are in fair condition at an age of approximately 10 years. Cab finishes have a useful life of up to 20 years. The Association should budget for replacements by 2027 and again by 2047 in conjunction with a full modernization.
- 2. Elevators, Modernization The Association utilizes a 2,000 pound capacity hydraulic elevator to serve four floors. Hydraulic elevator components include a cylinder, pump and controls. These components are original and in fair reported condition. The useful lives of these components vary up to 40 years. However, the Association should budget for replacements by 2047. The elevator's safety equipment should be brought up to the latest code ASME A17.1-2009. The Association should contract with an independent elevator consultant to develop specifications for elevator replacement proposals. Typical minor repairs should be funded through the operating budget.
- 3. Fire Alarm Systems The Association maintains a fire alarm system for each building. A fire alarm system comprises a main panel that controls emergency devices such as annunciators, exit signs, smoke detectors and pull boxes. The fire alarm systems are original and in good reported condition. Changes in building codes and/or technology may make a replacement necessary and/or desirable prior to the useful life of up to 25 years. Waterford should budget for replacements by 2032. Annual fire alarm system inspections are required by the National Fire Protection Association (NFPA) 722 Standards.

There is a class action lawsuit filed against certain manufacturers of fire protection systems for high-rise buildings built from 2004 to 2009. These buildings are at risk for having incompatible products installed which can potentially result in damages.

- 4. **Generator** Waterford utilizes a propane generator to power the lift station and common lights during a power outage. The generator is original and in fair reported condition. Generators have a useful life from 25- to 35-years. The Association should budget for replacement by 2042. The Association should fund replacement of the batteries through the operating budget as needed.
- 5. **Light Fixtures** The Association maintains 48 exterior wall and ceiling mounted light fixtures located at the front of the buildings. The light fixtures are original and in good condition overall. Light fixtures of this type have a useful life of up to 25 years. Waterford should budget for replacements by 2032.

Exterior Building Components

- 6. Balconies and Breezeways, Waterproof Coatings Waterford maintains 6,900 square feet of balconies and breezeways. The balconies and breezeways are original and in good condition overall. Areas of cracks and missing sealants between the breezeways and buildings are noted. Pages 3 and 4 of Appendix B depict this condition assessment in Figures 17 through 19. Balconies and breezeways have a long useful life with the benefit of periodic maintenance. Concrete cracks and spalling occurs from the expansion of the reinforcing steel bars due to corrosion. Concrete corrosion is caused by rainwater and chlorides getting into the concrete down to the level of the reinforcing. Failure to maintain the balconies and breezeways can lead to costly repairs. The Association should budget for waterproof coating applications and partial repairs as needed by 2022 and every five years thereafter except when paint finish applications occur.
- 7. **Doors, Common** Waterford maintains 14 common metal doors. The common doors are original and in fair to good condition overall. Areas of rust are noted at the rooftop doors. Doors have a useful life of up to 30 years. The Association should budget for replacements by 2037. The estimate of cost is based on fire rated self-closing doors.

- 8. Gutters and Downspouts Waterford utilizes approximately 2,825 linear feet of gutters and downspouts that are designed to collect rain water from the roofs and shed the water away from the buildings. The gutters and downspouts are original and in good condition. Gutters and downspouts have a useful life of up to 35 years. The Association should budget for replacements by 2042 in conjunction with roof replacements. The Association should utilize downspout extensions and splash blocks at discharge areas to direct the water away from foundations. An estimate provided by the Board for repairs related to water intrusion is included in 2017.
- 9. **Paint Finish Applications** The Association maintains approximately 56,900 square feet of paint finishes. This quantity includes the stairways, breezeways and balconies.

Periodic applications of a protective paint finish or waterproof coating is essential in order to maintain the appearance and integrity of the exterior insulation and finish system (EIFS). The Association should also plan for weatherizing the window sealants and any exterior penetrations as needed in conjunction with paint finish applications. Moisture damage can occur over time if maintenance is deferred.

The paint finish performance is affected by proper product selection, application, and surface preparation. Coating integrity and useful life will be reduced because of improperly prepared surfaces. The selection and implementation of proper surface preparation ensures coating adhesion to the substrate and prolongs the useful life of the coating system.

The paint finishes are original and in poor condition. Paint finishes have a useful life from 8- to 10-years. Waterford should budget for the next paint finish application in 2018 and every eight years thereafter. The estimate of cost includes painting the railings.

10. Railings, Metal – The Association maintains 3,040 linear feet of metal railings. The railings are original and in good condition overall. Areas of rust are noted. Page 4 of Appendix B depicts this condition in Figures 21 and 22. Metal railings have a useful life of up to 35 years. Waterford should budget for replacements by 2042. An allowance for paint finish applications is included in Line Item "Walls, Paint Finish Applications".

11. Roofs, Flat – The Association maintains 15 squares of flat roofs located at the HVAC areas. The original flat roofs are currently metal and in fair condition overall.

The most vulnerable parts of a roof are at the perimeters and penetrations such as vents, plumbing stacks and HVAC equipment. Water intrusion can lower insulation R-values and weaken the roof assembly.

Reroofing is more labor intensive than an original installation. Removal and disposal can be an issue in multistory buildings because of problems conveying materials on and off the roofs. Replacement costs are higher and make replacement less feasible economically.

New roofing can be accomplished by either a tear-off or an overlay. An overlay can cover up problems with the deck and flashings. The contractor should follow manufacturer's directions and specifications. The National Roofing Contractors Association (NRCA) recommends the use of a suitable cover board layer over insulation before a roof membrane installation.

There are several different options for flat roofs. The Association should look for roof system warranties offered by manufacturers. No Dollar Limit (NDL) warranties include roof leaks caused by defects in labor or materials. Flat roof coverings have a useful life from 20- to 25-years. Exposure to ultraviolet light, heat and weather degrade the membrane overtime. Degradation results in membrane damage from thermal expansion and contraction. Aging of the roof makes the membrane less pliable and difficult to maintain. The Association should budget for replacements of the flat roof systems in 2017 and again by 2042. The near term estimate is provided by the Board. Interim annual inspections and repairs are recommended funded through the operating budget.

12. Roofs, Metal – There are approximately 260 squares of standing seam metal roofs. Roof panels are crimped together rather than fastened by screws. The metal roofs are original and in good overall condition. Metal roofs of his type have a useful life of up to 35 years. The Association should budget for replacement of the metal roofs by 2042. The estimate of cost is based on a 24-gauge steel with a zinc aluminum metallic coating.

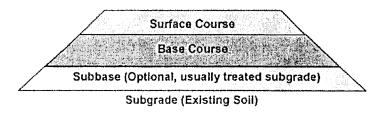
- 13. Rooftop Stands The Association is responsible for the shared HVAC rooftop stands. These stands should be brought up to modern standards when the flat roofs are replaced. New stands have an anticipated a useful life of up to 40 years. Waterford should budget for replacements in 2017 and again by 2042 in conjunction with the flat roofs.
- 14. Walls, EIFS Repairs The Waterford exterior cladding comprises an EIFS system. The Board provided an exterior cladding inspection report by Southern Inspection Co., Inc. The report notes leaks at windows. Significant areas of bubbling and cracking are noted. Pages 3 and 4 of Appendix B depict this condition assessment in Figures 14 through 16 and 20. Potential water intrusion problems with this type of cladding systems are improperly installed diverter flashing at roof and wall intersections allowing water to get behind the cladding and unsealed balconies. Ripping off the EIFS is a last resort. It is important to keep the EIFS clear of ground surface water with proper drainage. The Association should plan for EIFS repairs in 2017. The repair project should include sealing up the building envelope in conjunction with creating a drainable EIFS system. The estimate of cost will vary pending the outcome of a forensic investigation. A management company is recommended for an anticipated project of this size.

Pool Components

- 15. **Deck, Concrete Coatings** The pool deck comprises 2,690 square feet of concrete. The pool deck and the coating is in good condition at an age of less than one year. Concrete pool decks have a long useful life with the benefit of periodic maintenance. Periodic maintenance includes a slip resistant coating application every 8- to 12-years. Waterford should budget for the next coating application by 2027 and every seven years thereafter.
- 16. **Pool Finish** The Association maintains approximately 835 square feet of horizontal pool finish. The pool finish is original and in fair overall condition. The pool finish has a useful life of 8- to 12-years. Waterford should budget for resurfacing of the pool finish by 2021 and every 10 years thereafter. Typically minor upgrades will be needed to bring the pool up to current code. An allowance for replacement of the waterline tile is included in the estimate of cost.

Property Site Components

17. Asphalt Pavement, Mill and Overlay – The Association maintains approximately 4,725 square yards of asphalt parking areas. The asphalt pavement is original and in fair overall condition. Asphalt pavement comprises multiple layers. Typically the top layer or surface course deteriorates over time and can be milled or removed and overlaid or replaced. The following diagram depicts typical pavement layers.



A mill and overlay is a method of repaving of the surface course where cracked, worn and failed pavement is mechanically removed or milled. A new layer of asphalt is overlaid atop the remaining sound pavement. Milled pavement removes part of the existing pavement and permits the overlay to match the elevation of areas such as adjacent catch basins, curbs and gutters. The milled pavement should be properly bonded to the new overlayment. Overlayment thicknesses range from one to two inches. Variable thicknesses are often necessary for proper drainage.

A combination of area patching, crack repair and milling should occur before the overlayment. Areas that exhibit potholes, alligator cracks and areas of pavement that are deteriorated from vehicle fluids should all be repaired prior to overlayment. Area patching may require total replacement of isolated areas of pavement. The base course for residential subdivision roadways designed for light traffic is often six inches thick. The paving contractor should seal all cracks. Crack repair minimizes the chance of underlying cracks coming through the overlayment.

The useful life of the asphalt pavement surface course is from 15- to 25-years. Waterford should budget for a mill and overlay of the pavement by 2025. The first application of pavement preservation should occur 18 months after repaving. The estimate of cost includes line striping. The Association should retain an engineer for quality control.

18. Asphalt Pavement, Preservation – As previously mentioned, there are approximately 4,725 square yards of asphalt pavement. The asphalt pavement is original and in fair overall condition. We note areas of isolated cracks. Page 6 of Appendix B depicts this condition in Figure 33. The Association should repair any isolated areas of deteriorated pavement prior to asphalt coating applications.

Pavement surfaces comprise aggregate in an asphalt/petroleum binder. The petroleum elements of the binder oxidize and the asphalt loses its elastic properties over time and becomes brittle and then cracks occur. One form of pavement maintenance is a process called rejuvenation. Rejuvenation is intended to prolong the aging process by adding back the petroleum fractions needed for elasticity of the surface course.

Proposals for asphalt coating applications should include both crack seal repair and area patching. These activities reduce water infiltration and the effects of weather. The contractor should only apply asphalt coating applications after crack and surface repairs are completed.

The asphalt coating has a useful life of five- to eight-years. Waterford should plan for an application of pavement preservation in 2018. Subsequent cycles are likely every five - to eight-years thereafter except when replacement occurs. An estimate provided by the Board for drainage installation to the lower parking area is included in 2017.

- 19. **Boat Ramp, Concrete** The Association maintains approximately 3,750 square feet of concrete boat ramp. The boat ramp is in fair overall condition at an estimated age of 20 years. Boat ramps of this type have a useful life of up to 30 years. The Waterford should budget for replacement by 2027.
- 20. **Deck, Wood** The Association maintains approximately 450 square feet of wood decking located at the south east section of the property. The decking is original and in fair overall condition. The useful life of this type of decking is from 15- to 20-years. Waterford should budget for replacement by 2026 and again by 2046. The costs noted in the expense spreadsheet are based on an azek^T composite. Azek requires little maintenance. Cleaning

should be funded through the operating budget as needed. Typical minor repairs should be funded through the operating budget.

- 21. **Docks, Decking** The Association maintains approximately 8,725 square feet of decking. The decking is original and in fair overall condition. The useful life of this type of decking is up to 20 years. Waterford should budget for replacements by 2031. The estimate of costs includes replacement of the floats as needed. Cleaning should be funded through the operating budget as needed. Typical minor repairs and replacements should be funded through the operating budget.
- 22. **Docks, Roofs** There are approximately 19,315 square feet of roofs atop the docks. The roofs are original and in good condition. Roofs of his type have a useful life of up to 30 years. The Association should budget for replacement of these roofs by 2041.
- 23. **Gangways, Aluminum** There are approximately 1,330 square feet of aluminum gangways that connect the docks to the shoreline. The gangways are original and in good condition overall. Roofs of his type have a useful life of up to 25 years. The Association should budget for replacement of the gangways by 2036.
- 24. **Light Poles** The Association maintains 23 light poles and fixtures. The light poles are original and in good condition overall. Some of the finishes on the tall poles is faded. Light poles have a useful life of up to 30 years. Waterford should budget for replacements by 2037. Interim fixtures should be funded through the operating budget as needed.
- 25. **Mailboxes** Waterford maintains four mailbox stations. The mailbox stations are original and in good condition. Metal mailboxes have a useful life of up to 30 years. The Association should budget for replacements by 2037. The Association should verify new mailboxes meet the specifications of the United States Postal Service.
- 26. **Retaining Walls** The Association maintains approximately 3,900 square feet of concrete retaining walls. Retaining walls provide lateral support to vertical slopes of soil. The retaining walls are original and in good condition overall. There are no areas of weep

holes noted. Retaining walls of this type have a long useful life. Waterford should budget for partial replacements of up to forty percent (40%) by 2047. The estimate of costs and times will vary. However, the Association should make sure a waterproof coating is installed at the time of repairs. Interim weep hole installation should be funded through the operating budget in the near term.

27. Shoreline Stabilization – The shoreline comprises 600 linear feet. The shoreline partially utilizes rip rap for erosion control. Shoreline erosion can be caused by a variety of natural factors including steep slopes, changes in water elevation and storm water runoff. Erosion can lead to partial dredging. Waterford should budget for erosion control of up to twenty percent (20%) of the shorelines every 20 years or by 2027 and again by 2047 based on the condition.

The following Appendix B pictures depict the reserve components and specific conditions noted in the condition assessment.

Figure 1 Building Front Elevation



Figure 2 Building Rear Elevation



Figure 3 Building Side Elevation

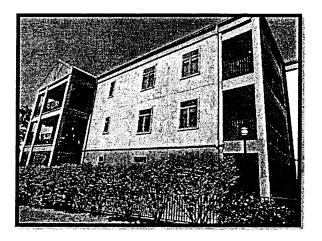


Figure 4 Pool House

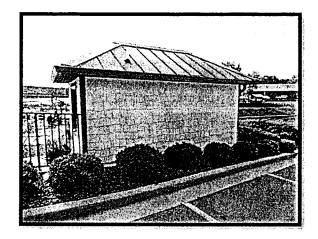


Figure 5 Elevator Cab Finishes

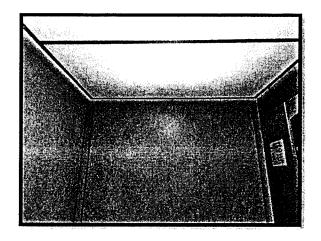


Figure 6 Elevator Cab Finishes

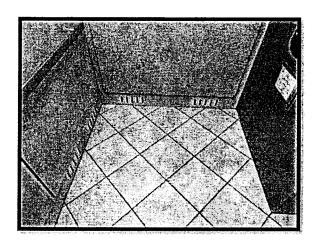


Figure 7 Elevator Mechanical Equipment

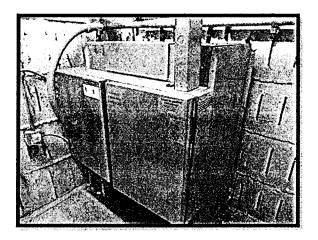


Figure 8 Fire Alarm Control Panel

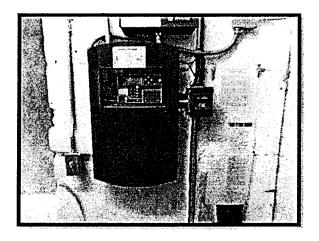


Figure 9

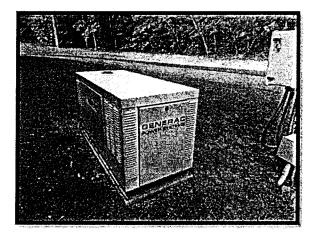


Figure 10 Light Fixtures

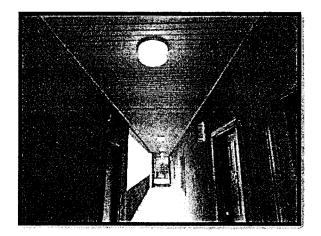


Figure 11 Common Door Rust

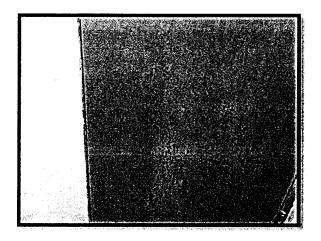


Figure 12 Gutter

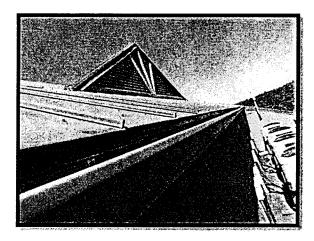


Figure 13 Gutter System

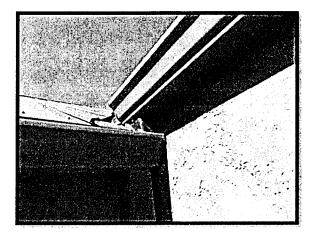


Figure 14 Door Frame Sealant Missing



Figure 15 EIFS Deterioration

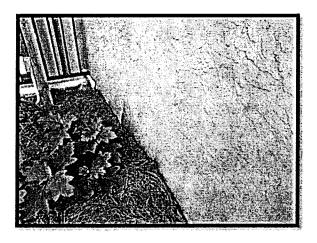


Figure 16 EIFS Bubbling



Figure 17 Breezeway Crack



Figure 18 Breezeway Sealant Missing

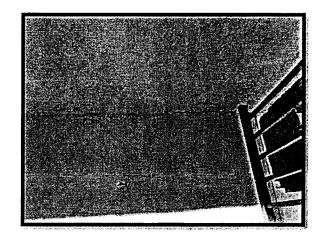


Figure 19 Breezeway Edge Cracking

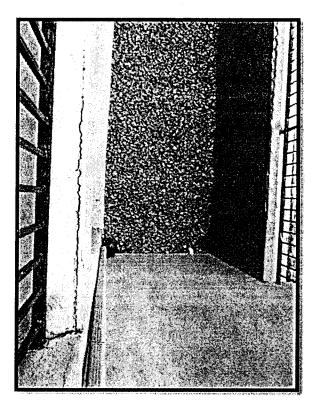


Figure 20 Balcony Fascia Beam Deterioration

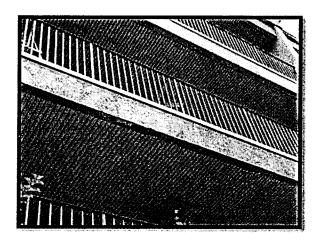


Figure 21 Railing Connection

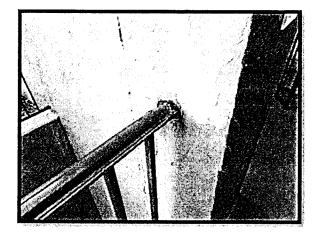


Figure 22 Metal Railing Rust



Figure 23 HVAC Area

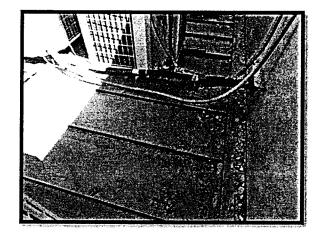


Figure 24 Metal Roof

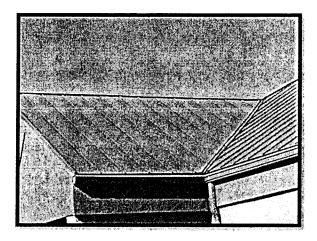


Figure 25 Metal Roof

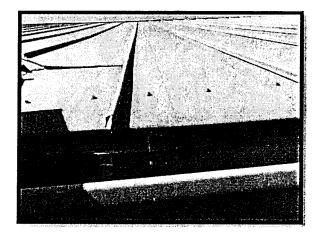


Figure 26 Stairwell Rust

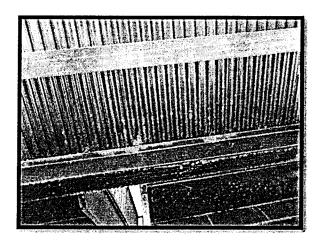


Figure 27 Column Corrosion

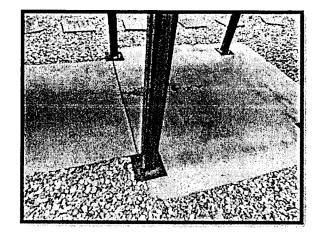


Figure 28 Pool Deck

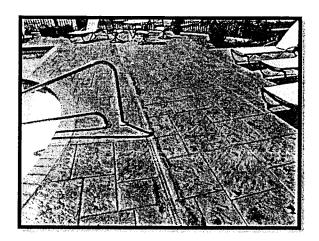


Figure 29 Pool Equipment

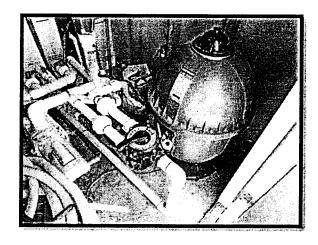


Figure 30 Pool

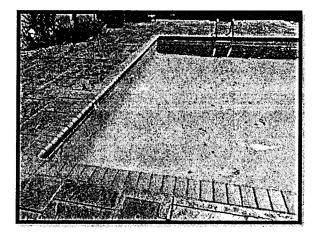


Figure 31 Asphalt Pavement Overview

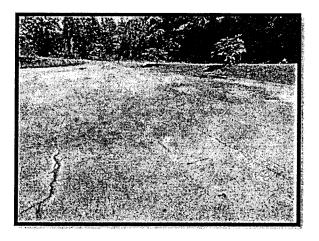


Figure 32 Pooling Water

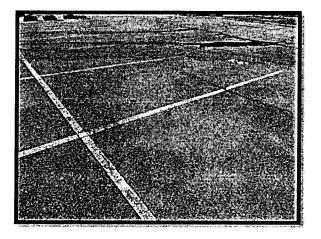


Figure 33 Asphalt Pavement Cracks

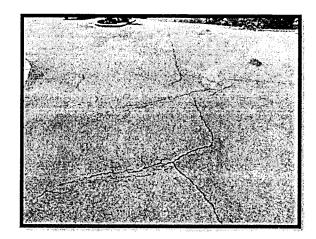


Figure 34 Boat Ramp



Figure 35 Wood Deck

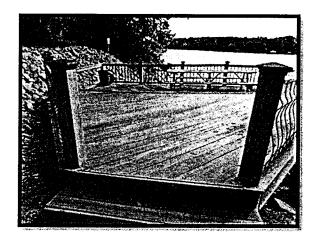


Figure 36 Docks

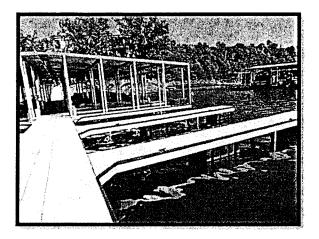


Figure 37 Dock Roof

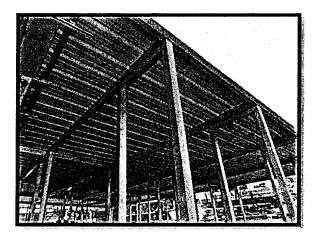


Figure 38 Dock Roof

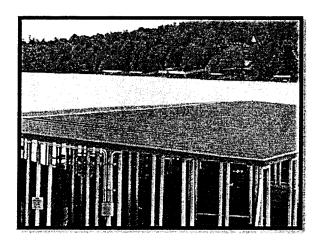


Figure 39 Gangway

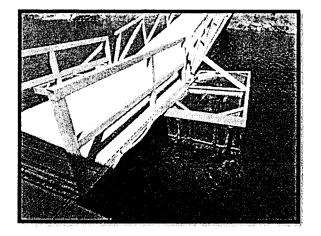


Figure 40 Irrigation Clock

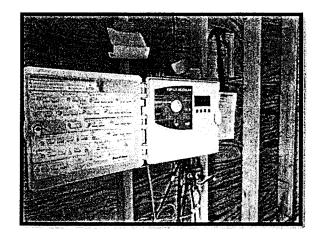


Figure 41 Decorative Light Pole

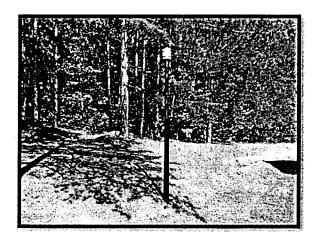


Figure 42 Light Pole

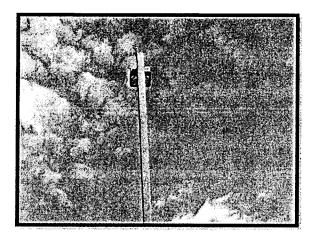


Figure 43 Mailbox Station

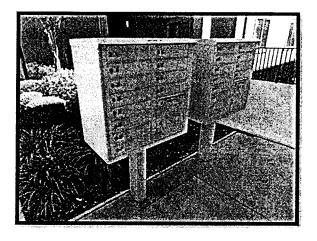


Figure 44 Retaining Wall Crack



Figure 45 Retaining Wall

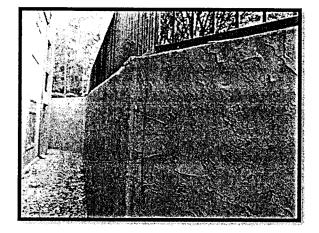


Figure 46 Shoreline

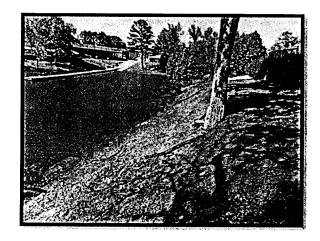
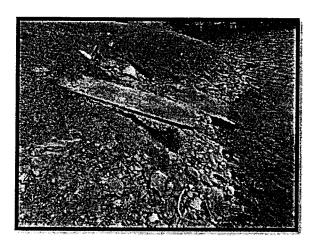
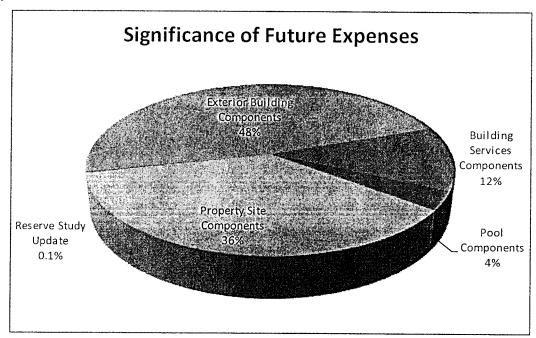


Figure 47 Shoreline Erosion

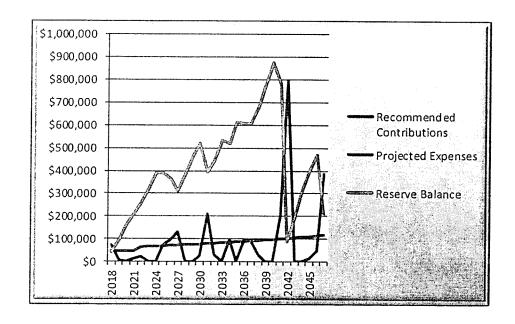


EXPENSE CHART AND COMPARISON GRAPH

The Reserve Expenses reflect current and future local costs of replacements with anticipated inflation. The following chart illustrates the relative importance of the Reserve Expenses.



The following graph depicts the next 30 years of Projected Expenses, Reserve Balances and cash flow Recommended Contributions:





Cash Flow Funding Plan or Pooling Method

Association, Inc. Waterford

Projected Year End Reserves	Projected Expenses	Anticipated Interest Earned	Total Recommended Reserve Contributions	Additional Reserve Contributions	Recommended Reserve Contributions	Beginning of Year Reserves	
		0.5%	ons				무
\$57,808	45,204	230	10,750	5,750	5,000	\$92,032	2017
\$40,301	73,295	289	10,750 55,500	11,500	44,000	\$57,808	2018
\$57,808 \$40,301 \$97,403 \$159,090 \$208,414 \$253,834 \$320,403 \$388,905 \$387,948 \$365,252 \$310,940 \$385,995 \$463,225 \$519,162 \$392,326 \$445,843	45,204 73,295 3,200	202	60,100	5,750 11,500 15,000	5,000 44,000 45,100 46,200 47,300 63,800 65,300 66,900	\$92,032 \$57,808 \$40,301 \$97,403 \$159,090 \$208,414 \$253,834 \$320,403 \$388,905 \$387,948 \$365,252 \$310,940 \$385,995 \$463,225 \$519,162 \$392,326	2019
\$159,090	-	487	61,200	15,000	46,200	\$97,403	2020
\$208,414	13,771	795	62,300	15,000	47,300	\$159,090	
\$253,834	0 13,771 19,422 0	1,042	60,100 61,200 62,300 63,800 65,300 66,900		63,800	\$208,414	2021 2022
\$320,403	0	1,269	65,300		65,300	\$253,834	2023
\$388,905	0	1,602	66,900		66,900	\$320,403	2024
\$387,948	71,402	1,945				\$388,905	2025
\$365,252	94,736	1,940	70,100		70,100	\$387,948	2026
\$310,940	1,402 94,736 127,938	1,826	71,800		71,800	\$365,252	2027
\$385,995	0	1,555	73,500		73,500	\$310,940	2028
\$463,225	0	İ	75,300		75,300	\$385,995	2029
\$519,162	23,479	2,316	77,100		77,100	\$463,225	2030
\$392,326	0 0 23,479 208,432 29,344	1,930 2,316 2,596	68,500 70,100 71,800 73,500 75,300 77,100 79,000 80,900		68,500 70,100 71,800 73,500 75,300 77,100 79,000 80,900	\$519,162	2031
\$445,843	29,344	1,962	80,900		80,900	\$392,326	2032

Projected Year End Reserves Projected Expenses Recommended Reserve Contributions Beginning of Year Reserves Anticipated Interest Earned 0.5% \$445,843 \$530,872 \$520,398 \$609,800 \$608,624 \$608,782 \$676,641 \$775,424 \$877,001 \$777,770 \$86,568 \$191,901 \$300,261 \$399,829 \$470,266 \$204,292 82,800 2,229 2033 \$530,872 97,929 84,800 2,654 \$520,398 \$609,800 86,800 2035 93,125 88,900 3,049 2036 \$608,624 93,885 91,000 3,043 2037 \$608,782 \$676,641 \$775,424 \$877,001 \$777,770 28,385 93,200 3,044 2038 95,400 3,383 2039 0 97,700 3,877 2040 203,616 100,000 4,385 2041 797,491 102,400 3,889 2042 104,900 \$86,568 \$191,901 \$300,261 \$399,829 \$470,266 2043 433 107,400 2044 110,000 11,933 1,501 2045 112,600 44,162 1,999 2046 383,625 115,300 2,351 2047

Threshold/ Risk Year

- Notes:

 1) FY 2017 Begins January 1, 2017 and Ends December 31, 2017

 1) FY 2017 Beginning Reserve Balance and Remaining Contributuions are as of: 3/31/2017

 2) FY 2017 Beginning Reserve Balance and Remaining Contributuions are as of: 3/31/2017

 3) Interest Earned is compounded on the Beginning Year Reserve Balance, the first year is a partial amount earned 4) Taxes on the interest earned are considered negligible

TERMS AND DEFINITIONS

Cash Flow Method - A method of calculating Reserve contributions where contributions to the Reserve fund are designed to offset the variable annual expenditures from the Reserve fund. Different Reserve Funding Plans are tested against the anticipated schedule of Reserve expenses until the desired Funding Goal is achieved.

Component - An individual line item in the Reserve Study developed or updated in the Physical Analysis. These elements form the building blocks of the Reserve Study. Components typically are: 1) Association responsibility, 2) with limited Useful Life expectancies, 3) predictable Remaining Useful Life expectancies, 4) above a minimum threshold cost, and 5) as required by local codes.

Component Assessment and Valuation - The task of estimating Useful Life, Remaining Useful Life, and Repair or Replacement Costs for the Reserve components. This task is accomplished either with or without onsite visual observations, based on Level of Service selected by the client.

Component Inventory - The task of selecting and quantifying Reserve Components. This task is accomplished through onsite visual observations, review of association design and organizational documents, and a review of established association precedents.

Component Method - A method of calculating Reserve contributions where the total reserve contribution is based on the sum of contributions for individual components.

Effective Age - The difference between Useful Life and Remaining Useful Life. Not always . equivalent to chronological age, since some components age irregularly. Used primarily in computation.

Financial Analysis - The portion of a Reserve Study where current status of the Reserves (measured as cash or Percent Funded) and a recommended Reserve contribution rate (Reserve Funding Plan) are derived. The Financial Analysis is one of the two parts of a Reserve Study.

Fully Funded - 100% Funded. When the actual (or projected) Reserve balance is equal to the Fully Funded Balance.

Fully Funded Balance (FFB) - Total Accrued Depreciation. An indicator against which Actual (or projected) Reserve balance can be compared. In essence, it is the Reserve balance that is proportional to the current Repair/replacement cost and the fraction of life "used up". This number is calculated for each component, them summed together for an association total. Two formulae can be utilized, depending on the provider's sensitivity to interest and inflation effects. Note: both yield identical results when interest and inflation are equivalent.

Funding Goals - Independent of methodology utilized, the following represent the basic categories of Funding Plan goals.

Baseline Funding - Establishing a Reserve funding goal of keeping the Reserve cash balance above zero.

Fully Funding - Setting a Reserve funding goal of attaining and maintaining Reserves at or near 100% funded.

Statutory Funding - Establishing a Reserve funding goal of setting aside the specific minimum amount of Reserves required by local statues.

Threshold Funding - Establishing a Reserve funding goal of keeping the Reserve balance above a specified dollar or Percent Funded amount. Depending on the threshold this may be more or less conservative than "Fully Funded".

Funding Plan - An Association's plan to provide income to a Reserve fund to offset anticipated expenditures from that fund.

Minimum Balance - A minimum Reserve balance established by the client.

Physical Analysis - The portion of the Reserve Study where the Component inventory, Condition Assessment and Life Adjustment and Valuation tasks are performed. This represents one of the two parts of the Reserve Study.

Remaining Useful Life (RUL) - Also referred to as "Remaining Life (RL). The estimated time, in years, that a reserve component can be expected to continue to serve its intended function. Replacements anticipated to occur in the initial or base year have "zero" Remaining Useful Life.

Reserve Assessments - The portion of assessments contributed to the Reserve Fund.

Reserve Balance - Actual or projected funds as of a particular point in time that the association has identified for use to defray the future repair or replacement of those major components which the association is obligated to maintain. Also known as Reserves, Reserve Accounts, Cash Reserves.

Special Assessment - An assessment levied on the members of an association in addition to regular assessments. Special Assessments are often regulated by Governing Documents or local statutes.

Straight Line - A formula used to calculate the annual reserve fund contribution for a specific component. Projected replacement cost divided by the useful life equals the annual payment.

Useful Life (UL) - Total Useful Life or Depreciable Life. The estimated time, in years, that a reserve component can be expected to serve its intended function in its present application or installation.

DISCLOSURES AND LIMITATIONS

No destructive testing was performed. Latent defects in design or construction are excluded from this report. There are no material issues to our knowledge that have not been disclosed to the client that would affect the integrity of this Reserve Study report. Custom Reserves has no interests with the client other than this Reserve Study.

Component quantities and estimates of costs indicated in this Report were developed by Custom Reserves unless otherwise noted in our "Condition Assessment" comments. The sources for the costs outlined in the study include experience, historical information and R.S. Means, Incorporated. This report should be used for budget and planning purposes only.

CREDENTIALS

PAUL GRIFONI – Licensed Home Inspector

EDUCATION - University of Massachusetts - Bachelor of Science in Engineering

PROFESSIONAL AFFILIATIONS / DESIGNATIONS

Reserve Specialist (RS) - Community Associations Institute



Professional Reserves Analyst (PRA) - Association of Professional Reserve Analysts

