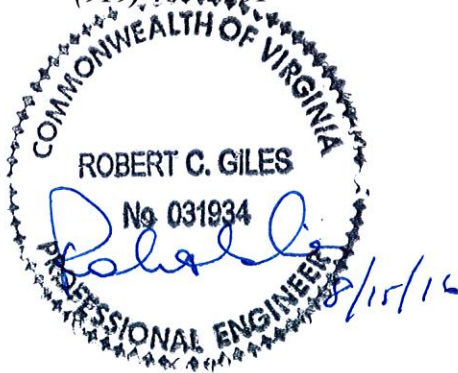


FULL RESERVE STUDY

***RIVERWATCH
GLOUCESTER, VA***

Prepared for:
***RIVERWATCH HOMEOWNERS ASSOCIATION
GLOUCESTER, VA
&
COMMUNITY PARTNERS OF VA, INC.***

Prepared by:
***CRITERIUM – GILES ENGINEERS
7334 CHAPEL HILL ROAD, SUITE 200
RALEIGH, NC 27607
(919) 465-3801***



AUGUST 15, 2016

CONTENTS

1.0	INTRODUCTION	1
2.0	EXECUTIVE SUMMARY	2
3.0	PURPOSE & SCOPE.....	3
3.1	PURPOSE	3
3.2	SCOPE	3
3.3	SOURCES OF INFORMATION.....	4
4.0	DESCRIPTION	5
5.0	OBSERVATIONS	6
6.0	RESERVE FUND ANALYSIS.....	10
7.0	CONCLUSION.....	12
8.0	LIMITATIONS	12
	APPENDIX A: RESERVE FUND PROJECTIONS.....	
	APPENDIX B: PROJECT PHOTOGRAPHS	

1.0 INTRODUCTION

The Riverwatch HOA authorized Criterium–Giles Engineers to conduct a Reserve Fund Study for the Riverwatch community located in Gloucester, Virginia. Studies of this nature are important to ensure a community has sufficient funds for long-term, periodic capital expenditure requirements. Anticipating large expenditures over an extended period of time through a structured analysis and scheduling process assists the Association in meeting financial requirements without increasing the service fees above permitted maximums, borrowing the funds, or levying special financial assessments to the home owners.

Typically, a community association has two broad cash requirements: the general operating reserves and the capital repair and replacement reserves. In this report, we will focus on those items falling under the capital repair and replacement reserve criteria. We have projected a capital repair and replacement reserve for twenty (20) years. The first ten years are the most reliable. Such a study should be updated every five years.

This report is structured to analyze components of the community for which the Association is responsible and to assess a useful expected life and useful remaining life to those components. The anticipated scheduled repair or replacement of the component and the anticipated expense for the activity are then analyzed in conjunction with the current capital reserves funding program for the community. Funding program recommendations are made with the objective of limiting substantial cash excesses while minimizing financial burdens that can result from significant cash inadequacies.

This report is intended to be used as a tool to determine reserve fund allocation requirements for the community, to manage future Association obligations, and to inform the community of future financial needs in general. The report that follows has been prepared from the perspective of what an owner of this property would benefit from knowing. Some items, beyond those of immediate concern, may be discussed. Therefore, the report should be read in its entirety in order to fully understand all of the information that has been obtained.

2.0 EXECUTIVE SUMMARY

Riverwatch is comprised of approximately 88 single family home sites. The community is situated off of Riverwatch Drive and East West Parkway off of Hell Neck Road in Gloucester, Virginia. The amenity center, including the pool building and boat dock/ramp was constructed in approximately 2004.

The association has responsibility for the pool house including the roofs, siding, doors, windows and mechanical systems. The association also maintains the common area site improvements including the boat storage lot, asphalt parking lot and concrete flatwork at the amenity center, walking trails with bridges, street signs and entrance signs. Amenities include a pool, associated mechanical systems and furniture.

The buildings, common areas and grounds are generally in good condition. Based on our evaluation, the current level of funding is not projected to maintain a positive balance through the term of this study. We have provided recommendations for annual reserve contribution schedules that provide sufficient funding to meet capital expenditure requirements in the next twenty years. A more detailed analysis of the reserve fund has been provided in Appendix A.

Some significant expenditures are expected over the term of the study. Some of the more notable examples are listed below:

- Repair, seal and resurface asphalt pavement
- Repair wood bridges, decking, boat dock
- Resurface pool
- Replace fencing at boat dock

There are, of course, other capital expenditures to be expected over the next twenty years. Those items that will require attention are discussed later in this report.

3.0 PURPOSE & SCOPE

3.1 Purpose

The purpose of this study is to perform a reserve fund analysis and to determine a capital needs plan. It is intended to be used as a tool for the Riverwatch Homeowners Association in determining the allocation requirements into the reserve fund in order to meet future anticipated capital expenditures for the community.

This report forecasts obligations for the community twenty years into the future. It should be noted that events might occur that could have an effect on the underlying component or system useful life assumptions used in this study. Likewise, inevitable market fluctuations can have an impact on component or system replacement and repair costs. Therefore, a study such as this should be updated from time to time, usually on a three to five-year cycle, in order to reflect the most accurate needs and obligations of the community.

3.2 Scope

This study has been performed according to the scope as generally defined by the Riverwatch Homeowners Association, Criterium-Giles Engineers Inc., Community Partners of VA, Inc., and the standards of the Community Associations Institute. The findings and recommendations are based on interviews with the community's management personnel; a review of available documents; and an investigation of the buildings and site.

The "Cash Flow Method" of calculating reserves has been utilized, whereby contributions to the reserve fund are designed to offset the variable annual expenditures. Funding alternates are recommended which are designed to achieve a "Baseline Funding" goal by maintaining a positive balance for the term of the study.

The guidelines used to determine which physical components within the community are to be included in the component inventory are based on the following general criteria:

1. The component must be a common element, or otherwise noted to be the responsibility of the Association to replace.
2. The component must have an estimated remaining useful life of twenty years or less. As the site ages, additional components may need to be added.
3. The funding for replacement should be from one source only, not funded from another area of the budget or through a maintenance contract.
4. The cost of replacement should be high enough to make it financially unsound to fund it from the operating budget.

Our reserve study analysis included evaluating the following association property:

- **Buildings:** The HOA is responsible for maintenance of the pool house, including the roofing, doors and windows, and painting and repairing the siding and trim.

- **Mechanical Systems:** The Association is responsible for the common area pool pump and filtration equipment as well as the plumbing and HVAC equipment serving the pool house.
- **Site and Grounds:** The HOA is responsible for asphalt paving and sidewalks at the pool house, common area drainage and irrigation systems, boat storage lot, walking trails including bridges, boat dock, common area site fencing, and entrance signage.

The above list was obtained from the site inspection and discussions with the management firm prior to the inspection.

This study estimates the funding levels required for maintaining the long-term viability of the facility. Our approach involves:

1. Examining association managed equipment, building and site facilities.
2. Predicting their remaining service life and, approximating how frequently they will require repair or replacement.
3. Estimating repair or replacement costs (in 2016 dollars) for each capital item.
4. Using data developed in Steps 1, 2 and 3 to project Capital Reserve balances for Years 1 through 20.

The statements in this report are opinions about the present condition of the subject community. They are based on visual evidence available during a diligent investigation of all reasonably accessible areas falling under the responsibility of the Association. We did not remove any surface materials, perform any destructive testing, or move any furnishings. This study is not an exhaustive technical evaluation. Such an evaluation would entail a significantly larger scope than this effort. For additional limitations, see Section 8.0.

3.3 Sources of Information

Onsite inspections of the property occurred on the following date:

- March 11, 2016

The following people were interviewed during our study:

- Beth Pryor, Property Manager, Community Partners of VA, Inc.
- Carol White, Board Member

The following documents were made available to us and reviewed:

- Gloucester County real estate records
- Riverwatch Balance Sheet dated 2/29/16
- Declaration and association governing documents
- Notes on draft review provided by board of directors

We based our cost estimates on some or all of the following:

- R.S. Means
- Our data files on similar projects
- Local contractor estimates

For your reference, the following definitions may be helpful:

Excellent: Component or system is in "as new" condition, requiring no rehabilitation and should perform in accordance with expected performance.

Good: Component or system is sound and performing its function, although it may show signs of normal wear and tear. Some minor rehabilitation work may be required.

Fair: Component or system falls into one or more of the following categories: a) Evidence of previous repairs not in compliance with commonly accepted practice, b) Workmanship not in compliance with commonly accepted standards, c) Component or system is obsolete, d) Component or system approaching end of expected performance. Repair or replacement is required to prevent further deterioration or to prolong expected life.

Poor: Component or system has either failed or cannot be relied upon to continue performing its original function as a result of having exceeded its expected performance, excessive deferred maintenance, or state of disrepair. Present condition could contribute to or cause the deterioration of other adjoining elements or systems. Repair or replacement is required.

Adequate: A component or system is of a capacity that is defined as enough for what is required, sufficient, suitable, and/or conforms to standard construction practices.

All ratings are determined by comparison to other buildings of similar age and construction type. Further, some details of workmanship and materials will be examined more closely in higher quality buildings where such details typically become more relevant.

All directions (left, right, rear, etc.), when used, are taken from the viewpoint of an observer standing in front of a building and facing it.

Repair/Replacement Reserves - Non-annual maintenance items that will require significant expenditure over the life of the buildings. Included are items that will reach the end of their estimated useful life during the course of this forecast, or, in the opinion of the investigator, will require attention during that time.

4.0 DESCRIPTION

Riverwatch is comprised of approximately 88 single family home sites. The community is situated off of Riverwatch Drive and East West Parkway off of Hell Neck Road in Gloucester, Virginia. The amenity center, including the pool building and boat dock/ramp was constructed in

approximately 2004.

The association has responsibility for the pool house including the roof, siding, doors, windows and mechanical systems. The association also maintains the common area site improvements including the asphalt parking lot and concrete flatwork at the amenity center, boat storage lot, walking trails with bridges, street signs and entrance signs. Amenities include a pool, associated mechanical systems and furniture.

The pool house building is of wood frame construction on a poured concrete slab foundation. Exterior surfaces are primarily comprised of fiber cement siding and trim. The building roofs are clad with standing seam metal roofing.

Site drainage is provided via landscaped swales in the common areas. The streets throughout the community are publicly maintained. Sections of the streets have transitioned over to public maintenance and remaining sections will be transitioned to public maintenance as development continues.

5.0 OBSERVATIONS

The following key observations were made about the current condition of the more significant and costly common elements of the property.

Site and Grounds

The association is responsible for maintaining the asphalt paved parking lot at the swimming pool. The paved surface generally appeared to be in good to fair condition. Longitudinal cracking was observed in sections of the asphalt paving. The parking lot lines are faded in color and it does not appear that the paving has been seal coated since original construction.

Typically, we recommend the application of an oil resistant sealant to all asphalt paved surfaces on an approximately 7 year cycle. At this same time, all cracks should be properly filled, patched, and sealed. We have allocated funds to seal the pavement on a 7 year cycle beginning in 2017.

Assuming sealing and crack repairs occur in the interim, we anticipate the asphalt paving in the community to have an estimated useful life of approximately twenty to twenty-five years prior to full resurfacing. We have allocated funds to resurface the asphalt paving in 2029. Resurfacing would include repairing any potholes or depressions and installing a new wearing layer of asphalt (1" to 2" thick) over the existing paving.

The association is responsible for maintaining the concrete pool deck, the concrete flatwork around the pool building and the concrete boat ramp. The concrete flatwork generally appears to be in good condition, with some minor cracking evident. We have allocated funds for periodic repairs and/or replacement of concrete surfaces as required and have assumed that 5% of the surfaces will require maintenance every 8 years beginning in 2025. Note that accumulated sand and sediment was observed at the shoreline at the boat ramp, we have assumed that periodic removal of the sediment would be funded from an annual maintenance budget. The concrete floor in the pool building is comprised of stamped

concrete with a seal coat. We have assumed that cleaning and re-sealing the stamped concrete would be funded from an annual maintenance budget.

Drainage systems include common area landscaped areas and grassed swales around the pool area. Stormwater piping is also located under sections of the walking trails in the community. Periodic repairs will likely include retrenching of swales to improve flow, adding rip rap or vegetation to stabilize exposed or steep areas, repairing drainage piping and drainage systems around the trail and other drainage improvements. Reportedly, the association will fund drainage improvements from an annual landscape budget.

Wood decking is installed adjacent to the pool building and appeared to be in good to fair condition with some typical weathering observed. Wood decking has an expected useful life of approximately 15 years, we have allocated funds to replace the decking and rails adjacent to the pool building beginning in 2022.

A wood framed boat dock is installed adjacent to the boat ramp near the amenity center in the community. The wood decking appeared to be in fair condition with some weathering evident. We have assumed minor repairs to the decking and railings would be funded from an annual maintenance budget. Assuming minor repairs are completed in the interim, we anticipate the boat dock to have an expected remaining useful life of approximately 15 years. It is likely that the wood pylons and wood framing of the framing at the boat dock will require significant structural repairs and/or full replacement in addition to full replacement of decking and rails. We have allocated funds for full replacement of the boat dock on a 30 year cycle beginning in 2032.

Anodized aluminum fencing is installed around the pool area in the community. The fencing generally appeared to be in good condition. The fencing has as an expected useful life beyond the term of this study. However, it is likely that minor repairs and full repainting of the fencing will be required on an approximately 15 year cycle. We have allocated funds to paint and repair the aluminum fencing beginning in 2025.

Custom street signs are located throughout the community. Typically, the county/DOT will only maintain and replace standard DOT spec street signs. We have assumed the association will be responsible for maintaining and replacing the street signs and have allocated funds for their replacement based on cost information provided on a 25 year cycle beginning in 2027.

A walking trail is located in the community along a creek behind several lots in the community. The walking trail does not include any surfacing material (mulch, gravel, etc.). Eight wood framed pedestrian bridges were observed along the walking trail. The wood bridges range in size from small sections approximately 8 feet in length to longer sections spanning over 200 feet. The bridges varied in condition. The wood bridge near the trail head at the end of East West Parkway is in poor condition and is blocked from access. The wood bridge behind lots 2 and 3 on Rivers Edge

Terrace was also observed to be in poor condition and should be temporarily blocked from access until repairs are completed. The wood bridge behind lot 9 on Coveside Point is also in poor condition and will require repair in the near term. We have allocated funds to replace these wooden bridges on a 15 year cycle beginning in 2017 based on cost information provided. The remaining bridges appeared to be in fair condition. We have allocated funds to replace the remaining bridges on a 15 year cycle beginning in 2020.

Entrance signs in the community are comprised of a small recently installed monument sign at the Riverwatch Drive entrance and two larger stone veneer monument signs with metal lettering at the East West Parkway entrance. We have assumed minor repairs to the lettering would be funded from an annual maintenance budget. We have allocated funds for more significant repairs to the monument structures including stone veneer repairs and repointing on a 15 year cycle beginning in 2024.

PVC fencing is installed at the entrance at East West Parkway and appeared to be in good condition. Routine maintenance and cleaning should be funded from an annual maintenance budget. We have allocated funds for replacing the PVC fencing on a 30 year cycle beginning in 2032.

Landscape irrigation and lighting systems are installed at the entrance sign on East West Parkway. The lighting includes up-lights and lantern style lights mounted on the monument structures. We have allocated funds for repairs to the lighting systems on a 12 year cycle beginning in 2025. The association does not plan on repairing the irrigation system at the entrance.

A gravel surfaced boat storage lot with gravel surfaced access drive is located off of Riverwatch Drive and maintained by the association. The boat storage area includes 8' tall wood perimeter fencing. The gravel surface appeared to be in fair condition with vegetative growth in areas. We have allocated funds to install additional gravel surfacing over the boat storage area and entrance drive on a 20 year cycle beginning in 2024. The wood fencing around the boat storage area is in fair condition with minor warping and damaged slats observed. We also observed vegetation in contact with the wood fencing around the perimeter. We recommend routinely trimming vegetation away from the wood fencing and have assumed this and minor repairs to the fencing would be funded from an annual maintenance budget. We have allocated funds to replace the wood fencing on a 20 year cycle beginning in 2029.

Common Building Exteriors

The predominant pitched roof surfaces over the pool house is covered in standing seam metal roofing. Roof surfacing is applied over plywood roof sheathing, and appears to be in good condition. Minor improvements over the term will likely include replacing vent boots, flashing and drip edge repairs which we have assumed would be funded from an annual maintenance budget.

The standing seam metal roofing will not likely require replacement until well beyond the term of this study. However, the enamel coating will

likely fade in color and begin to deteriorate. We have allocated funds to repair and re-coat the metal roofing on a 20 year cycle beginning in 2025.

The pool house building is of wood framed construction and primarily clad in fiber cement siding and trim. Painted wood ceiling panels are located in the open air ceilings. The painted surfaces generally appeared to be in fair to poor condition with areas of flaking paint, failing caulking and mildew accumulation noted. We have allocated funds for to repair and paint the pool building exterior cladding in 2017 and continuing on a 7 year cycle thereafter.

Two vinyl, thermal pane, glass windows are located on the pool house. Metal skin doors provide access to the pool house and restrooms and kitchen area. We expect that these windows and doors will provide approximately 25-30 years of useful life, and have included funds to replace them in 2036.

Common Pool house Interior

The pool house building includes men's and women's restrooms. Each restroom includes a toilet and wall mounted sink with ceramic tile flooring and wall tiles. The small kitchen area includes cabinets, countertops a sink and basic appliances. The restroom and kitchen fixtures, cabinets and appliances generally appeared to be in good condition. Reportedly the association plans on completing any necessary repairs to the kitchen and bathroom fixtures from an annual maintenance budget.

Mechanical

The pool building includes a 40 gallon electric water heater which has an expected useful life of approximately 15 years. Reportedly, the water heater has not been used in several years and the association will fund any necessary repairs from other sources.

The pool building is served by a well and an engineered septic system with tanks and a pump. The well includes a Well Mate pressure tank and a Crystal Right CR200 water softener/filter. The septic system includes an Advantex Treatment System Control Panel with a 1 horsepower recirculation pump and a 3 horsepower discharge pump. The system components have varying expected useful lives and are typically repaired/replaced as they fail. We have allocated funds to repair the well and septic system on a 15 year cycle beginning in 2025.

The pool building restrooms and pool area include an electronic access locking systems. The pool gate lock is reportedly planned for replacement in the near term. We have allocated funds for repairs/upgrades to these secured access systems on a 3 year cycle beginning in 2020.

Electrical lights at the pool house include ceiling pendants and wall mounted lights. We have included funds to replace the light fixtures and complete electrical and plumbing repairs on a 15 year cycle beginning in 2021.

Note that the pool building includes a small Mitsubishi ductless split system with exterior heat pump and fan units in the bathrooms/kitchen areas. This system is not in working condition and is reportedly not utilized. The pool building also includes security cameras with a DVR recording system which is not utilized. We have not included funds for repairing/replacing these systems.

Amenities

Amenities owned and maintained by the Association include the pool and associated furnishings.

The pool was under a cover during the inspection. The pool was reportedly repaired and replastered. Typically, pools should be drained, minor cracks repaired, and recoated (possibly quartz plaster) on an approximately 10-12 year cycle. We have budgeted funds for full resurfacing and tile repairs on a 12-year cycle beginning in 2028.

The pool cover was observed to be in fair to poor condition with torn areas observed. We have allocated funds to replace the pool cover on a 10 year cycle beginning in 2017.

The pool pump and filtration equipment includes a 2.5 horsepower pump and sand filter with a recently replaced auto-chlorinator systems. These components are typically replaced as they fail and we have provided an allocation of funds to repair the pump and filtration equipment on a 3 year cycle beginning in 2019.

Pool and outdoor furniture consisted of aluminum frame fabric web chairs and chaise lounges and tables. Several pieces of pool furniture are new and still in original packaging. We have allocated funds to replace approximately 1/3rd of the pool furniture on a 3 year cycle beginning in 2020.

A small grassed volley ball court with net is located adjacent to the pool building. We have assumed minor repairs to the net would be funded from an annual maintenance budget.

6.0 RESERVE FUND ANALYSIS

Using software developed by Criterium Engineers and KPMG Peat Marwick, we have analyzed capital reserves draw-down for the projected capital expenditures to determine the amount needed. The following is a projected reserve fund analysis for non-annual items as discussed in the report. This projection takes into consideration a reasonable return on invested moneys and inflation. Please review this thoroughly and let us know of any changes that may be desired.

The intent of this reserve fund projection is to help the Association develop a reserve fund to provide for anticipated repair or replacements of various system components during the next twenty years.

The capital items listed are those that are typically the responsibility of the Association and are derived from a list provided the Association with

several items added as a result of the inspection. However, association by-laws vary, and therefore, which components are the responsibilities of the owner and which are the responsibilities of the Association can vary. The Association should confirm that the items listed should be financed by the reserve fund.

This projection provides the following:

- An input sheet that defines all the criteria used for the financial alternatives, including the assumed inflation rate of 3% annually and rate of return on deposited reserve funds of 1.0% annually.
- A table that lists anticipated replacement and/or repair items complete with estimated remaining life expectancies, projected costs of replacement and/or repair, a frequency in years of when these items require replacement and/or repair, and a projection based on this frequency.
- A table and graph that represent end of year balances versus capital expenditures based on your current funding program and reserve balances, and alternatives to your current program. The provided graphs illustrate what effects the funding methods will have over the presented twenty-year period versus the anticipated capital expenditures.
- Note that based on our developed list of capital items and taking inflation into account; the current funding level is not projected to maintain a positive reserve fund balance.
- The Association should bear in mind that unanticipated expenditures can always arise and maintenance of a significant reserve fund balance can be viewed as a way to avoid special assessments.

We have included alternatives to your current reserve funding program and recommend that the board adopt an alternative that best reflects the objectives of the community. In summary they are as follows:

Current Reserve Funding Rate: \$9,000/year

Current Reserve Balance: \$31,278 (projected January 2017 balance)

- **Alternative 1:** Beginning in 2017 increase the annual reserve contribution by \$6,600 every other year for the next 12 years. This alternative is projected to maintain a positive reserve fund balance over the term.
- **Alternative 2:** Beginning in 2017, set the annual reserve contribution rate to \$24,000 per year. Then, increase the reserve contribution by 7% per year for the next 10 years. This alternative is projected to maintain a positive reserve fund balance over the term.
- **Alternative 3:** Not Used. Alternative 3 is typically used for special assessments. Assuming one of the funding alternatives above is utilized, we do not anticipate special assessments will be required to

fund reserves.

Please note that the reserve fund study does not include typical annual maintenance items. Our assumption is that you already have an annual operating budget that provides for these typical, repetitive items. This includes miscellaneous repairs, lawn and grounds maintenance, routine minor painting, etc. We have focused on those significant, non-annual items where careful financial planning is important.

Finally, please note that the estimates we have developed are based on 2016 dollars. Our reserve fund study does adjust for an estimated annual inflation and a given return on investment assuming that the indicated fund balances are maintained.

7.0 CONCLUSION

The alternatives provided above will provide sufficient funding to meet estimated capital expenditures during the next twenty years. Further detail of the reserve fund analysis is provided in Appendix A.

8.0 LIMITATIONS

The observations described in this study are valid on the date of the investigation and have been made under the conditions noted in the report. We prepared this study for the exclusive use of the Riverwatch Homeowners Association. Criterium-Giles Engineers Inc. does not intend any other individual or party to rely upon this study without our express written consent. If another individual or party relies on this study, they shall indemnify and hold Criterium-Giles Engineers Inc. harmless for any damages, losses, or expenses they may incur as a result of its use.

This study is limited to the visual observations made during our inspection. We did not remove surface materials, conduct any destructive or invasive testing, move furnishings or equipment, or undertake any digging or excavation. Accordingly, we cannot comment on the condition of systems that we could not see, such as buried structures and utilities, nor are we responsible for conditions that could not be seen or were not within the scope of our services at the time of the investigation. We did not undertake to completely assess the stability of the buildings or the underlying foundation soil since this effort would require excavation and destructive testing. Likewise, this is not a seismic assessment.

We did not investigate the following areas:

- Buried utilities or infrastructure
- Concealed structural members or systems
- Unit interiors

We do not render an opinion on uninvestigated portions of the community.

We did not perform any computations or other engineering analysis as part of this evaluation, nor did we conduct a comprehensive code compliance investigation. This study is not to be considered a warranty of condition, and no warranty is implied. The appendices are an integral part of this report and must be included in any review.

Members of the Criterium-Giles Engineers team working on this reserve

study are not members of, or otherwise associated with the association. Criterium-Giles Engineers has disclosed any other involvement with the association that could result in conflicts of interest.

Information provided by the official representative of the association regarding financial, physical, quantity, or historical issues, will be deemed reliable by Criterium-Giles Engineers. The reserve balance presented in the Reserve Study is based upon information provided and was not audited. Information provided about reserve projects will be considered reliable. Any on-site inspection should not be considered a project audit or quality inspection. Criterium-Giles Engineers is not aware of any additional material issues which, if not disclosed, would cause a distortion of the association's situation.

In our Reserve Fund Analysis, we have provided estimated costs. These costs are based on our general knowledge of building systems and the contracting and construction industry. When appropriate, we have relied on standard sources, such as Means Building Construction Cost Data, to develop estimates. However, for items that we have developed costs (e.g.: structural repairs), no standard guide for developing such costs exists. Actual costs can vary significantly, based on the availability of qualified contractors to do the work, as well as many other variables. We cannot be responsible for the specific cost estimates provided.

We have performed no design work as part of this study, nor have we obtained competitive quotations or estimates from contractors as this also is beyond the scope of the project. The actual cost to remedy deficiencies and deferred maintenance items that we have identified may vary significantly from estimates and competitive quotations from contractors.

If you have any questions about this study or the reserve fund analysis, please feel free to contact us. Thank-you for the opportunity to be of assistance to you.

Respectfully submitted,



Kevin R. Giles, RS
Project Manager
Criterium-Giles Engineers, Inc.



Robert C. Giles, PE, RS
President
Criterium-Giles Engineers, Inc.

Appendix A: RESERVE FUND PROJECTIONS

Itemized Worksheet

Capital Item To Be Replaced	Quantity	Unit cost	Reserve Requirement (*)	Frequency (yrs**)	Remaining Life (yrs)	Information Source
Site						
Crack fill, seal coat paving at parking lot	1,600 SY	\$2.00	\$3,200.00	7	0	
Resurface paving at parking lot	1,600 SY	\$14.00	\$22,400.00	20	12	
Repair sections of concrete flatwork	50 SY	\$95.00	\$4,750.00	8	8	Approx. 5% every 8 years
Replace decking at clubhouse deck	815 SF	\$10.00	\$8,150.00	15	5	
Replace boat dock	3,000 SF	\$65.00	\$195,000.00	30	15	
Paint/repair pool fencing	275 LF	\$10.00	\$2,750.00	15	8	
Replace street signs	21 EA	\$400.00	\$8,400.00	25	10	
Repair/replace walking trail bridges phase 1	1 LS	\$15,000.00	\$15,000.00	15	0	
Repair/replace walking trail bridges phase 2	1,385 SF	\$20.00	\$27,700.00	15	3	
Repair entrance signs	1 LS	\$3,500.00	\$3,500.00	15	7	
Replace PVC fencing	140 LF	\$30.00	\$4,200.00	30	15	
Repair landscape lighting at entrance	1 LS	\$3,750.00	\$3,750.00	12	8	
Resurface gravel at boat storage lot	2,300 SY	\$3.00	\$6,900.00	20	8	
Replace fencing at boat storage lot	500 LF	\$40.00	\$20,000.00	20	12	
Building Exterior						
Repair/paint metal roofing	1 LS	\$2,100.00	\$2,100.00	20	8	
Paint/repair exterior siding at pool house	1 LS	\$2,500.00	\$2,500.00	7	0	
Replace doors and windows at pool building	7 EA	\$750.00	\$5,250.00	30	19	
Building Interior						
Mechanical						
Repair septic system at pool building	1 LS	\$4,500.00	\$4,500.00	15	8	
Repair well at pool building	1 LS	\$3,000.00	\$3,000.00	15	8	
Repair/upgrade secured access systems	1 LS	\$2,000.00	\$2,000.00	3	3	
Replace exterior light fixtures at pool building	12 EA	\$300.00	\$3,600.00	15	4	
Amenities						
Repair/resurface swimming pool	1,500 SF	\$14.00	\$21,000.00	12	11	
Replace portions of pool furniture	20 EA	\$200.00	\$4,000.00	3	3	Approx. 1/3rd every 3 years
Repair pool pump/filtration equipment	1 LS	\$3,500.00	\$3,500.00	3	2	
Replace pool cover	1,500 Sf	\$4.00	\$6,000.00	10	0	
Other						
Totals			\$383,150.00			
Total Over Term			\$499,100.00			

* Costs are typically 10%±

** Reserve based on a 20 year projection of non-annual maintenance

Annual Expense By Year

	Year: Year Number:	2017 1	2018 2	2019 3	2020 4	2021 5	2022 6	2023 7	2024 8	2025 9	2026 10	2027 11	2028 12	2029 13	2030 14	2031 15	2032 16
Site																	
Crack fill, seal coat paving at parking lot		3,200	0	0	0	0	0	0	3,200	0	0	0	0	0	0	3,200	0
Resurface paving at parking lot		0	0	0	0	0	0	0	0	0	0	0	0	22,400	0	0	0
Repair sections of concrete flatwork		0	0	0	0	0	0	0	0	4,750	0	0	0	0	0	0	0
Replace decking at clubhouse deck		0	0	0	0	0	8,150	0	0	0	0	0	0	0	0	0	0
Replace boat dock		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	195,000
Paint/repair pool fencing		0	0	0	0	0	0	0	0	2,750	0	0	0	0	0	0	0
Replace street signs		0	0	0	0	0	0	0	0	0	0	8,400	0	0	0	0	0
Repair/replace walking trail bridges phase 1		15,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15,000
Repair/replace walking trail bridges phase 2		0	0	0	27,700	0	0	0	0	0	0	0	0	0	0	0	0
Repair entrance signs		0	0	0	0	0	0	0	3,500	0	0	0	0	0	0	0	0
Replace PVC fencing		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4,200
Repair landscape lighting at entrance		0	0	0	0	0	0	0	0	3,750	0	0	0	0	0	0	0
Resurface gravel at boat storage lot		0	0	0	0	0	0	0	0	6,900	0	0	0	0	0	0	0
Replace fencing at boat storage lot		0	0	0	0	0	0	0	0	0	0	0	0	20,000	0	0	0
Building Exterior																	
Repair/paint metal roofing		0	0	0	0	0	0	0	0	2,100	0	0	0	0	0	0	0
Paint/repair exterior siding at pool house		2,500	0	0	0	0	0	0	2,500	0	0	0	0	0	0	2,500	0
Replace doors and windows at pool building		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Building Interior																	
Mechanical																	
Repair septic system at pool building		0	0	0	0	0	0	0	0	4,500	0	0	0	0	0	0	0
Repair well at pool building		0	0	0	0	0	0	0	0	3,000	0	0	0	0	0	0	0
Repair/upgrade secured access systems		0	0	0	2,000	0	0	2,000	0	0	2,000	0	0	2,000	0	0	2,000
Replace exterior light fixtures at pool building		0	0	0	0	3,600	0	0	0	0	0	0	0	0	0	0	0
Amenities																	
Repair/resurface swimming pool		0	0	0	0	0	0	0	0	0	0	0	21,000	0	0	0	0
Replace portions of pool furniture		0	0	0	4,000	0	0	4,000	0	0	4,000	0	0	4,000	0	0	4,000
Repair pool pump/filtration equipment		0	0	3,500	0	0	3,500	0	0	3,500	0	0	3,500	0	0	3,500	0
Replace pool cover		6,000	0	0	0	0	0	0	0	0	0	6,000	0	0	0	0	0
Other																	
Total Costs		26,700	0	3,500	33,700	3,600	11,650	6,000	9,200	31,250	6,000	14,400	24,500	48,400	0	9,200	220,200
Total Costs Adjusted For 3% Inflation		26,700	0	3,713	36,825	4,052	13,506	7,164	11,315	39,587	7,829	19,352	33,914	69,007	0	13,916	343,064

Annual Expense By Year

	Year: Year Number:	2033 17	2034 18	2035 19	2036 20
Site					
Crack fill, seal coat paving at parking lot		0	0	0	0
Resurface paving at parking lot		0	0	0	0
Repair sections of concrete flatwork		4,750	0	0	0
Replace decking at clubhouse deck		0	0	0	0
Replace boat dock		0	0	0	0
Paint/repair pool fencing		0	0	0	0
Replace street signs		0	0	0	0
Repair/replace walking trail bridges phase 1		0	0	0	0
Repair/replace walking trail bridges phase 2		0	0	27,700	0
Repair entrance signs		0	0	0	0
Replace PVC fencing		0	0	0	0
Repair landscape lighting at entrance		0	0	0	0
Resurface gravel at boat storage lot		0	0	0	0
Replace fencing at boat storage lot		0	0	0	0
Building Exterior					
Repair/paint metal roofing		0	0	0	0
Paint/repair exterior siding at pool house		0	0	0	0
Replace doors and windows at pool building		0	0	0	5,250
Building Interior					
Mechanical					
Repair septic system at pool building		0	0	0	0
Repair well at pool building		0	0	0	0
Repair/upgrade secured access systems		0	0	2,000	0
Replace exterior light fixtures at pool building		0	0	0	3,600
Amenities					
Repair/resurface swimming pool		0	0	0	0
Replace portions of pool furniture		0	0	4,000	0
Repair pool pump/filtration equipment		0	3,500	0	0
Replace pool cover		0	0	0	0
Other					
Total Costs		4,750	3,500	33,700	8,850
Total Costs Adjusted For 3% Inflation		7,622	5,785	57,372	15,519

Reserve Study Worksheet

General Information:

1 Organization: **Riverwatch HOA**
2 Address: **Gloucester, VA**

3	Number of Units	88
4	Age of Building (in years)	12
5a	Study Period (in years)	20
5b	Normal Fiscal Year starts:	January 1, 2017
5c	Partial Fiscal Year starts:	January 1, 2017
5d	Partial Year Length:	12 months
6	Site Inspection Date	March 11, 2016
7	Reserve Funds at start	\$31,278
8	Rate of Return on invested Reserve Funds (%)	1.0%
9	Inflation Rate (%)	3.0%

10 Current Funding Levels

Existing Funding Levels				
	Total/Month	Total Annual	Per Unit/Month	Per Unit/Year
Reserve Fund Contribution.....	\$750	\$9,000	\$8.52	\$102.27
	Years Out	Total Annual	Per Unit	
Planned Special Assessment.....	0	\$0	\$0	
Balance Computed.....	(\$504,205)			

11 Alternative Reserve Fund Contribution

Alternative 1 Level Funding with Steps				
	Total/Month	Total Annual	Per Unit/Month	Per Unit/Year
Monthly Amount, (First Year).....	\$1,300	\$15,600	\$14.77	\$177.27
Monthly Amount, (Last Year).....	\$4,600	\$55,200	\$52.27	\$627.27
Balance Required Final Year.....	\$35,812			
Special Assessments:	Years Out	Total/Year	Per Unit	
First Assessment.....	0	\$0	\$0	
Second Assessment.....	0	\$0	\$0	
Balance Computed.....	\$167,907			

Alternative 2 Escalating Funding at 7% per Year				
	Total/Month	Total Annual	Per Unit/Month	Per Unit/Year
Monthly Amount, (First Year).....	\$2,000	\$24,000	\$22.73	\$272.73
Monthly Amount, (Last Year).....	\$3,934	\$47,212	\$44.71	\$536.50
Balance Required Final Year.....	\$35,812			
Base Escalation %.....	7.00%			
Special Assessments:	Years Out	Total/Year	Per Unit	
First Assessment.....	0	\$0	\$0	
Second Assessment.....	0	\$0	\$0	
Balance Computed.....	\$149,825			

Alternative 3 Escalating Funding with Special Assessments (NOT USED)				
	Total/Month	Total Annual	Per Unit/Month	Per Unit/Year
Monthly Amount, (First Year).....	\$0	\$0	\$0.00	\$0.00
Monthly Amount, (Last Year).....	\$0	\$0	\$0.00	\$0.00
Balance Required Final Year.....	\$35,812			
Base Escalation %.....	0.00%			
Special Assessments:	Years Out	Total/Year	Per Unit	
First Assessment.....	0	\$0	\$0	
Second Assessment.....	0	\$0	\$0	
Balance Computed.....	(\$684,861)			

Reserve Fund Worksheet

Fiscal Years:

Normal: Jan 2017

Partial: Jan 2017 (12 months)

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Existing Funding Levels

Beginning Reserve Fund Balance:	\$31,278	\$13,714	\$22,941	\$28,510	\$692	\$5,697	\$1,203	\$3,069	\$762	(\$29,825)	(\$28,653)	(\$39,006)	(\$63,920)	(\$123,926)	(\$114,926)	(\$119,842)
Revenue:	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000
Special Assessments:	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Investment Earnings:	\$136	\$227	\$282	\$7	\$56	\$12	\$30	\$8	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Capital Expenditures:	\$26,700	\$0	\$3,713	\$36,825	\$4,052	\$13,506	\$7,164	\$11,315	\$39,587	\$7,829	\$19,352	\$33,914	\$69,007	\$0	\$13,916	\$343,064
Ending Reserve Balance:	\$13,714	\$22,941	\$28,510	\$692	\$5,697	\$1,203	\$3,069	\$762	(\$29,825)	(\$28,653)	(\$39,006)	(\$63,920)	(\$123,926)	(\$114,926)	(\$119,842)	(\$453,907)

Alternative 1, Level Funding with Steps

Average Cap. Expenditure \$35,812

Beginning Reserve Fund Balance:	\$31,278	\$20,380	\$36,340	\$55,375	\$41,157	\$66,565	\$82,678	\$112,022	\$137,469	\$141,281	\$177,207	\$208,519	\$225,437	\$213,747	\$271,636	\$316,050
Revenue:	\$15,600	\$15,600	\$22,200	\$22,200	\$28,800	\$28,800	\$35,400	\$35,400	\$42,000	\$42,000	\$48,600	\$48,600	\$55,200	\$55,200	\$55,200	\$55,200
Special Assessment #1:	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Special Assessment #2:	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Investment Earnings:	\$202	\$360	\$548	\$407	\$659	\$819	\$1,109	\$1,361	\$1,399	\$1,755	\$2,065	\$2,232	\$2,116	\$2,689	\$3,129	\$282
Capital Expenditures:	\$26,700	\$0	\$3,713	\$36,825	\$4,052	\$13,506	\$7,164	\$11,315	\$39,587	\$7,829	\$19,352	\$33,914	\$69,007	\$0	\$13,916	\$343,064
Ending Reserve Balance:	\$20,380	\$36,340	\$55,375	\$41,157	\$66,565	\$82,678	\$112,022	\$137,469	\$141,281	\$177,207	\$208,519	\$225,437	\$213,747	\$271,636	\$316,050	\$28,467

Alternative 2, Escalating Funding at 7% per Year

Beginning Reserve Fund Balance:	\$31,278	\$28,864	\$55,089	\$79,642	\$72,941	\$101,351	\$122,722	\$153,091	\$182,118	\$185,606	\$224,119	\$254,498	\$270,474	\$251,166	\$301,361	\$338,003
Revenue:	\$24,000	\$25,680	\$27,478	\$29,401	\$31,459	\$33,661	\$36,018	\$38,539	\$41,236	\$44,123	\$47,212	\$47,212	\$47,212	\$47,212	\$47,212	\$47,212
Special Assessment #1:	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Special Assessment #2:	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Investment Earnings:	\$286	\$545	\$789	\$722	\$1,003	\$1,215	\$1,516	\$1,803	\$1,838	\$2,219	\$2,520	\$2,678	\$2,487	\$2,984	\$3,347	\$422
Capital Expenditures:	\$26,700	\$0	\$3,713	\$36,825	\$4,052	\$13,506	\$7,164	\$11,315	\$39,587	\$7,829	\$19,352	\$33,914	\$69,007	\$0	\$13,916	\$343,064
Ending Reserve Balance:	\$28,864	\$55,089	\$79,642	\$72,941	\$101,351	\$122,722	\$153,091	\$182,118	\$185,606	\$224,119	\$254,498	\$270,474	\$251,166	\$301,361	\$338,003	\$42,572

Alternative 3, Escalating Funding with Special Assessments (NOT USED)

Beginning Reserve Fund Balance:	\$31,278	\$4,624	\$4,670	\$966	(\$35,858)	(\$39,910)	(\$53,416)	(\$60,580)	(\$71,895)	(\$111,482)	(\$119,310)	(\$138,663)	(\$172,576)	(\$241,583)	(\$241,583)	(\$255,499)
Revenue:	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Special Assessment #1:	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Special Assessment #2:	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Investment Earnings:	\$46	\$46	\$10	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Capital Expenditures:	\$26,700	\$0	\$3,713	\$36,825	\$4,052	\$13,506	\$7,164	\$11,315	\$39,587	\$7,829	\$19,352	\$33,914	\$69,007	\$0	\$13,916	\$343,064
Ending Reserve Balance:	\$4,624	\$4,670	\$966	(\$35,858)	(\$39,910)	(\$53,416)	(\$60,580)	(\$71,895)	(\$111,482)	(\$119,310)	(\$138,663)	(\$172,576)	(\$241,583)	(\$241,583)	(\$255,499)	(\$598,563)

Reserve Fund Worksheet

Fiscal Years:				
Normal: Jan 2017	2033	2034	2035	2036
Partial: Jan 2017 (12 months)	17	18	19	20

Existing Funding Levels

Beginning Reserve Fund Balance:	(\$453,907)	(\$452,529)	(\$449,314)	(\$497,686)
Revenue:	\$9,000	\$9,000	\$9,000	\$9,000
Special Assessments:	\$0	\$0	\$0	\$0
Investment Earnings:	\$0	\$0	\$0	\$0
Capital Expenditures:	\$7,622	\$5,785	\$57,372	\$15,519
Ending Reserve Balance:	(\$452,529)	(\$449,314)	(\$497,686)	(\$504,205)

Alternative 1, Level Funding w

Beginning Reserve Fund Balance:	\$28,467	\$76,805	\$127,482	\$126,563
Revenue:	\$55,200	\$55,200	\$55,200	\$55,200
Special Assessment #1:	\$0	\$0	\$0	\$0
Special Assessment #2:	\$0	\$0	\$0	\$0
Investment Earnings:	\$760	\$1,262	\$1,253	\$1,662
Capital Expenditures:	\$7,622	\$5,785	\$57,372	\$15,519
Ending Reserve Balance:	\$76,805	\$127,482	\$126,563	\$167,907

Alternative 2, Escalating Fundi

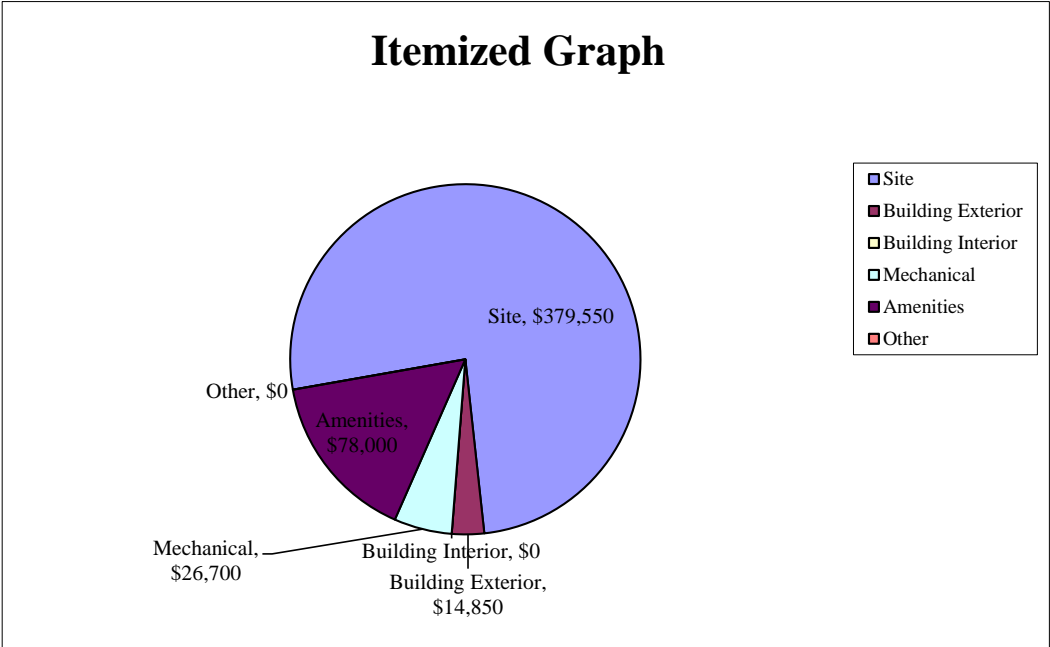
Beginning Reserve Fund Balance:	\$42,572	\$82,983	\$125,654	\$116,648
Revenue:	\$47,212	\$47,212	\$47,212	\$47,212
Special Assessment #1:	\$0	\$0	\$0	\$0
Special Assessment #2:	\$0	\$0	\$0	\$0
Investment Earnings:	\$822	\$1,244	\$1,155	\$1,483
Capital Expenditures:	\$7,622	\$5,785	\$57,372	\$15,519
Ending Reserve Balance:	\$82,983	\$125,654	\$116,648	\$149,825

Alternative 3, Escalating Fundi

Beginning Reserve Fund Balance:	(\$598,563)	(\$606,186)	(\$611,971)	(\$669,343)
Revenue:	\$0	\$0	\$0	\$0
Special Assessment #1:	\$0	\$0	\$0	\$0
Special Assessment #2:	\$0	\$0	\$0	\$0
Investment Earnings:	\$0	\$0	\$0	\$0
Capital Expenditures:	\$7,622	\$5,785	\$57,372	\$15,519
Ending Reserve Balance:	(\$606,186)	(\$611,971)	(\$669,343)	(\$684,861)

Itemized Graph

Categories	Totals
Site	\$379,550
Building Exterior	\$14,850
Building Interior	\$0
Mechanical	\$26,700
Amenities	\$78,000
Other	\$0
Total	\$499,100



Itemized Funding

Categories	Reserve Requirement	Beginning Balance	Balance Requiring Funding	Monthly Reserve Funding Required	Annual Reserve Funding Required	Full Funding Balance	Percent Funded
Site	\$379,550	\$27,979	\$351,571	\$2,367	\$28,402	\$175,933	
Building Exterior	\$14,850	\$904	\$13,946	\$41	\$498	\$5,685	
Building Interior	\$0	\$0	\$0	\$0	\$0	\$0	
Mechanical	\$26,700	\$976	\$25,724	\$194	\$2,330	\$6,140	
Amenities	\$78,000	\$1,418	\$76,582	\$406	\$4,874	\$8,917	
Other	\$0	\$0	\$0	\$0	\$0	\$0	
Totals	\$499,100	\$31,278	\$467,822	\$3,009	\$36,104	\$196,675	15.9%

Existing Funding Levels

Year	Year Number	Beginning Reserve Fund Balance	Fee Revenue	Special Assessments	Investment Earnings	Capital Expenditures	Ending Balance
2017	1	\$31,278	\$9,000	\$0	\$136	\$26,700	\$13,714
2018	2	\$13,714	\$9,000	\$0	\$227	\$0	\$22,941
2019	3	\$22,941	\$9,000	\$0	\$282	\$3,713	\$28,510
2020	4	\$28,510	\$9,000	\$0	\$7	\$36,825	\$692
2021	5	\$692	\$9,000	\$0	\$56	\$4,052	\$5,697
2022	6	\$5,697	\$9,000	\$0	\$12	\$13,506	\$1,203
2023	7	\$1,203	\$9,000	\$0	\$30	\$7,164	\$3,069
2024	8	\$3,069	\$9,000	\$0	\$8	\$11,315	\$762
2025	9	\$762	\$9,000	\$0	\$0	\$39,587	(\$29,825)
2026	10	(\$29,825)	\$9,000	\$0	\$0	\$7,829	(\$28,653)
2027	11	(\$28,653)	\$9,000	\$0	\$0	\$19,352	(\$39,006)
2028	12	(\$39,006)	\$9,000	\$0	\$0	\$33,914	(\$63,920)
2029	13	(\$63,920)	\$9,000	\$0	\$0	\$69,007	(\$123,926)
2030	14	(\$123,926)	\$9,000	\$0	\$0	\$0	(\$114,926)
2031	15	(\$114,926)	\$9,000	\$0	\$0	\$13,916	(\$119,842)
2032	16	(\$119,842)	\$9,000	\$0	\$0	\$343,064	(\$453,907)
2033	17	(\$453,907)	\$9,000	\$0	\$0	\$7,622	(\$452,529)
2034	18	(\$452,529)	\$9,000	\$0	\$0	\$5,785	(\$449,314)
2035	19	(\$449,314)	\$9,000	\$0	\$0	\$57,372	(\$497,686)
2036	20	(\$497,686)	\$9,000	\$0	\$0	\$15,519	(\$504,205)

Existing Funding Levels

Beginning Balance as of start of year beginning Jan 2017: \$31,278

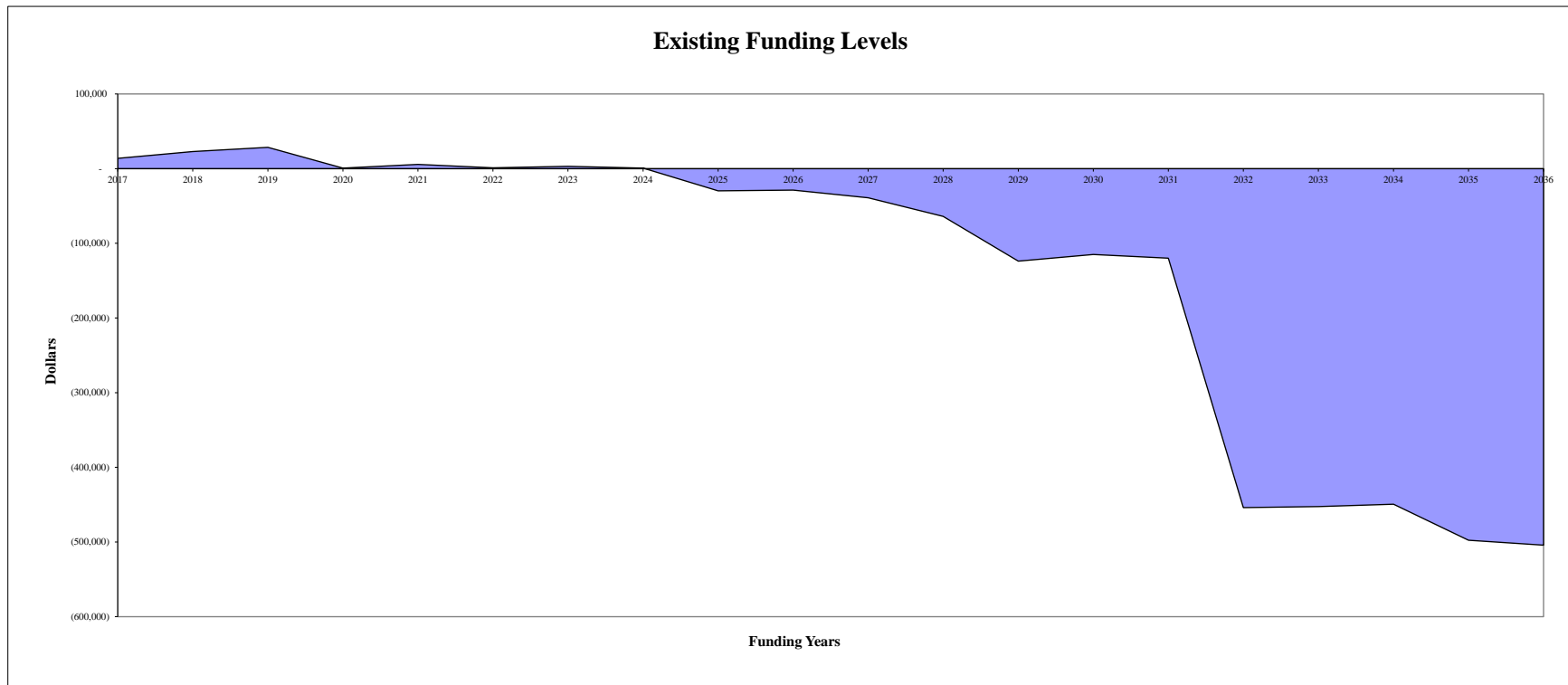
CONTRIBUTIONS	
AMOUNT	
\$9,000.00	per year
\$102.27	per unit per year
\$750.00	per month
\$8.52	per unit per month

SPECIAL ASSESSMENTS			
Totals			
Per Year	\$0	Per Unit	\$0

Projected Annual Funding and Expenditures:

Year:	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Year Number:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
End of Year Reserve Fund Balance	13,714	22,941	28,510	692	5,697	1,203	3,069	762	(29,825)	(28,653)	(39,006)	(63,920)	(123,926)	(114,926)	(119,842)
Capital Expenditures:	26,700	-	3,713	36,825	4,052	13,506	7,164	11,315	39,587	7,829	19,352	33,914	69,007	-	13,916
Total Revenue (all sources)	9,136	9,227	9,282	9,007	9,056	9,012	9,030	9,008	9,000	9,000	9,000	9,000	9,000	9,000	9,000

Year:	2032	2033	2034	2035	2036
Year Number:	16	17	18	19	20
End of Year Reserve Fund Balance	(453,907)	(452,529)	(449,314)	(497,686)	(504,205)
Capital Expenditures:	343,064	7,622	5,785	57,372	15,519
Total Revenue (all sources)	9,000	9,000	9,000	9,000	9,000



Alternative 1: Level Funding with Steps

Year	Year Number	Beginning Reserve Fund Balance	Fee Revenue	Special Assessments 1	Special Assessments 2	Investment Earnings	Capital Expenditures	Ending Balance
2017	1	\$31,278	\$15,600	\$0	\$0	\$202	\$26,700	\$20,380
2018	2	\$20,380	\$15,600	\$0	\$0	\$360	\$0	\$36,340
2019	3	\$36,340	\$22,200	\$0	\$0	\$548	\$3,713	\$55,375
2020	4	\$55,375	\$22,200	\$0	\$0	\$407	\$36,825	\$41,157
2021	5	\$41,157	\$28,800	\$0	\$0	\$659	\$4,052	\$66,565
2022	6	\$66,565	\$28,800	\$0	\$0	\$819	\$13,506	\$82,678
2023	7	\$82,678	\$35,400	\$0	\$0	\$1,109	\$7,164	\$112,022
2024	8	\$112,022	\$35,400	\$0	\$0	\$1,361	\$11,315	\$137,469
2025	9	\$137,469	\$42,000	\$0	\$0	\$1,399	\$39,587	\$141,281
2026	10	\$141,281	\$42,000	\$0	\$0	\$1,755	\$7,829	\$177,207
2027	11	\$177,207	\$48,600	\$0	\$0	\$2,065	\$19,352	\$208,519
2028	12	\$208,519	\$48,600	\$0	\$0	\$2,232	\$33,914	\$225,437
2029	13	\$225,437	\$55,200	\$0	\$0	\$2,116	\$69,007	\$213,747
2030	14	\$213,747	\$55,200	\$0	\$0	\$2,689	\$0	\$271,636
2031	15	\$271,636	\$55,200	\$0	\$0	\$3,129	\$13,916	\$316,050
2032	16	\$316,050	\$55,200	\$0	\$0	\$282	\$343,064	\$28,467
2033	17	\$28,467	\$55,200	\$0	\$0	\$760	\$7,622	\$76,805
2034	18	\$76,805	\$55,200	\$0	\$0	\$1,262	\$5,785	\$127,482
2035	19	\$127,482	\$55,200	\$0	\$0	\$1,253	\$57,372	\$126,563
2036	20	\$126,563	\$55,200	\$0	\$0	\$1,662	\$15,519	\$167,907

Alternative 1: Level Funding with Steps

Beginning Balance as of start of year beginning Jan 2017: \$31,278

CONTRIBUTIONS	
FIRST YR	LAST YR
\$15,600.00	\$55,200.00 per year
\$177.27	\$627.27 per unit per year
\$1,300.00	\$4,600.00 per month
\$14.77	\$52.27 per unit per month

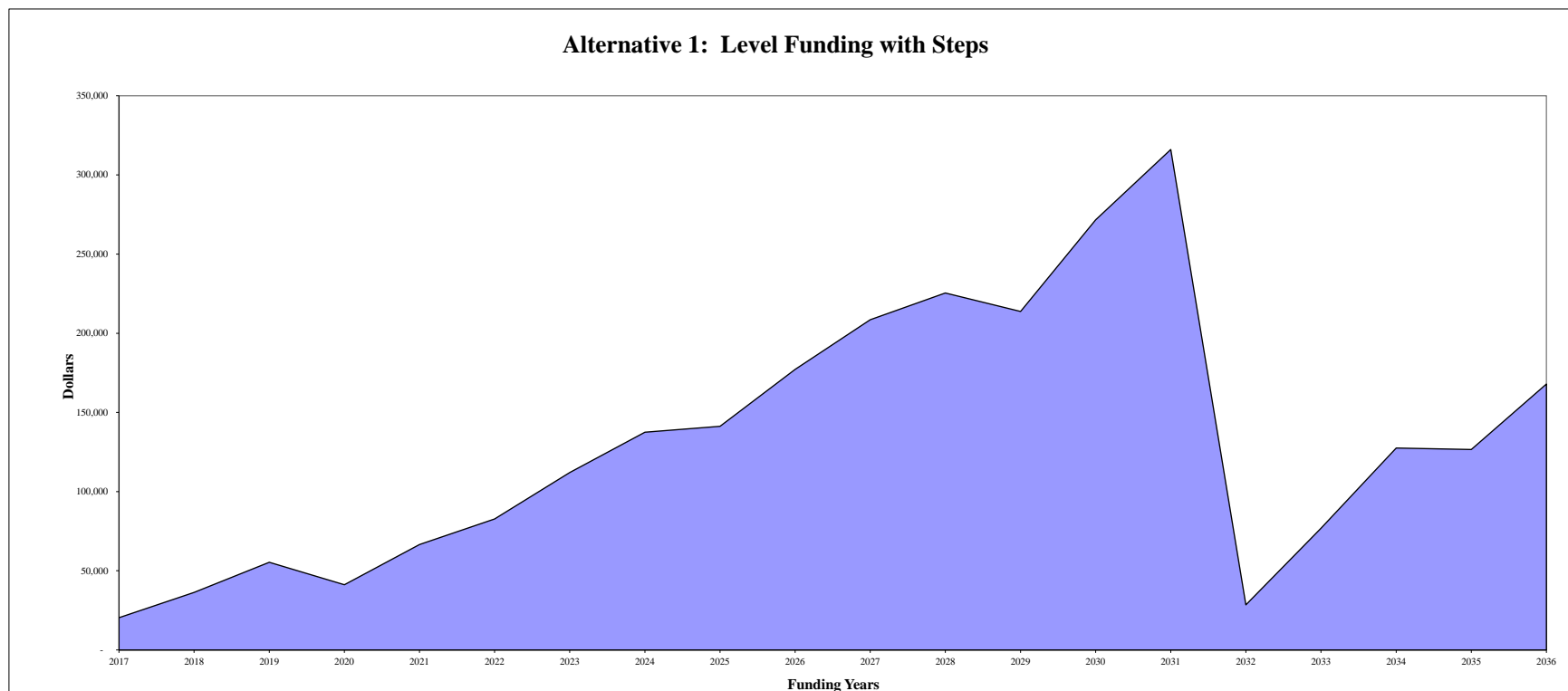
SPECIAL ASSESSMENTS				
First Second	Per Year Per Year	Totals		\$0 \$0
		\$0 \$0	Per Unit Per Unit	

SETTINGS (analyzed by year)			
Starting amount (\$):	1300		
Increment by (\$):	550		
Every	2	year	
Frequency:	6	time	

Projected Annual Funding and Expenditures:

Year:	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Year Number:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
End of Year Reserve Fund Balance	20,380	36,340	55,375	41,157	66,565	82,678	112,022	137,469	141,281	177,207	208,519	225,437	213,747	271,636	316,050
Capital Expenditures:	26,700	-	3,713	36,825	4,052	13,506	7,164	11,315	39,587	7,829	19,352	33,914	69,007	-	13,916
Total Revenue (all sources)	15,802	15,960	22,748	22,607	29,459	29,619	36,509	36,761	43,399	43,755	50,665	50,832	57,316	57,889	58,329

Year:	2032	2033	2034	2035	2036
Year Number:	16	17	18	19	20
End of Year Reserve Fund Balance	28,467	76,805	127,482	126,563	167,907
Capital Expenditures:	343,064	7,622	5,785	57,372	15,519
Total Revenue (all sources)	55,482	55,960	56,462	56,453	56,862



Alternative 2: Escalating Funding at 7% per Year

Year	Year Number	Beginning Reserve Fund Balance	Fee Revenue	Special Assessments 1	Special Assessments 2	Investment Earnings	Capital Expenditures	Ending Balance
2017	1	\$31,278	\$24,000	\$0	\$0	\$286	\$26,700	\$28,864
2018	2	\$28,864	\$25,680	\$0	\$0	\$545	\$0	\$55,089
2019	3	\$55,089	\$27,478	\$0	\$0	\$789	\$3,713	\$79,642
2020	4	\$79,642	\$29,401	\$0	\$0	\$722	\$36,825	\$72,941
2021	5	\$72,941	\$31,459	\$0	\$0	\$1,003	\$4,052	\$101,351
2022	6	\$101,351	\$33,661	\$0	\$0	\$1,215	\$13,506	\$122,722
2023	7	\$122,722	\$36,018	\$0	\$0	\$1,516	\$7,164	\$153,091
2024	8	\$153,091	\$38,539	\$0	\$0	\$1,803	\$11,315	\$182,118
2025	9	\$182,118	\$41,236	\$0	\$0	\$1,838	\$39,587	\$185,606
2026	10	\$185,606	\$44,123	\$0	\$0	\$2,219	\$7,829	\$224,119
2027	11	\$224,119	\$47,212	\$0	\$0	\$2,520	\$19,352	\$254,498
2028	12	\$254,498	\$47,212	\$0	\$0	\$2,678	\$33,914	\$270,474
2029	13	\$270,474	\$47,212	\$0	\$0	\$2,487	\$69,007	\$251,166
2030	14	\$251,166	\$47,212	\$0	\$0	\$2,984	\$0	\$301,361
2031	15	\$301,361	\$47,212	\$0	\$0	\$3,347	\$13,916	\$338,003
2032	16	\$338,003	\$47,212	\$0	\$0	\$422	\$343,064	\$42,572
2033	17	\$42,572	\$47,212	\$0	\$0	\$822	\$7,622	\$82,983
2034	18	\$82,983	\$47,212	\$0	\$0	\$1,244	\$5,785	\$125,654
2035	19	\$125,654	\$47,212	\$0	\$0	\$1,155	\$57,372	\$116,648
2036	20	\$116,648	\$47,212	\$0	\$0	\$1,483	\$15,519	\$149,825

Alternative 2: Escalating Funding at 7% per Year

Beginning Balance as of start of year beginning Jan 2017: \$31,278

CONTRIBUTIONS		
FIRST YR	LAST YR	
\$24,000.00	\$47,211.63	per year
\$272.73	\$536.50	per unit per year
\$2,000.00	\$3,934.30	per month
\$22.73	\$44.71	per unit per month

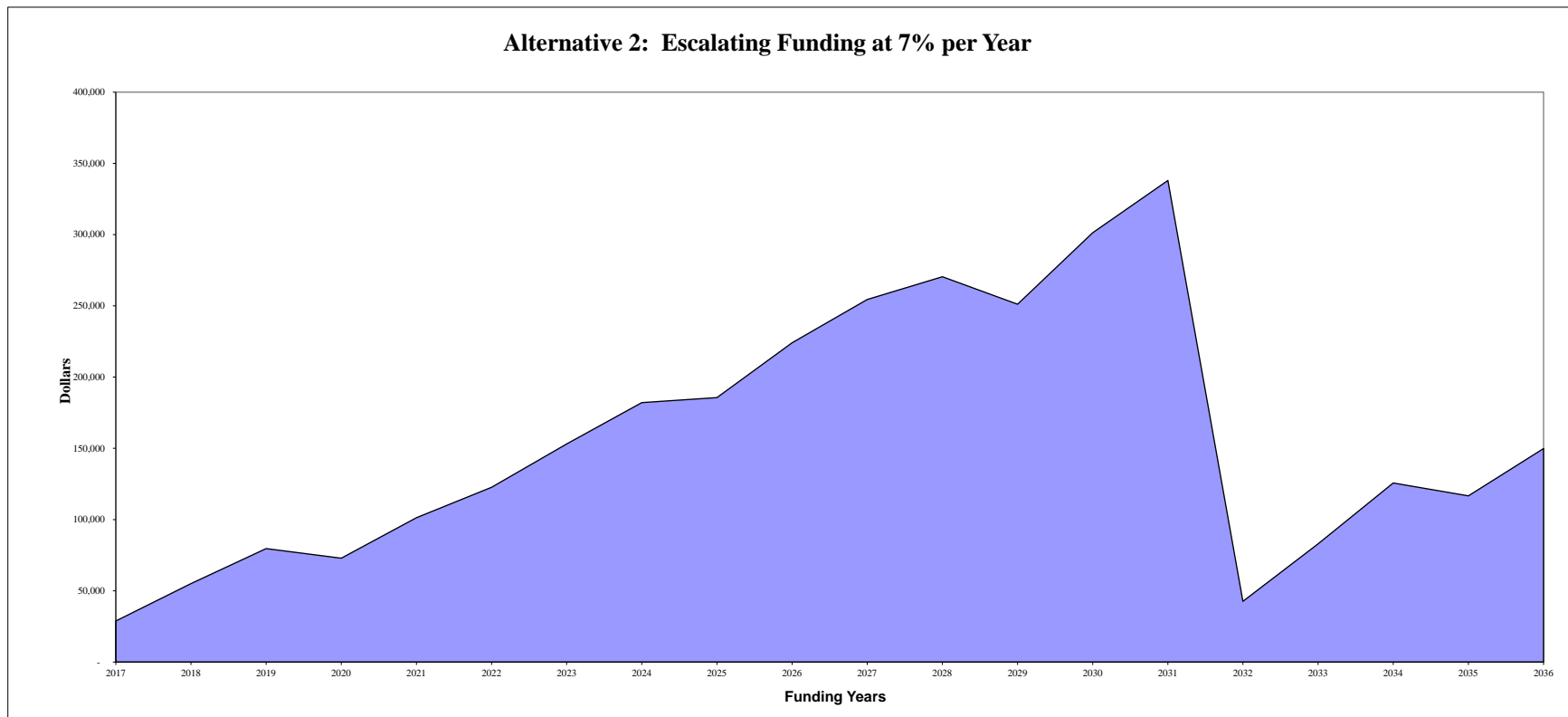
SPECIAL ASSESSMENTS				
First Second	Totals			
	Per Year	\$0	Per Unit	\$0
	Per Year	\$0	Per Unit	\$0

SETTINGS (analyzed by year)		
Starting amount (\$):	2000	
Increment by (%):	7	
Step (%):		
Every	1	year
Frequency:	10	time

Projected Annual Funding and Expenditures:

Year:	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Year Number:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
End of Year Reserve Fund Balance	28,864	55,089	79,642	72,941	101,351	122,722	153,091	182,118	185,606	224,119	254,498	270,474	251,166	301,361	338,003
Capital Expenditures:	26,700	-	3,713	36,825	4,052	13,506	7,164	11,315	39,587	7,829	19,352	33,914	69,007	-	13,916
Total Revenue (all sources)	24,286	26,225	28,266	30,123	32,463	34,876	37,533	40,342	43,074	46,342	49,731	49,890	49,698	50,195	50,558

Year:	2032	2033	2034	2035	2036
Year Number:	16	17	18	19	20
End of Year Reserve Fund Balance	42,572	82,983	125,654	116,648	149,825
Capital Expenditures:	343,064	7,622	5,785	57,372	15,519
Total Revenue (all sources)	47,633	48,033	48,456	48,367	48,695



Appendix B: PROJECT PHOTOGRAPHS

Location:
Riverwatch
Gloucester, VA

Photo Taken by:
Kevin R. Giles, RS

Date:
03/11/16



Description:
Monument
entrance sign.

Photo Number
1



Description:
Asphalt paved
parking lot at
swimming pool
area.

Photo Number
2

Location:
Riverwatch
Gloucester, VA

Photo Taken by:
Kevin R. Giles, RS

Date:
03/11/16



Description:
Longitudinal
cracking
developing in
asphalt paving.

Photo Number
3



Description:
Concrete flatwork
at boat ramp.

Photo Number
4

Location:
Riverwatch
Gloucester, VA

Photo Taken by:
Kevin R. Giles, RS

Date:
03/11/16



Description:
Wood decking at
pool building.

Photo Number
5



Description:
Wood boat dock.

Photo Number
6

Location:
Riverwatch
Gloucester, VA

Photo Taken by:
Kevin R. Giles, RS

Date:
03/11/16



Description:
Aluminum fencing
at pool area.

Photo Number
7



Description:
Boat storage lot
with gravel surface
and wood
perimeter fencing.

Photo Number
8

Location:
Riverwatch
Gloucester, VA

Photo Taken by:
Kevin R. Giles, RS

Date:
03/11/16



Description:
Vegetation in
contact with wood
perimeter fencing.

Photo Number
9



Description:
Wood framed
pedestrian bridge
on walking trail
blocked from
access, in poor
condition.

Photo Number
10

Location:
Riverwatch
Gloucester, VA

Photo Taken by:
Kevin R. Giles, RS

Date:
03/11/16



Description:
Additional wood
framed pedestrian
bridge in poor
condition.

Photo Number
11



Description:
Small drainage
pipe under section
of walking trail.

Photo Number
12

Location:
Riverwatch
Gloucester, VA

Photo Taken by:
Kevin R. Giles, RS

Date:
03/11/16



Description:
Pool building, pool
cover.

Photo Number
13



Description:
Standing seam
metal roofing on
pool building.

Photo Number
14

Location:
Riverwatch
Gloucester, VA

Photo Taken by:
Kevin R. Giles, RS

Date:
03/11/16



Description:
Deterioration
noted in exterior
surfaces of pool
building.

Photo Number
15



Description:
Septic system
control panel.

Photo Number
16

Location:
Riverwatch
Gloucester, VA

Photo Taken by:
Kevin R. Giles, RS

Date:
03/11/16



Description:
Kitchen area, pool
furniture storage.

Photo Number
17



Description:
Restroom fixtures.

Photo Number
18

Location:
Riverwatch
Gloucester, VA

Photo Taken by:
Kevin R. Giles, RS

Date:
03/11/16



Description:
Water heater, pool
filter.

Photo Number
19



Description:
Custom street sign
in community.

Photo Number
20

	<p><u>Description:</u></p> <p>Photo Number</p> <p>22</p>
--	---

	<p><u>Description:</u></p> <p>Photo Number</p> <p>24</p>
--	---