

REPLACEMENT RESERVE REPORT FY 2017

FOREST RIDGE ASSOCIATION



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Community Management by:

FOREST RIDGE ASSOCIATION

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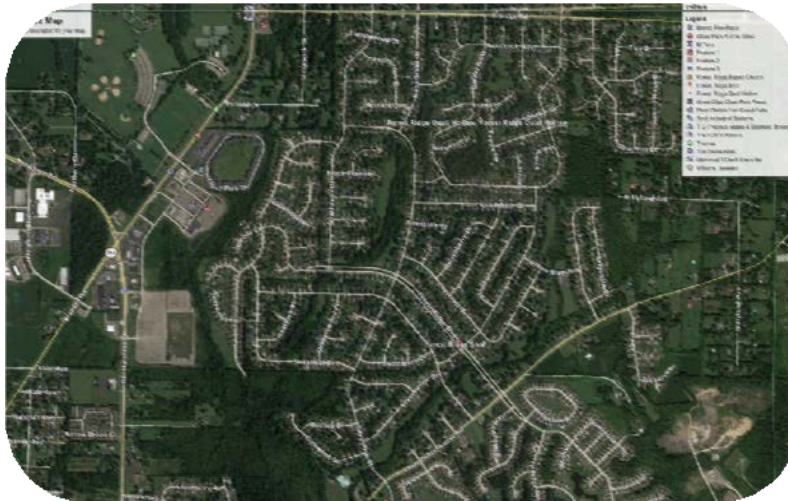
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REPLACEMENT RESERVE REPORT

FOREST RIDGE ASSOCIATION

HUBER HEIGHTS, OHIO 45424



Scope. Forest Ridge Association is a housing community located in Huber Heights, Ohio. Forest Ridge Association was constructed in 1964-1979. The community consists of pool house, three swimming pools, four tennis courts, two multipurpose courts, multiple tot lot areas, two storage buildings, many under road storm drainage culverts, sidewalks, and acres of green space with a total of 1,123 single family homes. The survey examined the common elements of the property, including:

- Asphalt drive and parking at swimming pool and one recreation area, and concrete curbs.
- Concrete sidewalks and covered concrete patio at pool house.
- Entry monuments with floodlights, stone, brick walls and wood siding, granite and two cast metal signs, asphalt shingle roof and wood siding. Metal and wood railing on wood bridge structure and decks and a wide wood gazebo with asphalt shingle roof. Gazebo surrounded by a concrete stamped red brick sidewalk.
- Flag pole with covered floodlight.
- Six metal light poles with single head fixtures
- Three swimming pools, concrete decks, guard chairs, diving board, four metal poles with two headed light fixtures, chain link perimeter fencing and an open pool house.
- Two metal equipment buildings, gravel drive, and concrete apron
- Six tot lot areas with benches (6).
- All building exteriors including: roofs, gutters, downspouts, windows, seven metal doors, two metal garage doors, office, restrooms, passage hall, coated with poured flexible matting material. Restrooms consisted of five partition stalls, two urinals, five wall hung sinks and five toilets. Also eight shower stalls covered with 1' rubber squares on concrete. Interior lighting consists of eleven, 4' two-bulb florescent fixtures.

Section A

Replacement Reserve Analysis

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Projected Annual Replacements
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Level of Service. This study has been performed as a Level I, Full Service Reserve Study as defined under the National Reserve Study Standards that have been adopted by the Community Associations Institute. As such, a complete component inventory was established based on information regarding commonly owned components provided by the community manager and upon quantities derived from field measurement and/or quantity takeoffs from to-scale engineering drawings. The condition of all commonly owned components was ascertained from a site visit and the visual inspection of each component by the Analyst. The life expectancy and the value of the components are provided based in part on these observations. The fund status and funding plan have been derived from analysis of this data.

Purpose. The purpose of this Replacement Reserve Study is to provide Forest Ridge Association (hereinafter called the Association) with an inventory of the common community facilities and infrastructure components that require periodic replacement. The Study includes a general view of the condition of these items and an effective financial plan to fund projected periodic replacements.

- **Inventory of Items Owned by the Association.** Section B Replacement Reserve Inventory lists the Projected Replacements of the commonly owned items that require periodic replacement using funding from Replacement Reserves. The Replacement Reserve Inventory also provides information about excluded items, which are items whose replacements are not scheduled for funding from Replacement Reserves.
- **Condition of Items Owned by the Association.** Section B Replacement Reserve Inventory includes our estimates of the normal economic life and the remaining economic life for the projected replacements. Section C Calendar of Projected Annual Replacements provides a year-by-year listing of the projected replacements. Section D Condition Assessment provides additional detail for items that are unique or deserving of attention because of their condition or the manner in which they have been treated in this Study.
- **Financial Plan.** The Association has a fiduciary responsibility to protect the appearance, value, and safety of the property and it is therefore essential the Association have a financial plan that provides funding for the projected replacements. In conformance with American Institute of Certified Public Accountant guidelines, Section A Replacement Reserve Analysis evaluates the current funding of Replacement Reserves as reported by the Association and recommends annual funding of Replacement Reserves by two generally accepted accounting methods; the Cash Flow Method and the Component Method. Section A Replacement Reserve Analysis includes graphic and tabular presentations of these methods and current Association funding. An Executive Summary of these calculations is provided on Page A1.

Basis. The data contained in this Replacement Reserve Study is based upon the following:

- The Request for Proposal submitted and executed by the Association.
- Our visual evaluation and measurements on March 01, 2017. Miller - Dodson Associates has visually inspected the common elements of the property in order to ascertain the remaining useful life and the replacement costs of these components.

Engineering Drawings. No architectural drawings or engineering site plans were available for review in connection with this study. We recommend the Association assemble a library of site and building plans of the entire community. Reproducible drawings should be stored and kept in a secure fireproof location. The Association will find these drawings to be a valuable resource in planning and executing future projects.

Current Funding. This reserve study has been prepared for Fiscal Year 2017 covering the period from January 1, 2017 to December 31, 2017. The Replacement Reserves on deposit as of 1/01/17 are reported to be \$77,000. The planned contribution for the fiscal year is \$15,000.

The property management agent has supplied the balance and contribution figures and confirmation or audit of these figures is beyond the scope of the study. For the purposes of this study, it is assumed that the annual contribution will be deposited at the end of each month.

Acknowledgement. Miller - Dodson Associates would like to acknowledge the assistance and input of Chris Hummer, Chris Tooley and Trevor Monger. They provided very helpful insight into the current operations at the property.

Analyst's Credentials. This study has been performed by John R. Stegmiller, who holds a Bachelor's Degree in Architecture in the College of Engineering at The Ohio State University. Mr. Stegmiller is a Registered Architect in the State of Ohio. Mr. Stegmiller is the owner of Stegmiller Architects, a design and construction management firm, which was established in Columbus, Ohio in 1939. Mr. Stegmiller is a retired Captain of the United States Naval Civil Engineer Corps, where he served for nearly 30 years both on active and reserve duty. Condition assessments of naval facilities and equipment represented a large part of his naval experience.

Respectfully submitted,



John Stegmiller
Reserve Analyst

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EXECUTIVE SUMMARY

The Forest Ridge Association Replacement Reserve Analysis uses the Cash Flow Method (CFM) to calculate Replacement Reserve funding for the periodic replacement of the 206 Projected Replacements identified in the Replacement Reserve Inventory.

\$95,647

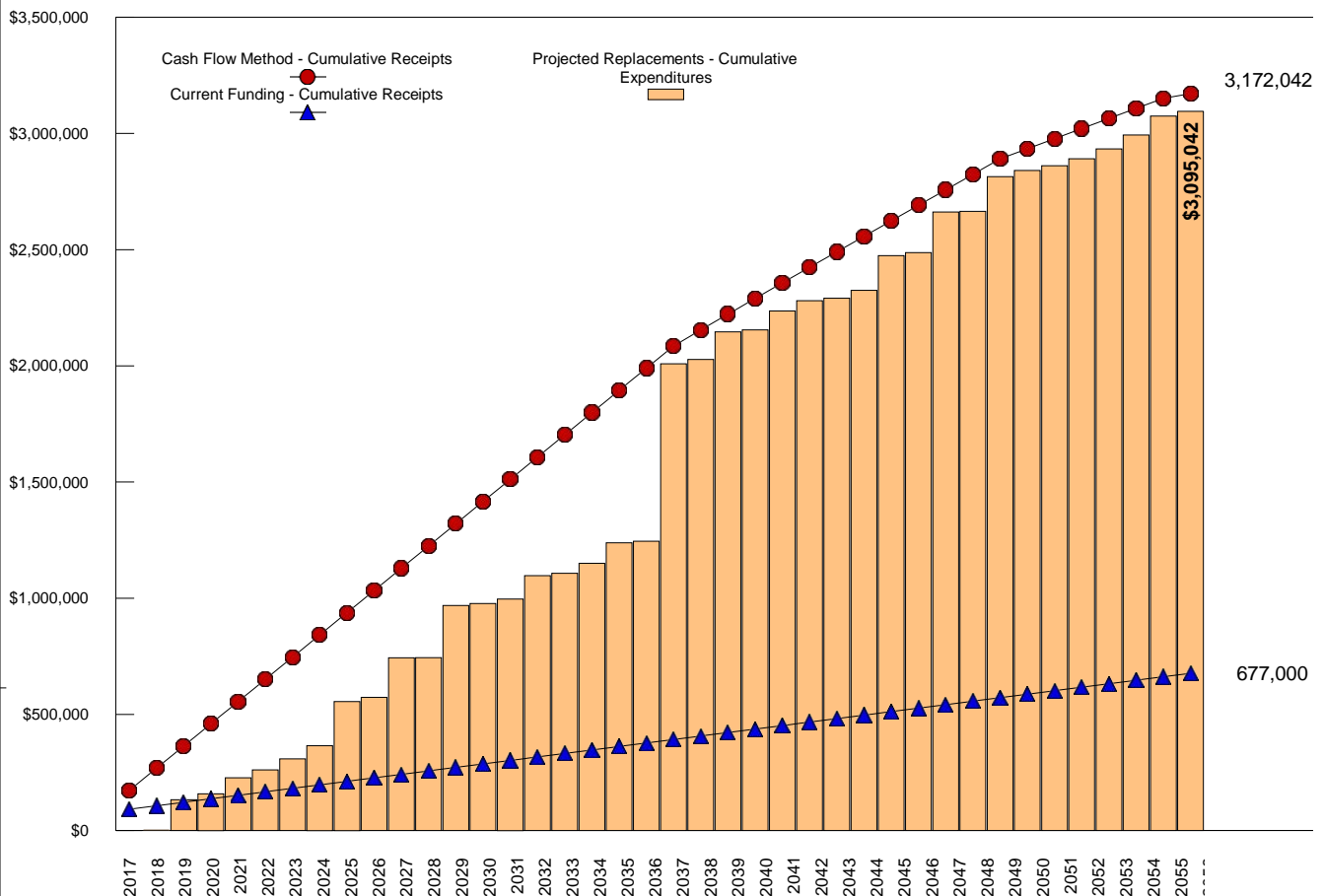
RECOMMENDED REPLACEMENT RESERVE FUNDING FOR THE STUDY YEAR, 2017

\$7.10 Per unit (average), minimum monthly funding of Replacement Reserves

We recommend the Association adopt a Replacement Reserve Funding Plan based on the annual funding recommendation above. Inflation adjusted funding for subsequent years is shown on Page A5.

Forest Ridge Association reports a Starting Balance of \$77,000 and Annual Funding totaling \$15,000. Current funding is inadequate to fund the \$3,095,042 of Projected Replacements scheduled in the Replacement Reserve Inventory over the 40-year Study Period. See Page A3 for a more detailed evaluation.

#1 - Cumulative Replacement Reserve Funding and Expenditures Graph



The Current Funding Objective as calculated by the Component Method (Fully Funded) is \$906,495 making the reserve account 8.5% funded. See the Appendix for more information on this method.

REPLACEMENT RESERVE ANALYSIS - GENERAL INFORMATION

The Forest Ridge Association Replacement Reserve Analysis calculations of recommended funding of Replacement Reserves by the Cash Flow Method and the evaluation of the Current Funding are based upon the same Study Year, Study Period, Beginning Balance, Replacement Reserve Inventory and Level of Service.

2017 STUDY YEAR

The Association reports that their accounting year begins on January 1, and the Study Year, the first year evaluated by the Replacement Reserve Analysis, begins on January 1, 2017.

40 Years STUDY PERIOD

The Replacement Reserve Analysis evaluates the funding of Replacement Reserves over a 40-year Study Period.

\$77,000 STARTING BALANCE

The Association reports Replacement Reserves on Deposit totaling \$77,000 at the start of the Study Year.

Level One LEVEL OF SERVICE

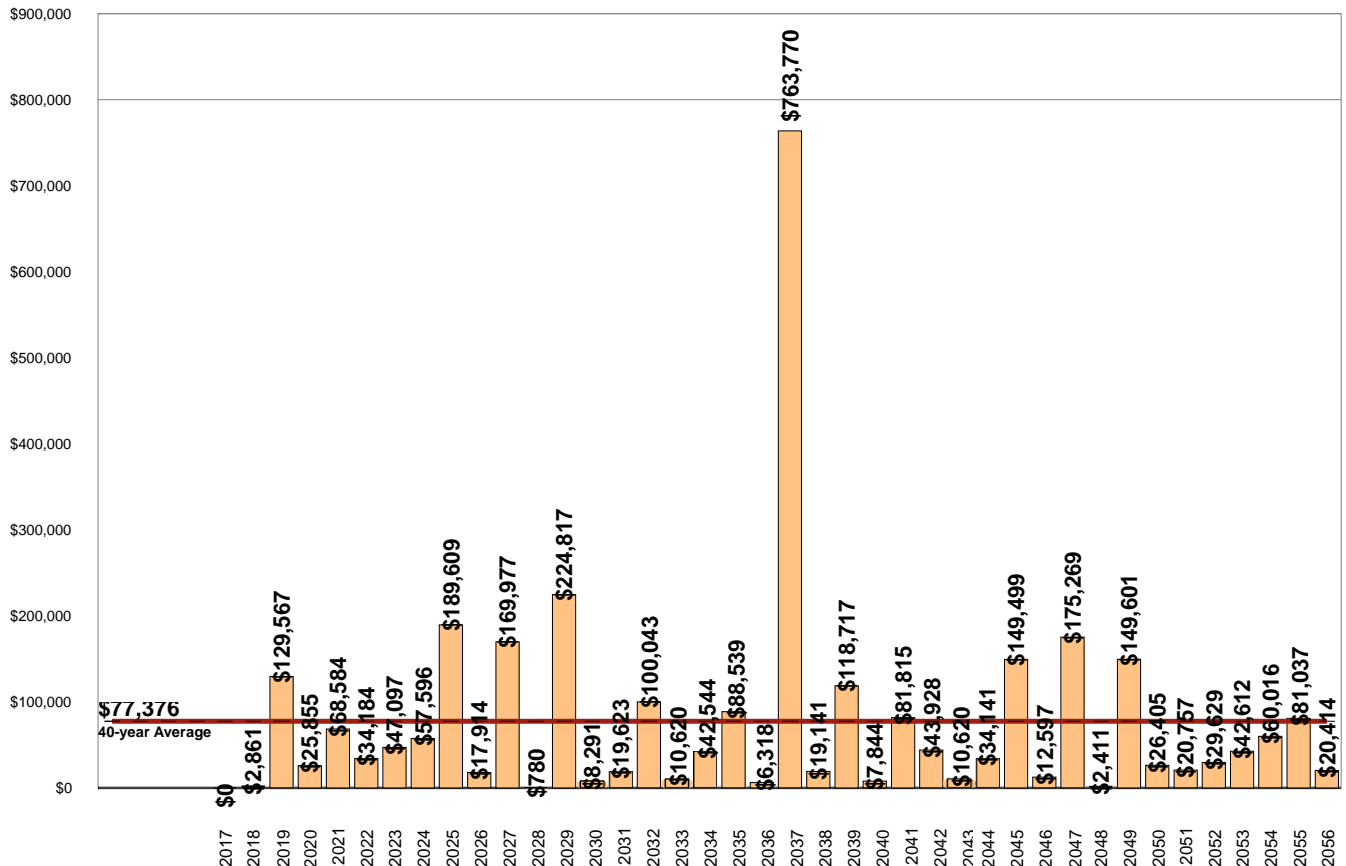
The Replacement Reserve Inventory has been developed in compliance with the National Reserve Study Standards for a Level One Study, as defined by the Community Associations Institute (CAI).

\$3,095,042 REPLACEMENT RESERVE INVENTORY - PROJECTED REPLACEMENTS

The Forest Ridge Association Replacement Reserve Inventory identifies 206 items that will require periodic replacement, that are to be funded from Replacement Reserves. We estimate the cost of these replacements will be \$3,095,042 over the 40-year Study Period. The Projected Replacements are divided into 21 major categories starting on Page B3. Pages B1-B2 provide detailed information on the Replacement Reserve Inventory.

#2 - Annual Expenditures for Projected Replacements Graph

This graph shows annual expenditures for Projected Replacements over the 40-year Study Period. The red line shows the average annual expenditure of \$77,376. Section C provides a year by year Calendar of these expenditures.



UPDATING

UPDATING OF THE FUNDING PLAN

The Association has a responsibility to review the Funding Plan annually. The review should include a comparison and evaluation of actual reserve funding with recommended levels shown on Page A4 and A5. The Projected Replacements listed on Page C2 should be compared with any replacements accomplished and funded from Replacement Reserves. Discrepancies should be evaluated and if necessary, the Reserve Study should be updated or a new study commissioned. We recommend annual increases in replacement reserve funding to account for the impact of inflation. Inflation Adjusted Funding is discussed on Page A5.

UPDATING OF THE REPLACEMENT RESERVE STUDY

At a minimum, the Replacement Reserve Study should be professionally updated every three to five years or after completion of a major replacement project. Updating should also be considered if during the annual review of the Funding Plan, discrepancies are noted between projected and actual reserve funding or replacement costs. Updating may also be necessary if there is a meaningful discrepancy between the actual inflation rate and the inflation rate used for the Inflation Adjusted Funding of Replacement Reserves on Page A5.

ANNUAL EXPENDITURES AND CURRENT FUNDING

The annual expenditures that comprise the \$3,095,042 of Projected Expenditures over the 40-year Study Period and the impact of the Association continuing to fund Replacement Reserves at the current level are detailed in Table 3.

#3 - Table of Annual Expenditures and Current Funding Data - Years 1 through 40										
Year	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Starting Balance	\$77,000									
Projected Replacements		(\$2,861)	(\$129,567)	(\$25,855)	(\$68,584)	(\$34,184)	(\$47,097)	(\$57,596)	(\$189,609)	(\$17,914)
Annual Deposit	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000
End of Year Balance	\$92,000	\$104,139	(\$10,428)	(\$21,283)	(\$74,867)	(\$94,050)	(\$126,147)	(\$168,743)	(\$343,353)	(\$346,267)
Cumulative Expenditures		(\$2,861)	(\$132,428)	(\$158,283)	(\$226,867)	(\$261,050)	(\$308,147)	(\$365,743)	(\$555,353)	(\$573,267)
Cumulative Receipts	\$92,000	\$107,000	\$122,000	\$137,000	\$152,000	\$167,000	\$182,000	\$197,000	\$212,000	\$227,000
Year	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Projected Replacements	(\$169,977)	(\$780)	(\$224,817)	(\$8,291)	(\$19,623)	(\$100,043)	(\$10,620)	(\$42,544)	(\$88,539)	(\$6,318)
Annual Deposit	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000
End of Year Balance	(\$501,244)	(\$487,024)	(\$696,841)	(\$690,132)	(\$694,755)	(\$779,798)	(\$775,418)	(\$802,962)	(\$876,501)	(\$867,819)
Cumulative Expenditures	(\$743,244)	(\$744,024)	(\$968,841)	(\$977,132)	(\$996,755)	(\$1,096,798)	(\$1,107,418)	(\$1,149,962)	(\$1,238,501)	(\$1,244,819)
Cumulative Receipts	\$242,000	\$257,000	\$272,000	\$287,000	\$302,000	\$317,000	\$332,000	\$347,000	\$362,000	\$377,000
Year	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046
Projected Replacements	(\$763,770)	(\$19,141)	(\$118,717)	(\$7,844)	(\$81,815)	(\$43,928)	(\$10,620)	(\$34,141)	(\$149,499)	(\$12,597)
Annual Deposit	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000
End of Year Balance	(\$1,616,588)	(\$1,620,729)	(\$1,724,446)	(\$1,717,290)	(\$1,784,105)	(\$1,813,033)	(\$1,808,653)	(\$1,827,794)	(\$1,962,294)	(\$1,959,891)
Cumulative Expenditures	(\$2,008,588)	(\$2,027,729)	(\$2,146,446)	(\$2,154,290)	(\$2,236,105)	(\$2,280,033)	(\$2,290,653)	(\$2,324,794)	(\$2,474,294)	(\$2,486,891)
Cumulative Receipts	\$392,000	\$407,000	\$422,000	\$437,000	\$452,000	\$467,000	\$482,000	\$497,000	\$512,000	\$527,000
Year	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056
Projected Replacements	(\$175,269)	(\$2,411)	(\$149,601)	(\$26,405)	(\$20,757)	(\$29,629)	(\$42,612)	(\$60,016)	(\$81,037)	(\$20,414)
Annual Deposit	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000
End of Year Balance	(\$2,120,160)	(\$2,107,571)	(\$2,242,172)	(\$2,253,577)	(\$2,259,334)	(\$2,273,963)	(\$2,301,574)	(\$2,346,591)	(\$2,412,628)	(\$2,418,042)
Cumulative Expenditures	(\$2,662,160)	(\$2,664,571)	(\$2,814,172)	(\$2,840,577)	(\$2,861,334)	(\$2,890,963)	(\$2,933,574)	(\$2,993,591)	(\$3,074,628)	(\$3,095,042)
Cumulative Receipts	\$542,000	\$557,000	\$572,000	\$587,000	\$602,000	\$617,000	\$632,000	\$647,000	\$662,000	\$677,000

EVALUATION OF CURRENT FUNDING

The evaluation of Current Funding (Starting Balance of \$77,000 & annual funding of \$15,000), is done in today's dollars with no adjustments for inflation or interest earned on Replacement Reserves. The evaluation assumes Replacement Reserves will only be used for the 206 Projected Replacements identified in the Replacement Reserve Inventory and that the Association will continue Annual Funding of \$15,000 throughout the 40-year Study Period.

Annual Funding of \$15,000 is approximately 16 percent of the \$95,647 recommended Annual Funding calculated by the Cash Flow Method for 2017, the Study Year.

Evaluation of the 206 Projected Replacements calculates an average annual expenditure over the next 40 years of \$77,376. Annual funding of \$15,000 is 19 percent of the average annual expenditure.

Our calculations identify funding shortfalls in 38 years of the Study Period with the initial shortfall in 2019. The largest shortfall, \$-2,418,042, occurs in 2056. All shortfalls can be seen and evaluated in Table 3 above.

In summary, Current Funding as reported by the Association and shown above, does not provide adequate funding for the \$3,095,042 of Projected Replacements scheduled in the Replacement Reserve Inventory over the Study Period.

CASH FLOW METHOD FUNDING

\$95,647

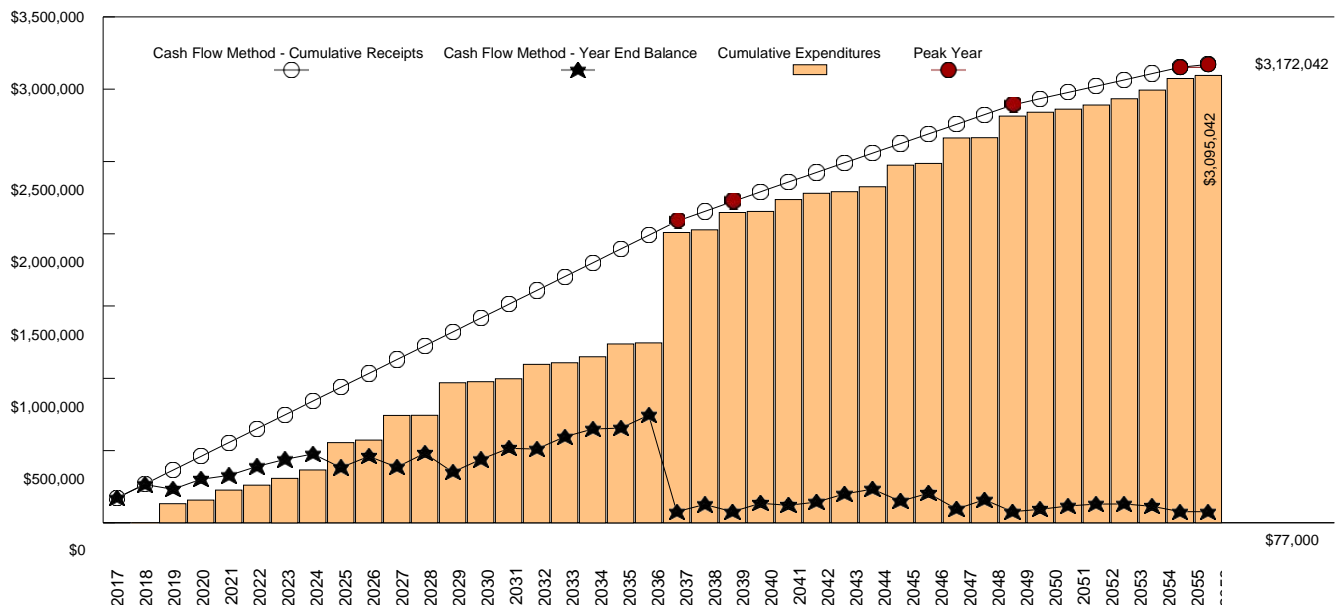
RECOMMENDED REPLACEMENT RESERVE FUNDING FOR 2017

\$7.10 Per unit (average), minimum monthly funding of Replacement Reserves

Recommended Replacement Reserve Funding has been calculated using the Cash Flow Method (also called the Straight Line or Threshold Method). This method calculates a constant annual funding between peaks in cumulative expenditures, while maintaining a Minimum Balance (threshold) in the Peak Years.

- Peak Years. The First Peak Year occurs in 2037 with Replacement Reserves on Deposit dropping to the Minimum Balance after the completion of \$2,008,588 of replacements from 2017 to 2037. Recommended funding declines from \$95,647 in 2037 to \$68,929 in 2038. Peak Years are identified in Chart 4 and Table 5.
- Minimum Balance. The calculations assume a Minimum Balance of \$77,000 in Replacement Reserves. This is approx. 12 months of average expenditures based on the \$77,376, 40-year average annual expenditure.
- Cash Flow Method Study Period. Cash Flow Method calculates funding for \$3,095,042 of expenditures over the 40-year Study Period. It does not include funding for any projects beyond 2056 and in 2056, the end of year balance will always be the Minimum Balance.

#4 - Cash Flow Method - Graph of Cumulative Receipts and Expenditures - Years 1 through 40



#5 - Cash Flow Method - Table of Receipts & Expenditures - Years 1 through 40

Year	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Starting Balance	\$77,000									
Projected Replacements		(\$2,861)	(\$129,567)	(\$25,855)	(\$68,584)	(\$34,184)	(\$47,097)	(\$57,596)	(\$189,609)	(\$17,914)
Annual Deposit	\$95,647	\$95,647	\$95,647	\$95,647	\$95,647	\$95,647	\$95,647	\$95,647	\$95,647	\$95,647
End of Year Balance	\$172,647	\$265,433	\$231,513	\$301,305	\$328,368	\$389,832	\$438,382	\$476,433	\$382,471	\$460,204
Cumulative Expenditures		\$2,861	\$132,428	\$158,283	\$226,867	\$261,050	\$308,147	\$365,743	\$555,353	\$573,267
Cumulative Receipts	\$172,647	\$268,294	\$363,941	\$459,588	\$555,235	\$650,882	\$746,529	\$842,176	\$937,824	\$1,033,471
Year	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Projected Replacements	(\$169,977)	(\$780)	(\$224,817)	(\$8,291)	(\$19,623)	(\$100,043)	(\$10,620)	(\$42,544)	(\$88,539)	(\$6,318)
Annual Deposit	\$95,647	\$95,647	\$95,647	\$95,647	\$95,647	\$95,647	\$95,647	\$95,647	\$95,647	\$95,647
End of Year Balance	\$385,874	\$480,741	\$351,570	\$438,927	\$514,951	\$510,555	\$595,582	\$648,686	\$655,794	\$745,122
Cumulative Expenditures	(\$743,244)	(\$744,024)	(\$968,841)	(\$977,132)	(\$996,755)	(\$1,096,798)	(\$1,107,418)	(\$1,149,962)	(\$1,238,501)	(\$1,244,819)
Cumulative Receipts	\$1,129,118	\$1,224,765	\$1,320,412	\$1,416,059	\$1,511,706	\$1,607,353	\$1,703,000	\$1,798,647	\$1,894,294	\$1,989,941
Year	1st Peak - 2037	2038	2nd Peak - 2039	2040	2041	2042	2043	2044	2045	2046
Projected Replacements	(\$763,770)	(\$19,141)	(\$118,717)	(\$7,844)	(\$81,815)	(\$43,928)	(\$10,620)	(\$34,141)	(\$149,499)	(\$12,597)
Annual Deposit	\$95,647	\$68,929	\$68,929	\$66,773	\$66,773	\$66,773	\$66,773	\$66,773	\$66,773	\$66,773
End of Year Balance	\$77,000	\$126,788	\$77,000	\$135,928	\$120,886	\$143,730	\$199,883	\$232,515	\$149,788	\$203,963
Cumulative Expenditures	(\$2,008,588)	(\$2,027,729)	(\$2,146,446)	(\$2,154,290)	(\$2,236,105)	(\$2,280,033)	(\$2,290,653)	(\$2,324,794)	(\$2,474,294)	(\$2,486,891)
Cumulative Receipts	\$2,085,588	\$2,154,517	\$2,223,446	\$2,290,218	\$2,356,991	\$2,423,764	\$2,490,536	\$2,557,309	\$2,624,081	\$2,690,854
Year	2047	2048	3rd Peak - 2049	2050	2051	2052	2053	2054	4th Peak - 2055	5th Peak - 2056
Projected Replacements	(\$175,269)	(\$2,411)	(\$149,601)	(\$26,405)	(\$20,757)	(\$29,629)	(\$42,612)	(\$60,016)	(\$81,037)	(\$20,414)
Annual Deposit	\$66,773	\$66,773	\$66,773	\$43,409	\$43,409	\$43,409	\$43,409	\$43,409	\$43,409	\$20,414
End of Year Balance	\$95,466	\$159,828	\$77,000	\$94,004	\$116,656	\$130,437	\$131,235	\$114,628	\$77,000	\$77,000
Cumulative Expenditures	(\$2,662,160)	(\$2,664,571)	(\$2,814,172)	(\$2,840,577)	(\$2,861,334)	(\$2,890,963)	(\$2,933,574)	(\$2,993,591)	(\$3,074,628)	(\$3,095,042)
Cumulative Receipts	\$2,757,627	\$2,824,399	\$2,891,172	\$2,934,581	\$2,977,990	\$3,021,400	\$3,064,809	\$3,108,219	\$3,151,628	\$3,172,042

INFLATION ADJUSTED FUNDING

The Cash Flow Method calculations on Page A4 have been done in today's dollars with no adjustment for inflation. At Miller + Dodson, we believe that long-term inflation forecasting is effective at demonstrating the power of compounding, not at calculating appropriate funding levels for Replacement Reserves. We have developed this proprietary model to estimate the short-term impact of inflation on Replacement Reserve funding.

\$95,647 2017 - CASH FLOW METHOD RECOMMENDED FUNDING

The 2017 Study Year calculations have been made using current replacement costs (see Page B2), modified by the Analyst for any project specific conditions.

\$100,466 2018 - INFLATION ADJUSTED FUNDING

A new analysis calculates 2018 funding based on three assumptions;

- ☐ Replacement Reserves on Deposit totaling \$172,647 on January 1, 2018.
- ☐ No Expenditures from Replacement Reserves in 2017.

- ☐ Construction Cost Inflation of 4.50 percent in 2017.

The \$100,466 inflation adjusted funding in 2018 is a 5.04 percent increase over the non-inflation adjusted 2018 funding of \$95,647.

\$105,746 2019 - INFLATION ADJUSTED FUNDING

A new analysis calculates 2019 funding based on three assumptions;

- ☐ Replacement Reserves on Deposit totaling \$270,123 on January 1, 2019.
- ☐ All 2018 Projected Replacements listed on Page C2 accomplished at a cost to Replacement Reserves less than \$2,990.
- ☐ Construction Cost Inflation of 4.50 percent in 2018.

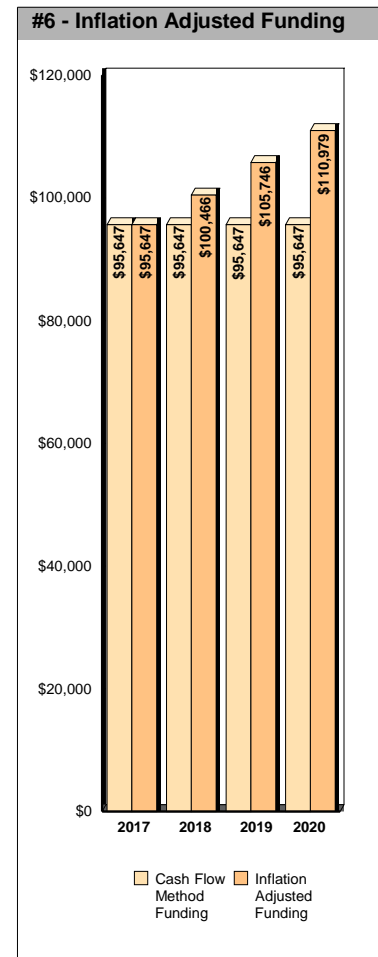
The \$105,746 inflation adjusted funding in 2019 is a 10.56 percent increase over the non-inflation adjusted 2019 funding of \$95,647.

\$110,979 2020 - INFLATION ADJUSTED FUNDING

A new analysis calculates 2020 funding based on three assumptions;

- ☐ Replacement Reserves on Deposit totaling \$234,380 on January 1, 2020.
- ☐ All 2019 Projected Replacements listed on Page C2 accomplished at a cost to Replacement Reserves less than \$141,490.
- ☐ Construction Cost Inflation of 4.50 percent in 2019.

The \$110,979 inflation adjusted funding in 2020 is a 16.03 percent increase over the non-inflation adjusted funding of \$95,647.



YEAR FIVE & BEYOND

The inflation adjusted funding calculations outlined above are not intended to be a substitute for periodic evaluation of common elements by an experienced Reserve Analyst. Industry Standards, lender requirements, and many state and local statutes require a Replacement Reserve Study be professionally updated every 3 to 5 years.

INFLATION ADJUSTMENT

Prior to approving a budget based upon the 2018, 2019 and 2020 inflation adjusted funding calculations above, the 4.50 percent base rate of inflation used in our calculations should be compared to rates published by the Bureau of Labor Statistics. If there is a significant discrepancy (over 1 percent), contact Miller Dodson + Associates prior to using the Inflation Adjusted Funding.

INTEREST ON RESERVES

The recommended funding calculations do not account for interest earned on Replacement Reserves.

In 2017, based on a 1.00 percent interest rate, we estimate the Association may earn \$1,248 on an average balance of \$124,824, \$2,214 on an average balance of \$221,385 in 2018, and \$2,523 on \$252,252 in 2019. The Association may elect to attribute 100 percent of the earned interest to Reserves, resulting in a reduction in the 2017 funding from \$95,647 to \$94,399 (a 1.31 percent reduction), \$100,466 to \$98,253 in 2018 (a 2.20 percent reduction), and \$105,746 to \$103,224 in 2019 (a 2.39 percent reduction).

REPLACEMENT RESERVE STUDY - SUPPLEMENTAL COMMENTS

- ☐ Forest Ridge Association has 1123 units. The type of property is a homeowner association.
- ☐ The Cash Flow Method calculates the minimum annual funding necessary to prevent Replacement Reserves from dropping below the Minimum Balance. Failure to fund at least the recommended levels may result in funding not being available for the Projected Replacements listed in the Replacement Reserve Inventory.
- ☐ The accuracy of the Replacement Reserve Analysis is dependent upon expenditures from Replacement Reserves being made ONLY for the 206 Projected Replacements specifically listed in the Replacement Reserve Inventory. The inclusion/exclusion of items from the Replacement Reserve Inventory is discussed on Page B1.

REPLACEMENT RESERVE INVENTORY GENERAL INFORMATION

Forest Ridge Association - Replacement Reserve Inventory identifies 219 items. Two types of items are identified, Projected Replacements and Excluded Items:

- **PROJECTED REPLACEMENTS.** 206 of the items are Projected Replacements and the periodic replacements of these items are scheduled for funding from Replacement Reserves. The Projected Replacements have an estimated one-time replacement cost of \$1,930,407. Replacements totaling \$3,095,042 are scheduled in the Replacement Reserve Inventory over the 40-year Study Period.

Projected Replacements are the replacement of commonly-owned physical assets that require periodic replacement and whose replacement is to be funded from Replacement Reserves.

- **EXCLUDED ITEMS.** 13 of the items are Excluded Items, and expenditures for these items are NOT scheduled for funding from Replacement Reserves. The accuracy of the calculations made in the Replacement Reserve Analysis is dependent on expenditures NOT being made for Excluded Items. The Excluded Items are listed in the Replacement Reserve Inventory to identify specific items and categories of items that are not to be funded from Replacement Reserves. There are multiple categories of items that are typically excluded from funding by Replacement Reserves, including but not limited to:

Tax Code. The United States Tax Code grants very favorable tax status to Replacement Reserves, conditioned on expenditures being made within certain guidelines. These guidelines typically exclude maintenance activities, minor repairs and capital improvements.

Value. Items with a replacement cost of less than \$1,000 and/or a normal economic life of less than 3 years are typically excluded from funding from Replacement Reserves. This exclusion should reflect Association policy on the administration of Replacement Reserves. If the Association has selected an alternative level, it will be noted in the Replacement Reserve Inventory - General Comments on Page B2.

Long-lived Items. Items that when properly maintained, can be assumed to have a life equal to the property as a whole, are typically excluded from the Replacement Reserve Inventory.

Unit improvements. Items owned by a single unit and where the items serve a single unit are generally assumed to be the responsibility of that unit, not the Association.

Other non-common improvements. Items owned by the local government, public and private utility companies, the United States Postal Service, Master Associations, state and local highway authorities, etc., may be installed on property that is owned by the Association. These types of items are generally not the responsibility of the Association and are excluded from the Replacement Reserve Inventory.

The rationale for the exclusion of an item from funding by Replacement Reserves is discussed in more detail in the 'Comments' sections of the Section B - Replacement Reserve Inventory.

- **CATEGORIES.** The 219 items included in the Forest Ridge Association Replacement Reserve Inventory are divided into 21 major categories. Each category is printed on a separate page, Pages B3 to B22.
- **LEVEL OF SERVICE.** This Replacement Reserve Inventory has been developed in compliance with the standards established for a Level One Study - Full Service, as defined by the National Reserve Study Standards, established in 1998 by Community Associations Institute, which states:

A Level I - Full Service Reserve Study includes the computation of complete component inventory information regarding commonly owned components provided by the Association, quantities derived from field measurements and/or quantity takeoffs from to-scale engineering drawings that may be made available. The condition of all components is ascertained from a visual inspection of each component by the analyst. The remaining economic life and the value of the components are provided based on these observations and the funding status and funding plan are then derived from analysis of this data.

REPLACEMENT RESERVE INVENTORY - GENERAL INFORMATION (cont'd)

- ☐ INVENTORY DATA. Each of the 206 Projected Replacements listed in the Replacement Reserve Inventory includes the following data:

Item Number. The Item Number is assigned sequentially and is intended for identification purposes only.

Item Description. We have identified each item included in the Inventory. Additional information may be included in the Comments section at the bottom of each page of the Inventory.

Units. We have used standard abbreviations to identify the number of units including SF-square feet, LF-lineal feet, SY-square yard, LS-lump sum, EA-each, and PR-pair. Non-standard abbreviations are noted in the Comments section at the bottom of the page.

Number of Units. The methods used to develop the quantities are discussed in "Level of Service" above.

Unit Replacement Cost. We use four sources to develop the unit cost data shown in the Inventory; actual replacement cost data provided by the client, information provided by local contractors and suppliers, industry standard estimating manuals, and a cost database we have developed based upon our detailed interviews with contractors and service providers who are specialists in their respective lines of work.

Normal Economic Life (Yrs). The number of years that a new and properly installed item should be expected to remain in service.

Remaining Economic Life (Yrs). The estimated number of years before an item will need to be replaced. In "normal" conditions, this could be calculated by subtracting the age of the item from the Normal Economic Life of the item, but only rarely do physical assets age "normally". Some items may have longer or shorter lives depending on many factors such as environment, initial quality of the item, maintenance, etc.

Total Replacement Cost. This is calculated by multiplying the Unit Replacement Cost by the Number of Units.

Each of the 13 Excluded Items includes the Item Description, Units, and Number of Units. Many of the Excluded Items are listed as a 'Lump Sum' with a quantity of 1. For the Excluded Items, this indicates that all of the items identified by the 'Item Description' are excluded from funding by Replacement Reserves.

- ☐ REVIEW OF EXPENDITURES. This Replacement Reserve Study should be reviewed by an accounting professional representing the Association prior to implementation.
- ☐ PARTIAL FUNDING. Items may have been included in the Replacement Reserve Inventory at less than 100 percent of their full quantity and/or replacement cost. This is done on items that will never be replaced in their entirety, but which may require periodic replacements over an extended period of time. The assumptions that provide the basis for any partial funding are noted in the Comments section.
- ☐ REMAINING ECONOMIC LIFE GREATER THAN 40 YEARS. The calculations do not include funding for initial replacements beyond 40 years. These replacements are included in this Study for tracking and evaluation. They should be included for funding in future Studies, when they enter the 40-year window.

SITE COMPONENTS
PROJECTED REPLACEMENTS

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST (\$)
1	Asphalt pavement, mill & overlay,(pp)	sf	20,203	\$1.65	20	10	\$33,335
2	Asphalt pavement, mill & overlay (rp)	sf	6,694	\$1.65	20	10	\$11,045
3	Asphalt pavement, seal coat (pp,rp)	sf	26,897	\$0.20	5	3	\$5,379
4	Gravel area (replen. 3/8"/sf)(mb,tc pr)	sf	4,100	\$1.25	10	4	\$5,125
5	Concrete apron (4) (6%) (pp,rp,mb)	sf	52	\$11.25	60	3	\$585
6	Concrete apron (4) (6%) (pp,rp,mb)	sf	52	\$11.25	60	9	\$585
7	Concrete apron (4) (6%) (pp,rp,mb)	sf	52	\$11.25	60	15	\$585
8	Concrete apron (4) (6%) (pp,rp,mb)	sf	52	\$11.25	60	21	\$585
9	Concrete apron (4) (6%) (pp,rp,mb)	sf	52	\$11.25	60	27	\$585
10	Concrete apron (4) (6%) (pp,rp,mb)	sf	52	\$11.25	60	33	\$585
11	Concrete apron (4) (6%) (pp,rp,mb)	sf	52	\$11.25	60	39	\$585
12	Concrete apron (4) (6%) (pp,rp,mb)	sf	52	\$11.25	60	45	\$585
13	Concrete apron (4) (6%) (pp,rp,mb)	sf	52	\$11.25	60	51	\$585
14	Concrete apron (4) (6%) (pp,rp,mb)	sf	52	\$11.25	60	57	\$585
15	Concrete, wheel stops (pp)	ea	46	\$85.50	20	10	\$3,933

SITE COMPONENTS - Replacement Costs - Subtotal \$64,667

SITE COMPONENTS
COMMENTS

- ☐ We have assumed that the Association will replace the asphalt pavement by the installation of a 2 inch thick overlay. The pavement will need to be milled prior to the installation of the overlay. Milling and the cost of minor repairs (5 to 10 percent of the total area) to the base materials and bearing soils beneath the pavement are included in the cost shown above.
- ☐ Assume gravel apron at mechanical buildings to be replaced by concrete apron. (mb)

SITE COMPONENTS (cont.)
PROJECTED REPLACEMENTS

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST (\$)
16	Concrete picnic slab (6%)(ph)	sf	60	\$12.50	60	6	\$750
17	Concrete picnic slab (6%)(ph)	sf	60	\$12.50	60	12	\$750
18	Concrete picnic slab (6%)(ph)	sf	60	\$12.50	60	18	\$750
19	Concrete picnic slab (6%)(ph)	sf	60	\$12.50	60	24	\$750
20	Concrete picnic slab (6%)(ph)	sf	60	\$12.50	60	30	\$750
21	Concrete picnic slab (6%)(ph)	sf	60	\$12.50	60	36	\$750
22	Concrete picnic slab (6%)(ph)	sf	60	\$12.50	60	42	\$750
23	Concrete picnic slab (6%)(ph)	sf	60	\$12.50	60	48	\$750
24	Concrete picnic slab (6%)(ph)	sf	60	\$12.50	60	54	\$750
25	Concrete picnic slab (6%)(ph)	sf	60	\$12.50	60	60	\$750
26	Concrete sidewalk (6%)	sf	2,058	\$9.10	60	6	\$18,728
27	Concrete sidewalk (6%)	sf	2,058	\$9.10	60	12	\$18,728
28	Concrete sidewalk (6%)	sf	2,058	\$9.10	60	18	\$18,728
29	Concrete sidewalk (6%)	sf	2,058	\$9.10	60	24	\$18,728
30	Concrete sidewalk (6%)	sf	2,058	\$9.10	60	30	\$18,728
31	Concrete sidewalk (6%)	sf	2,058	\$9.10	60	36	\$18,728
32	Concrete sidewalk (6%)	sf	2,058	\$9.10	60	42	\$18,728
33	Concrete sidewalk (6%)	sf	2,058	\$9.10	60	48	\$18,728
34	Concrete sidewalk (6%)	sf	2,058	\$9.10	60	54	\$18,728
35	Concrete sidewalk (6%)	sf	2,058	\$9.10	60	60	\$18,728

SITE COMPONENTS (cont.) - Replacement Costs - Subtotal \$194,778

SITE COMPONENTS (cont.)
COMMENTS

- ☐ For concrete components and other roadway shoulder work, we have assumed that the Association will conduct concrete component replacement projects in conjunction with the asphalt pavement and other concrete or right-of-way replacement projects.

SITE COMPONENTS (cont.)

PROJECTED REPLACEMENTS

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST (\$)
36	Concrete pool deck (6%)	sf	793	\$10.85	60	3	\$8,604
37	Concrete pool deck (6%)	sf	793	\$10.85	60	9	\$8,604
38	Concrete pool deck (6%)	sf	793	\$10.85	60	15	\$8,604
39	Concrete pool deck (6%)	sf	793	\$10.85	60	21	\$8,604
40	Concrete pool deck (6%)	sf	793	\$10.85	60	27	\$8,604
41	Concrete pool deck (6%)	sf	793	\$10.85	60	33	\$8,604
42	Concrete pool deck (6%)	sf	793	\$10.85	60	39	\$8,604
43	Concrete pool deck (6%)	sf	793	\$10.85	60	45	\$8,604
44	Concrete pool deck (6%)	sf	793	\$10.85	60	51	\$8,604
45	Concrete pool deck (6%)	sf	793	\$10.85	60	57	\$8,604
46	Concrete curb, barrier (6%) (rp)	ft	24	\$35.50	60	3	\$852
47	Concrete curb, barrier (6%) (rp)	ft	24	\$35.50	60	9	\$852
48	Concrete curb, barrier (6%) (rp)	ft	24	\$35.50	60	15	\$852
49	Concrete curb, barrier (6%) (rp)	ft	24	\$35.50	60	21	\$852
50	Concrete curb, barrier (6%) (rp)	ft	24	\$35.50	60	27	\$852
51	Concrete curb, barrier (6%) (rp)	ft	24	\$35.50	60	33	\$852
52	Concrete curb, barrier (6%) (rp)	ft	24	\$35.50	60	39	\$852
53	Concrete curb, barrier (6%) (rp)	ft	24	\$35.50	60	45	\$852
54	Concrete curb, barrier (6%) (rp)	ft	24	\$35.50	60	51	\$852
55	Concrete curb, barrier (6%) (rp)	ft	24	\$35.50	60	57	\$852

SITE COMPONENTS (cont.) - Replacement Costs - Subtotal \$94,561

SITE COMPONENTS (cont.)

COMMENTS

- ☐ For concrete components and other roadway shoulder work, we have assumed that the Association will conduct concrete component replacement projects in conjunction with the asphalt pavement and other concrete or right-of-way replacement projects.

SITE COMPONENTS (cont.)

PROJECTED REPLACEMENTS

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST (\$)
56	Wood walkway, PTL structure, ramp 7'w	sf	72	\$32.50	20	15	\$2,340
57	Wood ped. bridge, PTL structure	sf	252	\$52.40	30	15	\$13,205
58	Wood PTL decking	sf	324	\$11.25	15	10	\$3,645
59	Wood PTL railing, 2-bd	ft	104	\$22.45	15	3	\$2,335
60	Wood ped. bridge, PTL structure 4'w	sf	148	\$52.40	30	15	\$7,755
61	Wood ped. bridge, PTL deck	sf	148	\$11.25	15	10	\$1,665
62	Metal pipe railing, 2-strand	ft	54	\$49.25	45	25	\$2,660
63	Wood ped/ trk. bridge, PTL struc. 12'w	sf	180	\$62.20	30	15	\$11,196
64	Wood ped/ trk. bridge, PTL, deck	sf	180	\$11.25	30	10	\$2,025
65	Wood PTL railing, 3-bd w/handrail	ft	30	\$27.80	15	4	\$834
66	Retaining walls, rr-ties ,along bank	sf	120	\$32.65	20	18	\$3,918

SITE COMPONENTS (cont.) - Replacement Costs - Subtotal \$51,577

SITE COMPONENTS (cont.)

COMMENTS

SITE COMPONENTS (cont.)

PROJECTED REPLACEMENTS

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST (\$)
67	Concrete culvert bnk. slopes (6%)	sf	432	\$10.75	60	6	\$4,644
68	Concrete culvert bnk. slopes (6%)	sf	432	\$10.75	60	12	\$4,644
69	Concrete culvert bnk. slopes (6%)	sf	432	\$10.75	60	18	\$4,644
70	Concrete culvert bnk. slopes (6%)	sf	432	\$10.75	60	24	\$4,644
71	Concrete culvert bnk. slopes (6%)	sf	432	\$10.75	60	30	\$4,644
72	Concrete culvert bnk. slopes (6%)	sf	432	\$10.75	60	36	\$4,644
73	Concrete culvert bnk. slopes (6%)	sf	432	\$10.75	60	42	\$4,644
74	Concrete culvert bnk. slopes (6%)	sf	432	\$10.75	60	48	\$4,644
75	Concrete culvert bnk. slopes (6%)	sf	432	\$10.75	60	54	\$4,644
76	Concrete culvert bnk. slopes (6%)	sf	432	\$10.75	60	60	\$4,644
77	Concrete culvert bulkheads (14) (10%)	sf	260	\$21.70	10	40	\$5,642

SITE COMPONENTS (cont.) - Replacement Costs - Subtotal \$52,082

SITE COMPONENTS (cont.)

COMMENTS

SITE COMPONENTS (cont.)
PROJECTED REPLACEMENTS

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST (\$)
78	Vehicular entry gate, swing (3) (pl,rc)	ft	3	\$1,980.00	10	6	\$5,940
79	Entrance mon, asphalt shingle roof (em)	sf	156	\$5.10	30	15	\$796
80	Entrance monument, wood trim,soffit	sf	140	\$8.50	25	10	\$1,190
81	Entrance monument, granite carved sign	sf	15	\$150.00	80	40	\$2,250
82	Entrance mon.,4' flour.lights/soffit (2)	ea	2	\$140.00	20	7	\$280
83	Entrance monument, floods (em,flp)	ls	1	\$1,200.00	20	10	\$1,200
84	Entrance mon. brk,tuckpoint (10%) (3)	sf	35	\$12.50	10	5	\$438
85	Flagpole, aluminum, 15'hi	ea	1	\$1,250.00	30	8	\$1,250
86	Light fixtures, attached to tele. poles.	ea	6	\$450.00	25	12	\$2,700
87	Gazebo, 14' octagon, PLT-wood w/ asphalt shea		1	\$16,040.00	25	20	\$16,040
88	Concrete stamped brick sidewalk (6%)	sf	27	\$15.10	60	4	\$408
89	Concrete stamped brick sidewalk (6%)	sf	27	\$15.10	60	4	\$408
90	Concrete stamped brick sidewalk (6%)	sf	27	\$15.10	60	4	\$408
91	Concrete stamped brick sidewalk (6%)	sf	27	\$15.10	60	4	\$408
92	Concrete stamped brick sidewalk (6%)	sf	27	\$15.10	60	4	\$408
93	Concrete stamped brick sidewalk (6%)	sf	27	\$15.10	60	4	\$408
94	Concrete stamped brick sidewalk (6%)	sf	27	\$15.10	60	4	\$408
95	Concrete stamped brick sidewalk (6%)	sf	27	\$15.10	60	4	\$408
96	Concrete stamped brick sidewalk (6%)	sf	27	\$15.10	60	4	\$408
97	Concrete stamped brick sidewalk (6%)	sf	27	\$15.10	60	4	\$408
SITE COMPONENTS (cont.) - Replacement Costs - Subtotal							\$36,160

SITE COMPONENTS (cont.)
COMMENTS

- ☐ Gazebo replacement: Gazebo w/ asphalt shingle, PTL deck, (\$12,700), benches (\$720), cupula (\$450), electric service (\$1650), electric fixt, outlet, (\$520)

SITE COMPONENTS (cont.)

PROJECTED REPLACEMENTS

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST (\$)
98	Domestic water laterals (10%) (allow)	ft	300	\$94.50	10	10	\$28,350
99	Domestic water risers, CPVC (ph)	ft	120	\$48.00	60	15	\$5,760
100	Sanitary laterals (10%) (allow.)	ft	300	\$82.50	10	10	\$24,750
101	Sewer ejector pump, 12 gpm, 70 gal. (mq)	ea	1	\$2,250.00	20	10	\$2,250
102	Sewer ejector pump, 24 gpm, 275 gal (mq).	ls	1	\$7,350.00	20	10	\$7,350
103	Water booster pump system. 5 hp (eq)	ea	1	\$11,150.00	15	7	\$11,150
104	Storm water management (10% allowance)	ls	1	\$9,200.00	10	10	\$9,200
105	Sanitary risers & vents, cast iron (ph)	ft	80	\$45.00	60	25	\$3,600

SITE COMPONENTS (cont.) - Replacement Costs - Subtotal \$92,410

SITE COMPONENTS (cont.)

COMMENTS

- ☐ Comprehensive drawings detailing the components of the systems listed above were not available for our review. We have included the estimated cost of the systems based upon our experience with other similar communities. We have assumed that 10 percent of the system(s) will require replacement. In the future, this assumption and the estimated costs should be adjusted based upon actual experience at the community.

POOLHOUSE / MAINT.BLDG .
PROJECTED REPLACEMENTS

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST (\$)
106	Roofing, asphalt shingles (ph)	sf	3,210	\$4.60	30	12	\$14,766
107	Gutter & dwnspts,5" alum (ph,mb1,2)	ft	478	\$6.50	30	12	\$3,107
108	Vinyl trim soffits (ph)	sf	272	\$6.80	50	30	\$1,850
109	Wood siding, T-111 vertical,gable end	sf	200	\$6.40	30	10	\$1,280
110	Wood ceiling, planks /spacing (ph)	sf	1,428	\$3.50	25	15	\$4,998
111	Exterior doors , metal, (ph, mb1,2)	ea	7	\$850.00	30	12	\$5,950
112	Exterior doors, wood (rr)	ea	1	\$600.00	25	10	\$600
113	Exterior windows (ph,mb1).	sf	12	\$42.00	25	10	\$504
114	Exterior window screens/vents (ph)	ea	8	\$300.00	20	5	\$2,400
115	Rubber EPDM poured flooring (ent,rr,o)	sf	1,100	\$12.00	10	2	\$13,200
116	Shower plumbing fixtures (8) (rr)	ea	8	\$350.00	15	4	\$2,800
117	Restroom showers, rubber mat (rr)	sf	234	\$4.50	5	4	\$1,053
118	Sinks/mirrors (rr)	ea	5	\$250.00	25	10	\$1,250
119	Toilets/partitions (rr)	ea	5	\$1,200.00	25	10	\$6,000
120	Urinal/partitions (rr)	ea	2	\$400.00	25	10	\$800
121	Hot water heater (rr)	ea	1	\$1,100.00	20	10	\$1,100
122	Handicap access.(rr) /upgrades (allow)	ls	1	\$10,000.00	40	4	\$10,000

POOLHOUSE / MAINT.BLDG . - Replacement Costs - Subtotal \$71,658

POOLHOUSE / MAINT.BLDG .
COMMENTS

- ☐ Reserve Study includes additional \$10,000 (allowance) above standard (rr) replacement cost. Upgrade for handicaps needs (ex: grab bars in,toilets, wc access. toilet partitions hc shower fixtures, toilet partitions and sinks..

POOLHOUSE / MAINT.BLDG ,con'd
PROJECTED REPLACEMENTS

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST (\$)
123	Office desk, shelving, counter (ph)	ls	1	\$5,500.00	25	18	\$5,500
124	Drinking fountain (ph)	ea	1	\$550.00	25	8	\$550
125	Ceiling ventilation fan (pmr)	ea	1	\$450.00	20	10	\$450
126	Storage bldg. mtl, w/shingle, (2) (ph)	ls	1	\$3,800.00	25	18	\$3,800
127	Light fixtures,floresent ,4' l) (rr,entm,,o hw)	ea	8	\$130.00	20	12	\$1,040
128	Light fixtures, ceiling mt., (pc,hw)	ea	8	\$150.00	20	10	\$1,200
129	Security cameras (ph,mb1,2)	ea	18	\$100.00	20	10	\$1,800
130	Roofing, corr. metal, (2 bldg) (mb1,2)	sf	2,835	\$3.50	50	20	\$9,923
131	Exterior metal siding,trim. (mb1.2)	sf	1,930	\$3.90	25	20	\$7,527
132	Exterior light fixt. floods, (mb1,2)	ea	3	\$175.00	20	15	\$525
133	Electric ceiling / wall heater, 5 kw (mb2)	ea	1	\$1,100.00	10	8	\$1,100
134	Office cabnets, kit., racks, tool bench (mb2)	ls	1	\$5,100.00	30	20	\$5,100
135	Garage door 10x14, comm./oper.(mb1)	ea	1	\$1,900.00	30	20	\$1,900
136	Garage door 16x7, comm../oper(mb2)	ea	1	\$1,250.00	30	20	\$1,250

POOLHOUSE / MAINT.BLDG ,con'd - Replacement Costs - Subtotal \$41,665

POOLHOUSE / MAINT.BLDG ,con'd
COMMENTS

MAINTENANCE BLDG EQUIP.
PROJECTED REPLACEMENTS

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST (\$)
137	Tractor, heated enclosed ,4 wheel	ea	1	\$14,000.00	25	20	\$14,000
138	Grasshopper, lawnmower, lg	ea	1	\$8,500.00	25	20	\$8,500
139	Lazyboy lawnmower small	ea	2	\$550.00	15	10	\$1,100
140	Land rover, small, 4- wheeler	ea	1	\$9,500.00	15	12	\$9,500
141	Chipper, Vermcer, attach.	ea	1	\$8,500.00	15	10	\$8,500
142	Air compressor, attach.	ea	1	\$2,400.00	20	12	\$2,400
143	Tractor bucket, attach	ea	1	\$3,200.00	20	18	\$3,200
144	Edgers, hand	ea	4	\$375.00	15	12	\$1,500
145	Garden water tanks w/trailer, attach.	ea	2	\$750.00	20	18	\$1,500
146	Lawn mower trailer, attach.	ea	1	\$2,200.00	25	20	\$2,200
147	Seed spreader, funnel, attach.	ea	1	\$2,500.00	25	14	\$2,500
148	Chemical weed mtl tank spreader, attach.	ea	1	\$1,900.00	20	12	\$1,900

MAINTENANCE BLDG EQUIP. - Replacement Costs - Subtotal \$56,800

MAINTENANCE BLDG EQUIP.
COMMENTS

RECREATION
PROJECTED REPLACEMENTS

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST (\$)
149	Swimming pool structure(3)	sf	7,418	\$85.00	40	20	\$630,530
150	Swimming pool, whitecoat	sf	11,422	\$5.85	10	2	\$66,819
151	Swimming pool waterline tile (6x6)	ft	652	\$10.15	10	2	\$6,618
152	Swimming pool coping, precast conc.	ft	652	\$27.50	20	2	\$17,930
153	Pool deck, caulking (10%)	ft	150	\$5.20	5	1	\$780
154	Pool diving blocks	ea	12	\$250.00	15	7	\$3,000
155	Pool cover, safety mesh (3)	sf	7,800	\$1.48	12	5	\$11,544
156	Pool perimeter chainlink fence(10' hi)	ft	776	\$27.00	30	12	\$20,952
157	Pool perimeter chainlink fence (3 hi)	ft	165	\$10.30	30	15	\$1,700
158	Pool lifeguard chair, mounted	ea	5	\$4,400.00	20	4	\$22,000
159	Pool diving stand, metal,, 1 meter	ea	1	\$11,750.00	20	4	\$11,750
160	Pool diving board, 8'	ea	1	\$740.00	10	4	\$740
161	Pool site light, standard triple head,	ea	6	\$1,160.00	20	10	\$6,960
162	Pool site light, 12' aluminum pole	ea	6	\$2,850.00	30	15	\$17,100
163	Pool site light, standard single head	ea	4	\$480.00	20	10	\$1,920
164	Pool site light, 10 ' metal pole	ea	4	\$1,250.00	30	15	\$5,000
RECREATION - Replacement Costs - Subtotal							\$825,342

RECREATION
COMMENTS

- ☐ We have assumed that the project to replace the pool deck will include the replacement of the plumbing and electrical systems installed beneath the pavement.
- ☐ Concrete pool deck listed under Site Compoment .

RECREATION (cont.)
PROJECTED REPLACEMENTS

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST (\$)
165	Pool pump 2.5 HP (eq)	ea	3	\$2,000.00	10	7	\$6,000
166	Pool pump 2.5HP (eq)	ea	1	\$2,000.00	10	10	\$2,000
167	Pool filter, cartridge ,50 sf (eq)	ea	1	\$1,150.00	20	10	\$1,150
168	Pool filter, cartridge, 150 sf (eq)	ea	1	\$1,690.00	20	5	\$1,690
169	Pool filter, cartridge, 150 sf (eq)	ea	1	\$2,130.00	20	5	\$2,130
170	Chemical chlorination tank (eq)	ea	3	\$395.00	15	8	\$1,185
171	Chemical feed pump (eq)	ea	3	\$440.00	10	5	\$1,320
172	Pool vaccum system (pd)	ea	1	\$2,100.00	15	10	\$2,100
173	Drinking fountain, (tc)	ea	1	\$450.00	20	1	\$450

RECREATION (cont.) - Replacement Costs - Subtotal \$18,025

RECREATION (cont.)
COMMENTS

RECREATION (cont.)
PROJECTED REPLACEMENTS

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST (\$)
174	Pool furniture, lounge, vinyl strap	ea	26	\$190.00	10	4	\$4,940
175	Pool furniture, chair, vinyl strap	ea	39	\$135.00	10	4	\$5,265
176	Pool benches, metal	ea	3	\$400.00	10	6	\$1,200
177	Pool furniture, round table,	ea	13	\$250.00	10	5	\$3,250
178	Pool table chairs	ea	52	\$150.00	10	5	\$7,800
179	Pool benches, metal	ea	3	\$400.00	10	6	\$1,200
180	Pool furniture, umbrella	ea	13	\$345.00	12	6	\$4,485
181	Wood picnic tables w/benches	ea	3	\$350.00	15	6	\$1,050
182	Pool benches, metal, wood.	ea	3	\$500.00	10	6	\$1,500

RECREATION (cont.) - Replacement Costs - Subtotal \$30,690

RECREATION (cont.)
COMMENTS

- ☐ Current pool furniture, tables and chairs are cement Assume tables and chairs will be replaced with metal and cloth pool furniture.

RECREATION (cont.)
PROJECTED REPLACEMENTS

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST (\$)
183	Tennis court, asphalt overlay (4)	sf	25,100	\$4.00	20	8	\$100,400
184	Tennis court, color coat (4)	sf	25,100	\$1.00	10	8	\$25,100
185	Tennis court, post & footings	pr	8	\$1,280.00	20	8	\$10,240
186	Tennis court, net	ea	4	\$320.00	5	3	\$1,280
187	Tennis court chain link fencing 12' hi (4)	ft	1,100	\$33.75	30	8	\$37,125
188	MP court, asphalt overlay (2)	sf	8,156	\$4.00	20	12	\$32,624
189	MP court, asphalt coating (2)	sf	8,156	\$0.20	6	1	\$1,631
190	Basketball pole & backboard	ea	4	\$1,500.00	20	8	\$6,000
191	MP fence, 10' hi galv. chain link	ft	400	\$27.00	30	12	\$10,800
192	Baseball chain link fence, 4' hi	ft	140	\$10.80	30	5	\$1,512
193	Baseball chain link backstop 15' hi	ft	50	\$42.00	30	5	\$2,100
194	Baseball bench wd/metal (2)	ea	2	\$250.00	30	10	\$500
195	Bike rack, 9 bikes	ea	4	\$625.00	30	20	\$2,500

RECREATION (cont.) - Replacement Costs - Subtotal \$231,812

RECREATION (cont.)
COMMENTS

RECREATION (cont.)
PROJECTED REPLACEMENTS

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST (\$)
196	Tot lot, ADA MP structure, 2 platforms & 2 slid ea		1	\$25,000.00	15	2	\$25,000
197	Tot lot merry-go-round	ea	1	\$1,100.00	30	7	\$1,100
198	Tot lot, spring ride (small)	ea	1	\$825.00	30	10	\$825
199	Tot lot, half moon climber	ea	5	\$1,050.00	30	7	\$5,250
200	Tot lot, 2 seat teeter totter 6'	ea	1	\$1,080.00	30	7	\$1,080
201	Tot lot slide	ea	5	\$1,800.00	30	7	\$9,000
202	Tot lot, A-frame swing, 2 seat	ea	7	\$1,495.00	30	7	\$10,465
203	Tot lot, 3.5" arch-frame swing, 2 seat	ea	1	\$1,790.00	30	7	\$1,790
204	Tot lot, horizontal ladder 10'	ea	5	\$1,050.00	30	7	\$5,250
205	Tot lot metal climber	ea	1	\$1,600.00	30	7	\$1,600
206	Tot lot surfacing, wood mulch 3"	sf	6,200	\$1.10	3	3	\$6,820

RECREATION (cont.) - Replacement Costs - Subtotal \$68,180

RECREATION (cont.)
COMMENTS

- ☐ Tot lots and tot lot equipment should be evaluated annually by a playground safety specialist for compliance with the Consumer Product Safety Commission, Handbook for Public Playground Safety. Defects should be corrected immediately to protect the users of the facilities from potential injury and the Association from potential liability for those injuries.
- ☐ Reserve Study includes tot lot replacement structure in two years.. Allowance \$25,000three platforms, ,two slides, ladder, curved tubes,and climber panel.

VALUATION EXCLUSIONS

EXCLUDED ITEMS

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST (\$)
	Property identification signage	ls	1				EXCLUDED

VALUATION EXCLUSIONS

COMMENTS

- ☐ Valuation Exclusions. For ease of administration of the Replacement Reserves and to reflect accurately how Replacement Reserves are administered, items with a dollar value less than \$1,000.00 have not been scheduled for funding from Replacement Reserves. Examples of items excluded from funding by Replacement Reserves by this standard are listed above.

- ☐ The list above exemplifies exclusions by the cited standard(s) and is not intended to be comprehensive.

LONG-LIFE EXCLUSIONS

EXCLUDED ITEMS

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST (\$)
	Wall, floor, & roof structure	ls	1				EXCLUDED
	Stainless steel pool fixtures	ls	1				EXCLUDED

LONG-LIFE EXCLUSIONS

COMMENTS

- ☐ Long Life Exclusions. Components that when properly maintained, can be assumed to have a life equal to the property as a whole, are normally excluded from the Replacement Reserve Inventory. Examples of items excluded from funding by Replacement Reserves by this standard are listed above.
- ☐ Exterior masonry is generally assumed to have an unlimited economic life but periodic repointing is required and we have included this for funding in the Replacement Reserve Inventory.
- ☐ The list above exemplifies exclusions by the cited standard(s) and is not intended to be comprehensive.

UTILITY EXCLUSIONS

EXCLUDED ITEMS

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST (\$)
	Telephone cables and structures	ls	1				EXCLUDED

UTILITY EXCLUSIONS

COMMENTS

- ☐ Utility Exclusions. Many improvements owned by utility companies are on property owned by the Association. We have assumed that repair, maintenance, and replacements of these components will be done at the expense of the appropriate utility company. Examples of items excluded from funding Replacement Reserves by this standard are listed above.

- ☐ The list above exemplifies exclusions by the cited standard(s) and is not intended to be comprehensive.

MAINTENANCE AND REPAIR EXCLUSIONS

EXCLUDED ITEMS

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST (\$)
	Cleaning of asphalt pavement	ls	1				EXCLUDED
	Crack sealing of asphalt pavement	ls	1				EXCLUDED
	Striping of parking spaces	ls	1				EXCLUDED
	Exterior painting	ls	1				EXCLUDED
	Interior painting	ls	1				EXCLUDED

MAINTENANCE AND REPAIR EXCLUSIONS

COMMENTS

- ☐ Maintenance activities, one-time-only repairs, and capital improvements. These activities are NOT appropriately funded from Replacement Reserves. The inclusion of such component in the Replacement Reserve Inventory could jeopardize the special tax status of ALL Replacement Reserves, exposing the Association to significant tax liabilities. We recommend that the Board of Directors discuss these exclusions and Revenue Ruling 75-370 with a Certified Public Accountant.
- ☐ Examples of items excluded from funding by Replacement Reserves by this standard are listed above.
- ☐ The list above exemplifies exclusions by the cited standard(s) and is not intended to be comprehensive.

GOVERNMENT EXCLUSIONS

EXCLUDED ITEMS

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST (\$)
	Government, roadways & parking	ls	1				EXCLUDED
	Government, sidewalks & curbs	ls	1				EXCLUDED
	Government, lighting	ls	1				EXCLUDED
	Government, stormwater mgmt.	ls	1				EXCLUDED

GOVERNMENT EXCLUSIONS

COMMENTS

- ☐ Government Exclusions. We have assumed that some of the improvements installed on property owned by the Association will be maintained by the state, county, or local government, or other association or other responsible entity. Examples of items excluded from funding by Replacement Reserves by this standard are listed above.
- ☐ Excluded right-of-ways, including Corkwood Dr., Redbay Dr., Berryleaf Ct, Silver Oak St., Union Schoolhouse Rd., Bay Tree Ct., Leatner Wood Pl., Ninebark Pl., Meadowsweet Dr., Silver Arrow Dr., Sweetbell Ct., Pepperwood Dr., Sweetbitch Dr., Butterwood Ct., Hackview Ct., Sweetleaf Dr., Slipperywood Pl., Wildoak Ct., Honeywood Ct., Leafback Pl., Cutleaf Ct., Forest Ridge Blvd., Branchport Dr., Ridgepath Dr., Elmshaven Dr., Willow Branch Dr., Springhollow Ct., Beach Haven Ct., Wachtan Ct., Crozycroft Dr., Honeyleaf Way, Corkhill Dr.,
- ☐ Splitrock Dr., Quisenberry Dr., Olgetree Ct., Pinecastle Ct., Quail Bush Dr., Bronze Leaf Ct., Walshwood Ct., Spruce Pine Ct.,
- ☐ Beach Tree Ct., Blue Spruce Ct., Berrywood Dr., Appleridge Ct., Strathaven Dr., Leafburrow Dr., Amberwood Dr., Woodcock Way,
- ☐ Hollywreath Ct., Whitewood Ct., Budwood Ct., Kilridge Rd. and adjacent properties
- ☐ The list above exemplifies exclusions by the cited standard(s) and is not intended to be comprehensive.

PROJECTED ANNUAL REPLACEMENTS GENERAL INFORMATION

CALENDAR OF ANNUAL REPLACEMENTS. The 206 Projected Replacements in the Forest Ridge Association Replacement Reserve Inventory whose replacement is scheduled to be funded from Replacement Reserves are broken down on a year-by-year basis, beginning on Page C2.

REPLACEMENT RESERVE ANALYSIS AND INVENTORY POLICIES, PROCEDURES, AND ADMINISTRATION

- ☐ REVISIONS. Revisions will be made to the Replacement Reserve Analysis and Replacement Reserve Inventory in accordance with the written instructions of the Board of Directors. No additional charge is incurred for the first revision, if requested in writing within three months of the date of the Replacement Reserve Study. It is our policy to provide revisions in electronic (Adobe PDF) format only.
 - ☐ TAX CODE. The United States Tax Code grants favorable tax status to a common interest development (CID) meeting certain guidelines for their Replacement Reserve. If a CID files their taxes as a 'Corporation' on Form 1120 (IRC Section 277), these guidelines typically require maintenance activities, partial replacements, minor replacements, capital improvements, and one-time only replacements to be excluded from Reserves. A CID cannot co-mingle planning for maintenance activities with capital replacement activities in the Reserves (Revenue Ruling 75-370). Funds for maintenance activities and capital replacements activities must be held in separate accounts. If a CID files taxes as an "Exempt Homeowners Association" using Form 1120H (IRC Section 528), the CID does not have to segregate these activities. However, because the CID may elect to change their method of filing from year to year within the Study Period, we advise using the more restrictive approach. We further recommend that the CID consult with their Accountant and consider creating separate and independent accounts and reserves for large maintenance items, such as painting.
 - ☐ CONFLICT OF INTEREST. Neither Miller - Dodson Associates nor the Reserve Analyst has any prior or existing relationship with this Association which would represent a real or perceived conflict of interest.
 - ☐ RELIANCE ON DATA PROVIDED BY THE CLIENT. Information provided by an official representative of the Association regarding financial, physical conditions, quality, or historical issues is deemed reliable.
 - ☐ INTENT. This Replacement Reserve Study is a reflection of the information provided by the Association and the visual evaluations of the Analyst. It has been prepared for the sole use of the Association and is not for the purpose of performing an audit, quality/forensic analyses, or background checks of historical records.
 - ☐ PREVIOUS REPLACEMENTS. Information provided to Miller - Dodson Associates regarding prior replacements is considered to be accurate and reliable. Our visual evaluation is not a project audit or quality inspection.
 - ☐ EXPERIENCE WITH FUTURE REPLACEMENTS. The Calendar of Annual Projected Replacements, lists replacements we have projected to occur over the next thirty years, begins on Page C2. Actual experience in replacing the items may differ significantly from the cost estimates and time frames shown because of conditions beyond our control. These differences may be caused by maintenance practices, inflation, variations in pricing and market conditions, future technological developments, regulatory actions, acts of God, and luck. Some items may function normally during our visual evaluation and then fail without notice.
 - ☐ REVIEW OF THE REPLACEMENT RESERVE STUDY. For this study to be effective, it should be reviewed by the Forest Ridge Association Board of Directors, those responsible for the management of the items included in the Replacement Reserve Inventory, and the accounting professionals employed by the Association.
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PROJECTED REPLACEMENTS - YEARS 1 TO 3

[illegible]

PROJECTED REPLACEMENTS - YEARS 4 TO 6

Item	2020 - YEAR 4	\$
3	Asphalt pavement, seal coa	\$5,379
5	Concrete apron (4) (6%) (pp	\$585
36	Concrete pool deck (6%)	\$8,604
46	Concrete curb, barrier (6%)	\$852
59	Wood PTL railing, 2-bd	\$2,335
186	Tennis court, net	\$1,280
206	Tot lot surfacing, wood mulc	\$6,820

Item	2021 - YEAR5	\$
4	Gravel area (replen. 3/8"/sf)	\$5,125
65	Wood PTL railing, 3-bd w/ha	\$834
88	Concrete stamped brick side	\$408
89	Concrete stamped brick side	\$408
90	Concrete stamped brick side	\$408
91	Concrete stamped brick side	\$408
92	Concrete stamped brick side	\$408
93	Concrete stamped brick side	\$408
94	Concrete stamped brick side	\$408
95	Concrete stamped brick side	\$408
96	Concrete stamped brick side	\$408
97	Concrete stamped brick side	\$408
116	Shower plumbing fixtures (8	\$2,800
117	Restroom showers, rubber	\$1,053
122	Handicap access.(rr) /upgra	\$10,000
158	Pool lifeguard chair, mounte	\$22,000
159	Pool diving stand, metal,, 1	\$11,750
160	Pool diving board, 8'	\$740
174	Pool furniture, lounge, vinyl	\$4,940
175	Pool furniture, chair, vinyl st	\$5,265

Item	2022 - YEAR 6	\$
84	Entrance mon. brk,tuckpoint	\$438
114	Exterior window screens/ven	\$2,400
155	Pool cover, safety mesh (3)	\$11,544
168	Pool filter, cartridge, 150 sf (	\$1,690
169	Pool filter, cartridge, 150 sf (	\$2,130
171	Chemical feed pump (eq)	\$1,320
177	Pool furniture, round table,	\$3,250
178	Pool table chairs	\$7,800
192	Baseball chain link fence, 4	\$1,512
193	Baseball chain link backstop	\$2,100

Total Scheduled Replacements	\$25,855
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Total Scheduled Replacements	\$68,584
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Total Scheduled Replacements	\$34,184
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PROJECTED REPLACEMENTS - YEARS 7 TO 9

Item	2023 - YEAR 7	\$	Item	2024 - YEAR 8	\$	Item	2025 - YEAR 9	\$
16	Concrete picnic slab (6%)(p	\$750	82	Entrance mon., 4' flour. lights	\$280	3	Asphalt pavement, seal coa	\$5,379
26	Concrete sidewalk (6%)	\$18,728	103	Water booster pump system	\$11,150	85	Flagpole, aluminum, 15'hi	\$1,250
67	Concrete culvert bnk. slopes	\$4,644	154	Pool diving blocks	\$3,000	124	Drinking fountain (ph)	\$550
78	Vehicular entry gate, swing	\$5,940	165	Pool pump 2.5 HP (eq)	\$6,000	133	Electric ceiling / wall heater,	\$1,100
153	Pool deck, caulking (10%)	\$780	189	MP court, asphalt coating (2	\$1,631	170	Chemical chlorination tank (	\$1,185
176	Pool benches, metal	\$1,200	197	Tot lot merry-go-round	\$1,100	183	Tennis court, asphalt overla	\$100,400
179	Pool benches, metal	\$1,200	199	Tot lot, half moon climber	\$5,250	184	Tennis court, color coat (4)	\$25,100
180	Pool furniture, umbrella	\$4,485	200	Tot lot, 2 seat teeter totter 6'	\$1,080	185	Tennis court, post & footing	\$10,240
181	Wood picnic tables w/bench	\$1,050	201	Tot lot slide	\$9,000	186	Tennis court, net	\$1,280
182	Pool benches, metal, wood.	\$1,500	202	Tot lot, A-frame swing, 2 se	\$10,465	187	Tennis court chain link fenci	\$37,125
206	Tot lot surfacing, wood mulc	\$6,820	203	Tot lot, 3.5" arch-frame swin	\$1,790	190	Basketball pole & backboard	\$6,000
			204	Tot lot, horizontal ladder 10'	\$5,250			
			205	Tot lot metal climber	\$1,600			
Total Scheduled Replacements		\$47,097	Total Scheduled Replacements		\$57,596	Total Scheduled Replacements		\$189,609

PROJECTED REPLACEMENTS - YEARS 10 TO 12

Item	2026 - YEAR 10	\$	Item	2027 - YEAR 11	\$	Item	2028 - YEAR 12	\$
6	Concrete apron (4) (6%) (pp)	\$585	1	Asphalt pavement, mill & ov	\$33,335	153	Pool deck, caulking (10%)	\$780
37	Concrete pool deck (6%)	\$8,604	2	Asphalt pavement, mill & ov	\$11,045			
47	Concrete curb, barrier (6%)	\$852	15	Concrete, wheel stops (pp)	\$3,933			
117	Restroom showers, rubber	\$1,053	58	Wood PTL decking	\$3,645			
206	Tot lot surfacing, wood mulc	\$6,820	61	Wood ped. bridge, PTL dec	\$1,665			
			64	Wood ped/ trk. bridge, PTL,	\$2,025			
			80	Entrance monument, wood t	\$1,190			
			83	Entrance monument, floods	\$1,200			
			98	Domestic water laterals (10	\$28,350			
			100	Sanitary laterals (10%) (allo	\$24,750			
			101	Sewer ejector pump, 12 gpm	\$2,250			
			102	Sewer ejector pump, 24 gpm	\$7,350			
			104	Storm water management (1	\$9,200			
			109	Wood siding, T-111 vertical	\$1,280			
			112	Exterior doors, wood (rr)	\$600			
			113	Exterior windows (ph,mb1).	\$504			
			118	Sinks/mirrors (rr)	\$1,250			
			119	Toilets/partitions (rr)	\$6,000			
			120	Urnal/partitions (rr)	\$800			
			121	Hot water heater (rr)	\$1,100			
			125	Ceiling ventilation fan (pmr)	\$450			
			128	Light fixtures, ceiling mt., (pc	\$1,200			
			129	Security cameras (ph,mb1,2	\$1,800			
			139	Lazyboy lawnmower small	\$1,100			
			141	Chipper, Vermcer, attach.	\$8,500			
			161	Pool site light, standard tripl	\$6,960			
			163	Pool site light, standard sing	\$1,920			
			166	Pool pump 2.5HP (eq)	\$2,000			
			167	Pool filter, cartridge ,50 sf (e	\$1,150			
			172	Pool vaccum system (pd)	\$2,100			
			194	Baseball bench wd/metal (2	\$500			
			198	Tot lot, spring ride (small)	\$825			
Total Scheduled Replacements		\$17,914	Total Scheduled Replacements		\$169,977	Total Scheduled Replacements		\$780

PROJECTED REPLACEMENTS - YEARS 13 TO 15

Item	2029 - YEAR 13	\$	Item	2030 - YEAR 14	\$	Item	2031 - YEAR 15	\$
17	Concrete picnic slab (6%)(p	\$750	3	Asphalt pavement, seal coa	\$5,379	4	Gravel area (replen. 3/8"/sf)	\$5,125
27	Concrete sidewalk (6%)	\$18,728	186	Tennis court, net	\$1,280	117	Restroom showers, rubber	\$1,053
68	Concrete culvert bnk. slopes	\$4,644	189	MP court, asphalt coating (2	\$1,631	147	Seed spreader, funnel, attac	\$2,500
86	Light fixtures, attached to tel	\$2,700				160	Pool diving board, 8'	\$740
106	Roofing, asphalt shingles (p	\$14,766				174	Pool furniture, lounge, vinyl	\$4,940
107	Gutter & dwnspts, 5' alum (p	\$3,107				175	Pool furniture, chair, vinyl st	\$5,265
111	Exterior doors , metal, (ph,	\$5,950						
115	Rubber EPDM poured floori	\$13,200						
127	Light fixtures, florescent ,4' l) (	\$1,040						
140	Land rover, small, 4- wheele	\$9,500						
142	Air compressor, attach.	\$2,400						
144	Edgers, hand	\$1,500						
148	Chemical weed mtl tank spr	\$1,900						
150	Swimming pool, whitecoat	\$66,819						
151	Swimming pool waterline tile	\$6,618						
156	Pool perimeter chainlink fen	\$20,952						
188	MP court, asphalt overlay (2	\$32,624						
191	MP fence, 10' hi galv. chain li	\$10,800						
206	Tot lot surfacing, wood mulc	\$6,820						
Total Scheduled Replacements		\$224,817	Total Scheduled Replacements		\$8,291	Total Scheduled Replacements		\$19,623

PROJECTED REPLACEMENTS - YEARS 16 TO 18

Item	2032 - YEAR 16	\$
7	Concrete apron (4) (6%) (pp	\$585
38	Concrete pool deck (6%)	\$8,604
48	Concrete curb, barrier (6%)	\$852
56	Wood walkway, PTL structu	\$2,340
57	Wood ped. bridge, PTL stru	\$13,205
60	Wood ped. bridge, PTL stru	\$7,755
63	Wood ped/ trk. bridge, PTL	\$11,196
79	Entrance mon, asphalt shing	\$796
84	Entrance mon.brk,tuckpoint	\$438
99	Domestic water risers, CPV	\$5,760
110	Wood ceiling, planks /spacin	\$4,998
132	Exterior light fixt. floods, (mb	\$525
157	Pool perimeter chainlink fen	\$1,700
162	Pool site light, 12' aluminum	\$17,100
164	Pool site light, 10 ' metal pol	\$5,000
171	Chemical feed pump (eq)	\$1,320
177	Pool furniture, round table,	\$3,250
178	Pool table chairs	\$7,800
206	Tot lot surfacing, wood mulc	\$6,820
Total Scheduled Replacements		\$100,043
Item	2033 - YEAR 17	\$
78	Vehicular entry gate, swing	\$5,940
153	Pool deck, caulking (10%)	\$780
176	Pool benches, metal	\$1,200
179	Pool benches, metal	\$1,200
182	Pool benches, metal, wood.	\$1,500
Total Scheduled Replacements		\$10,620
Item	2034 - YEAR 18	\$
155	Pool cover, safety mesh (3)	\$11,544
165	Pool pump 2.5 HP (eq)	\$6,000
196	Tot lot, ADA MP structure, 2	\$25,000
Total Scheduled Replacements		\$42,544

PROJECTED REPLACEMENTS - YEARS 19 TO 21

Item	2035 - YEAR 19	\$	Item	2036 - YEAR 20	\$	Item	2037 - YEAR 21	\$
3	Asphalt pavement, seal coa	\$5,379	65	Wood PTL railing, 3-bd w/ha	\$834	87	Gazebo, 14' octagon, PLT-w	\$16,040
18	Concrete picnic slab (6%)(p	\$750	116	Shower plumbing fixtures (8	\$2,800	98	Domestic water laterals (10	\$28,350
28	Concrete sidewalk (6%)	\$18,728	117	Restroom showers, rubber	\$1,053	100	Sanitary laterals (10%) (allo	\$24,750
59	Wood PTL railing, 2-bd	\$2,335	189	MP court, asphalt coating (2	\$1,631	104	Storm water management (1	\$9,200
66	Retaining walls, rr-ties ,alon	\$3,918				130	Roofing, corr. metal, (2 bldg	\$9,923
69	Concrete culvert bnk. slopes	\$4,644				131	Exterior metal siding,trim. (m	\$7,527
123	Office desk, shelving, count	\$5,500				134	Office cabinets, kit., racks, to	\$5,100
126	Storage bldg. mtl, w/shingle,	\$3,800				135	Garage door 10x14, comm.	\$1,900
133	Electric ceiling / wall heater,	\$1,100				136	Garage door 16x7, comm../	\$1,250
143	Tractor bucket, attach	\$3,200				137	Tractor, heated enclosed ,4	\$14,000
145	Garden water tanks w/trailer	\$1,500				138	Grasshopper, lawnmower, l	\$8,500
180	Pool furniture, umbrella	\$4,485				146	Lawn mower trailer, attach.	\$2,200
184	Tennis court, color coat (4)	\$25,100				149	Swimming pool structure(3)	\$630,530
186	Tennis court, net	\$1,280				166	Pool pump 2.5HP (eq)	\$2,000
206	Tot lot surfacing, wood mulc	\$6,820				195	Bike rack, 9 bikes	\$2,500
Total Scheduled Replacements		\$88,539	Total Scheduled Replacements		\$6,318	Total Scheduled Replacements		\$763,770

PROJECTED REPLACEMENTS - YEARS 22 TO 24

[illegible][illegible]

PROJECTED REPLACEMENTS - YEARS 25 TO 27

Item	2041 - YEAR 25	\$	Item	2042 - YEAR 26	\$	Item	2043 - YEAR 27	\$
4	Gravel area (replen. 3/8"/sf)	\$5,125	58	Wood PTL decking	\$3,645	78	Vehicular entry gate, swing	\$5,940
19	Concrete picnic slab (6%)(p	\$750	61	Wood ped. bridge, PTL dec	\$1,665	153	Pool deck, caulking (10%)	\$780
29	Concrete sidewalk (6%)	\$18,728	62	Metal pipe railing, 2-strand	\$2,660	176	Pool benches, metal	\$1,200
70	Concrete culvert bnk. slopes	\$4,644	84	Entrance mon. brk, tuckpoint	\$438	179	Pool benches, metal	\$1,200
117	Restroom showers, rubber	\$1,053	105	Sanitary risers & vents, cast	\$3,600	182	Pool benches, metal, wood.	\$1,500
158	Pool lifeguard chair, mounte	\$22,000	114	Exterior window screens/ven	\$2,400			
159	Pool diving stand, metal,, 1	\$11,750	139	Lazyboy lawnmower small	\$1,100			
160	Pool diving board, 8'	\$740	141	Chipper, Vermcer, attach.	\$8,500			
174	Pool furniture, lounge, vinyl	\$4,940	168	Pool filter, cartridge, 150 sf (	\$1,690			
175	Pool furniture, chair, vinyl st	\$5,265	169	Pool filter, cartridge, 150 sf (	\$2,130			
206	Tot lot surfacing, wood mulc	\$6,820	171	Chemical feed pump (eq)	\$1,320			
			172	Pool vaccum system (pd)	\$2,100			
			177	Pool furniture, round table,	\$3,250			
			178	Pool table chairs	\$7,800			
			189	MP court, asphalt coating (2	\$1,631			
Total Scheduled Replacements		\$81,815	Total Scheduled Replacements		\$43,928	Total Scheduled Replacements		\$10,620

PROJECTED REPLACEMENTS - YEARS 28 TO 30

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PROJECTED REPLACEMENTS - YEARS 31 TO 33

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PROJECTED REPLACEMENTS - YEARS 34 TO 36

Item		2050 - YEAR 34	\$
3	Asphalt pavement, seal coa		\$5,379
10	Concrete apron (4) (6%) (pp)		\$585
41	Concrete pool deck (6%)		\$8,604
51	Concrete curb, barrier (6%)		\$852
59	Wood PTL railing. 2-bd		\$2,335
124	Drinking fountain (ph)		\$550
186	Tennis court, net		\$1,280
206	Tot lot surfacing, wood mulc		\$6,820
Total Scheduled Replacements			\$26,405
Item		2051 - YEAR 35	\$
4	Gravel area (replen. 3/8"/sf)		\$5,125
65	Wood PTL railing, 3-bd w/ha		\$834
116	Showder plumbing fixtures (8		\$2,800
117	Restroom showers, rubber		\$1,053
160	Pool diving board, 8'		\$740
174	Pool furniture, lounge, vinyl		\$4,940
175	Pool furniture, chair, vinyl st		\$5,265
Total Scheduled Replacements			\$20,757
Item		2052 - YEAR 36	\$
56	Wood walkway, PTL structu		\$2,340
80	Entrance monument, wood t		\$1,190
84	Entrance mon.brk,tuckpoint		\$438
112	Exterior doors, wood (rr)		\$600
113	Exterior windows (ph,mb1).		\$504
118	Sinks/mirrors (rr)		\$1,250
119	Toilets/partitions (rr)		\$6,000
120	Urnal/partitions (rr)		\$800
132	Exterior light fixt. floods, (mb		\$525
171	Chemical feed pump (eq)		\$1,320
177	Pool furniture, round table,		\$3,250
178	Pool table chairs		\$7,800
192	Baseball chain link fence, 4		\$1,512
193	Baseball chain link backstop		\$2,100
Total Scheduled Replacements			\$29,629

PROJECTED REPLACEMENTS - YEARS 37 TO 39

Item	2053 - YEAR 37	\$
21	Concrete picnic slab (6%)(p	\$750
31	Concrete sidewalk (6%)	\$18,728
72	Concrete culvert bnk. slopes	\$4,644
78	Vehicular entry gate, swing	\$5,940
153	Pool deck, caulking (10%)	\$780
176	Pool benches, metal	\$1,200
179	Pool benches, metal	\$1,200
181	Wood picnic tables w/bench	\$1,050
182	Pool benches, metal, wood.	\$1,500
206	Tot lot surfacing, wood mulc	\$6,820
Total Scheduled Replacements \$42,612		
Item	2054 - YEAR 38	\$
86	Light fixtures, attached to tel	\$2,700
103	Water booster pump system	\$11,150
154	Pool diving blocks	\$3,000
165	Pool pump 2.5 HP (eq)	\$6,000
189	MP court, asphalt coating (2	\$1,631
197	Tot lot merry-go-round	\$1,100
199	Tot lot, half moon climber	\$5,250
200	Tot lot, 2 seat teeter totter 6'	\$1,080
201	Tot lot slide	\$9,000
202	Tot lot, A-frame swing, 2 se	\$10,465
203	Tot lot, 3.5" arch-frame swin	\$1,790
204	Tot lot, horizontal ladder 10'	\$5,250
205	Tot lot metal climber	\$1,600
Total Scheduled Replacements \$60,016		
Item	2055 - YEAR 39	\$
3	Asphalt pavement, seal coa	\$5,379
66	Retaining walls, rr-ties ,alon	\$3,918
85	Flagpole, aluminum, 15'hi	\$1,250
133	Electric ceiling / wall heater,	\$1,100
143	Tractor bucket, attach	\$3,200
145	Garden water tanks w/trailer	\$1,500
170	Chemical chlorination tank (	\$1,185
184	Tennis court, color coat (4)	\$25,100
186	Tennis court, net	\$1,280
187	Tennis court chain link fenci	\$37,125
Total Scheduled Replacements \$81,037		

PROJECTED REPLACEMENTS - YEARS 40 TO 42

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CONDITION ASSESSMENT

General Comments. Miller - Dodson Associates conducted a Reserve Study at Forest Ridge Association in March 2017. Forest Ridge Association is in average condition for a homeowners association constructed beginning in 1964. A review of the Replacement Reserve Inventory will show that we are anticipating most of the components achieving their normal economic lives.

The following comments pertain to the larger, more significant components in the Replacement Reserve Inventory and to those items that are unique or deserving of attention because of their condition or the manner in which they have been treated in the Replacement Reserve Analysis or Inventory.

SITE IMPROVEMENTS

Asphalt Pavement. The site includes asphalt pavement for vehicle access and parking. In general, the asphalt pavement is in fair condition with multiple areas of defects. The Association maintains an inventory of 26,927 square feet of asphalt pavement, including the following streets and parking areas:

Pool parking area	19,645	sf
Recreation parking	6,574	
Pool asphalt sidewalk	588	
Recreation sidewalk	120	
Total	26,927	sf

The defects noted include the following:

- **Open Cracks.** There are multiple locations where open cracks are allowing water to penetrate to the asphalt base and the bearing soils beneath the pavement. This water will erode the base accelerating the deterioration of the asphalt pavement. If the cracks have allowed the deterioration of the base materials and the bearing soil, the damaged areas should be removed and replaced. All other cracks should be cleaned and filled.
- **Improper Grading.** The asphalt pavement is not properly graded in a number of areas, resulting in the ponding of water on the pavement. Water ponding on asphalt pavement accelerates the deterioration of the pavement and will result in the formation of potholes. Proper grading of the asphalt pavement will require replacement of portions of the asphalt. It may also require replacement of some of the adjacent segments of curb and gutter that are not properly sloped to move water to the storm water management system.
- **Alligatoring.** There are multiple locations where the asphalt has developed a pattern of cracking known as alligatoring. Alligatoring is the result of an unstable base under the asphalt. Shifting in the base causes the asphalt to crack and shift, forming the cracks that resemble the skin of an alligator. Once these cracks extend through the asphalt, they will allow water to penetrate to the base, accelerating the rate of deterioration. The only solution is to remove the defective asphalt and compact the base before new asphalt is installed.
- **Depressions.** There are areas where the asphalt surface is depressed due to deformation in the surface or underlying layers. These depressions may continue to grow with exposure to traffic. Water ponding was noted in several of these areas. Repair will require removal of the asphalt and base material, installation and compaction of new base material, and resurfacing with asphalt.

- **Cracking Along Edges.** Sections of the asphalt pavement have developed cracks along their edges as a result of a lack of curbing to hold it in place. The pavement will continue to deteriorate with time.



Cracking in pool parking lot near wood bridges.



Cracking in asphalt pool parking area.

- **Reflective Cracks.** The asphalt pavement has a significant number of reflective cracks. Reflective cracks occur when an asphalt overlay is installed over pavement that has existing cracks. With time and movement of the asphalt surfaces, those cracks reappear in the new asphalt. Reflective cracks can be eliminated by the installation of a material, such as Petromat, over existing cracks at the time of overlay.

As a rule of thumb, asphalt should be overlaid when approximately five percent of the surface area has become cracked or has failed. The normal service life of asphalt pavement is typically 18 to 20 years.

In order to maintain the condition of the pavement throughout the community and to ensure the longest life of the asphalt, we recommend a systematic and comprehensive maintenance program that includes:

- **Crack Sealing.** All cracks should be sealed with an appropriate sealing compound to prevent water infiltration through the asphalt compound into the base. This repair should be done annually. This is an entirely different process from the seal coating discussed below. Crack sealing is normally considered a maintenance activity and is not funded from Reserves. Areas of extensive cracking or deterioration that cannot be made watertight by crack sealing should be cut out and patched.
- **Cleaning.** Long-term exposure to oil or gas breaks down asphalt. Because this asphalt pavement is generally not used for long-term parking, it is unlikely that frequent cleaning will be necessary. When necessary, spill areas should be cleaned, or if deterioration has penetrated the asphalt, patched. This is a maintenance activity, and we have assumed that it will not be funded from Reserves.
- **Seal Coating.** The asphalt should be seal coated every three to five years. For this maintenance activity to be effective in extending the life of the asphalt, the crack sealing and cleaning of the asphalt as discussed above should be completed first.

Pricing used in the study is based on a recent contract for a two-inch overlay and reflects the current local market.

Asphalt Seal Coat. The asphalt pavement is estimated to have been seal coated within the past 4 years. The seal coating is in good condition overall. We recommend following a crack filling and recoating cycle of five years for asphalt surfaces.

Concrete Flatwork. The concrete flatwork includes the community sidewalks, pool decks, patios, and driveway aprons. The Association maintains an inventory of approximately 49,216 square feet of concrete flatwork. The overall condition of the concrete flatwork is fair with multiple areas of defects. The defects noted include the following:

- **Cracking.** There are multiple sections of the concrete flatwork that have cracked creating trip hazards.
- **Heaving/Settlement.** Sections of the concrete flatwork have heaved or settled relative to their adjacent sections, creating trip hazards.
- **Scaling and Flaking.** Several sections of the concrete flatwork are scaling and flaking. Scaling and flaking are the loss of the surface mortar in concrete, typically caused by water freezing within the concrete. Once started, scaling and flaking can be expected to continue to grow as a result of exposure of the concrete to freeze-thaw cycles. These scaled sections are creating trip hazards.



Concrete sidewalk between road and tot lot areas cracked and sinking.



Concrete pool deck is sinking near racing pool and poolhouse.

- **Popouts.** Sections of the concrete flatwork have developed a number of popouts. Popouts are small sections of concrete surface that fail as the result of moisture freezing in a void just below the surface, causing pieces of concrete to pop away, leaving a shallow divot. Water can collect in the popouts and can extend the damage if it freezes.
- **Lack of Expansion Joints.** Sections of the concrete flatwork were installed without a proper expansion joint between it and the adjacent sections of concrete. As a result, the edges of the concrete are breaking off, creating trip hazards.
- **Poor Drainage.** There are several areas where water is ponding on the concrete flatwork due to settlement of the flatwork or poor drainage of the surrounding area.



Settling of sidewalk along road causing a tripping hazard.



Transition between the pool deck and poolhouse picnic area is deteriorating and causes a severe tripping hazard.



Cracking and pop-out areas of pool deck.



Cracked concrete sidewalk with salt deterioration at street in front of maintenance buildings.

- The expansion joint material is not present in many of the joints between the concrete sidewalks and curbs. The expansion material that fills these joints is installed to allow movement and to serve as a gasket to prevent water from entering the pavement. If these joints are left open, soil will wash away underneath the pavement and will cause settlement of both the curb and gutter and the sidewalk. Additionally, water that is allowed to collect behind the curb and gutter will open up the joint between the asphalt and gutter pan, which will deteriorate the edges of the asphalt. The expansion joint material should be replaced with an impregnated homasote approximately every five years as a normal maintenance procedure.

The standards we used for recommending replacement are as follows:

1. Trip hazard, 0.5 inch height difference.
2. Severe cracking.
3. Severe spalling
4. Uneven riser heights on steps.
5. Steps with risers in excess of 8.25 inches.

Because it is highly unlikely that all of the community's concrete components will fail and require replacement in the period of the study, we have programmed funds for the replacement of 60 percent of the inventory and spread those funds over a 60-year timeframe to reflect the incremental nature of this work. This approach assumes a failure rate of one percent per year.

Entrance Monuments. Brick masonry walls have been erected as entrance monuments to the community. Because the stonework has a very long life expectancy, we have excluded replacement of these walls. We have, however, included funding for the periodic tuckpointing of mortar joints as exposure to weather over an extended period of time will wash lime out of the mortar and weaken the joint. Periodic tuckpointing of these joints and replacement of damaged brick is required to extend the life of the wall. Unless the wall is damaged by settlement, this work is typically not required until the wall is approximately 35-40 years old. At that point we expect that approximately 10 percent of the surface area will require repair and that an additional 10 percent will require repair every 10 years thereafter.



Rear of brick monument wall and asphalt shingle roof.



The extended brick walls of monument are deteriorating.

Precast panels are considered to be long-life items and are therefore excluded from the Reserve Analysis.

The community has several brick retaining walls (entrance monuments) that it maintains. The total brick retaining wall inventory is approximately 250 square feet. We have assumed that these walls will be replaced on an as necessary basis.

All brick sections are in fair to poor condition at main entrance monument. Because weather and other conditions result in the slow deterioration of the mortar in the brick joints, we have included funding in the Reserve Analysis for tuckpointing. We have assumed that ten percent of the brick will require tuckpointing every ten years.

Gazebo. The Association maintains a gazebo of wood construction. The gazebo has a wood floor and an asphalt shingle roof. The roof, floor, and the structure of the gazebo are in good condition.

The rate of deterioration of the wood components of the gazebo will vary with the level of maintenance performed on those components as well as the exposure of the gazebo to the elements. Gazebos of this type can be expected to have a service life of 40 years.



Stamped concrete brick with coloring sidewalk up to and around the gazebo has cracked in a few locations.



Ceiling and light fixture in gazebo.

We have separated the gazebo into three components in the Reserve Analysis to reflect their different service lives; the roof, the floor, and the structure.

Wood Bridge. There are three wood bridges located near parking lot crossing creek leading to pool and recreation area. The overall conditions of the bridges are good. For the Reserve Analysis, we have separated each bridge into two components, the wood deck and the structure, to reflect their different service lives.



Wood bridge (4'w) with metal 2-bar railings over open storm water community creek.



Wood bridge (7'w) with two wood rail and wood handrail.

Storm Water System. We have included the catch basins and underground piping portions of the storm water system in the Reserve Analysis. No engineering drawings were available to accurately determine distances, sizes of lines and materials used for underground components of the system. Accordingly, we have provided an estimate of the approximate replacement cost based on our experience with other communities of similar size and on our inspection of the visible components while on site. Inspection of the underground lines and structures is beyond the scope of work of this study.

Dumpster Area. The community has one trash gravel dumpster area off asphalt drive to swimming pool parking area. No fencing around the dumpster. The overall condition of the trash corrals is fair.



Dumpster and gravel pad on entrance drive to pool.

POOLHOUSE EXTERIOR

Asphalt Shingle Roofing. The asphalt shingle roof is in fair condition. We noted areas where the asphalt shingles showed significant shrinkage and granular loss; all signs that the shingles are approaching the end of their service life.

We have estimated the remaining useful life of the roofs based on the conditions seen at the site as well as the age of the roofs. We have assumed that when the roofs eventually will require replacement, all roofs will be replaced with 30-year roofs. We have assumed that the gutters and downspouts will be replaced when the roofs are replaced.



Poolhouse with asphalt shingle roof.



Wood T-111 siding in gables and screened/louver (8) openings in concrete block walls.

Wood Siding. The upper gable ends are covered with T-111 plywood grooved siding.

POOLHOUSE EXTERIOR AND INTERIOR

Metal Exterior Doors. The exterior doors (5) are of metal construction. These doors are approximately 40 years old and are in fair to poor condition.

Metal doors and their frames are prone to damage from corrosion. To limit damage, doors and frames should be painted every five to six years.

Office, Restrooms, Pool Equipment Room These rooms in the building were last renovated years ago. Listed below are the major components that we have included in the Reserve Analysis:

- Light Fixtures. Corridor illumination is provided by wall mounted and ceiling mounted light fixtures. The fixtures use incandescent fluorescent lamps. The fixtures are in good fair poor working condition and do not provide adequate lighting. Fixtures of this type have a typical service life of 25 years.

We recommend that the Association install compact fluorescent lamps in place of the existing incandescent bulbs. Compact fluorescent lamps can provide the same light output while using approximately 25 percent of the energy of an incandescent bulb. They also offer service lives that are ten to 15 times longer.

- Furnishings. We have included the furnishings in office space in the Reserve Analysis. We have assumed that the service life for the furniture is 15 years and that it will be replaced with similar items.



Poolhouse office with counter and desk.



Typical wood partition stalls. Need of handicap upgrades in both restrooms.

- Pool equipment. Listed in inventory.

EQUIPMENT/MAINTENANCE BUILDINGS EXTERIOR

Metal Roof. The buildings are covered with corrugated metal and have alum.downspouts and gutters



Maintenance storage building #2 with 16'x7' garage door and corrugated metal siding and roof.



Corrugated metal siding exterior flood lights and alum. gutters.

- **Metal Siding.** The siding of both maintenance buildings are covered with corrugated metal siding.

EQUIPMENT/MAINTENANCE BUILDING INTERIORS

Office

- The office space in the newest building was last renovated 20 years ago date to the original construction of the building. Listed below are the major corridor components that we have included in the Reserve Analysis:
- Furnishings. We have included the cabinets/counters in maintenance building in the Reserve Analysis. We have assumed that the service life for the cabinets/counters is 25 years and that it will be replaced with similar items.



Maintenance building #1 with tractor.



Four wheel mule in maintenance building #1

Storage

- **Light Fixtures.** Building lighting is provided by ceiling mounted light fixtures. The fixtures use fluorescent lamps. The fixtures are in good working condition and do provide adequate lighting. Fixtures of this type have a typical service life of 25 years.

We recommend that the Association install compact fluorescent lamps in place of the existing incandescent bulbs. Compact fluorescent lamps can provide the same light output while using approximately 25 percent of the energy of an incandescent bulb. They also offer service lives that are ten to 15 times longer.

- **Maintenance Equipment.** The equipment is listed in the inventory.

RECREATIONAL FACILITIES

Swimming Pool. The community operates an outdoor pool, racing pool and wading pool of concrete construction with a concrete deck. The concrete deck is not coated. Listed below are the major components of the pool facilities:

Pool Shell. The shells for the swimming pools are in fair to poor condition. Pool shells normally have a finite life of approximately 45 years. At that time it may not be necessary to replace the entire structure. However, it is prudent to anticipate a major expenditure for replacement of underground lines and sections of the pool. Based on our research, we have found it to be prudent to program \$85 per square foot of pool surface to cover these needs.



Wading pool with deteriorating coping.
Pool has new filtering system.



Six lane racing pool with lifeguard chairs
in background.

Pool Deck. The pool has a concrete deck. The overall condition of the deck is fair to poor. Because it is highly unlikely that all of the community's concrete components will fail and require replacement in the period of the study, we have programmed funds for the replacement of 60 percent of the inventory and spread those funds over a 60-year timeframe to reflect the incremental nature of this work. This approach assumes a failure rate of one percent per year.



Concrete pool deck cracking in various
areas.



Due to the age of the pool deck many
areas are sinking, causing standing
water.

- Whitecoat. The pool whitecoat is in poor condition. We have assumed a service life of eight to ten years for the pool whitecoat.
- Coping. The pool is edged with masonry coping. The coping is in good to fair condition.



Water table tile needs replacement in diving pool.



Coping deterioration around in wading pool.

Waterline Tile. The waterline tile is in poor condition. We have assumed that the waterline tile will be replaced or restored when the pool is whitecoated.



Diving pool missing water table tile, needs whitecoating and new concrete coping.



The existing pool filter system for the diving and racing pool needing in the near future.

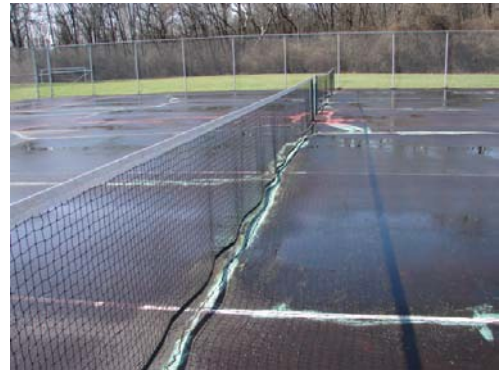
- Pump and Filter System. The filter system is in good to fair operating condition. We have assumed a service life of 20 years for the filter system, and 10 years for the pump.

Tennis Courts - Asphalt. The community maintains four tennis courts. The overall condition of these courts is poor. Listed below are the major components of the tennis court facilities:

- Asphalt Pavement. The asphalt pavement for the tennis court is in poor condition with cracks and splits that extend into the playing surface. We have assumed a service life of 20 years for the asphalt.
- Color Coat. The color coat on the tennis courts is in poor condition with some major defects in its finish.



Typical cracks on tennis courts. Many cracks are on the playing areas. The colored surface coating has worn off.



Tennis courts near nets. Cracking on playing surface.

- Fencing. The fencing installed around the tennis courts is chain link and in fair to poor condition. The fencing has damage in several locations. The fencing and poles are corroded. We have assumed that the fencing will be replaced when the asphalt pavement is replaced.
- Net Posts. The net posts are in good condition. We have assumed that the new posts will be replaced when the asphalt pavement is replaced.

Basketball Court (MP) - Asphalt. The community maintains two full basketball courts. The overall condition of the court is fair. Listed below are the major components of the basketball court facilities:

- Asphalt Pavement. The asphalt pavement for the basketball court is in fair condition with cracks and splits that extend into the playing surface. We have assumed a service life of 20 years for the asphalt.



Lower fencing near wading pool showing rust.



Basketball courts have minor cracking and backboards are aging.

- Fencing. The fencing installed around the basketball court is chain link and in fair condition. There were a few noted defects. The fencing has damage in several locations. The fencing and poles are corroded. We have assumed that the fencing will be replaced when the asphalt pavement is replaced.
- Backboard. The backboard and post are in fair to poor condition.



Backboards are of thin metal material.
Needs updating.



Chain link fencing in recreation area are
rusting and bending in middle and
bottoms.

Tot Lots. The community maintains (6) six tot lots. These tot lots include play structures, miscellaneous play equipment, no borders, wood chip surfacing and wood/metal benches. The facilities are in good to fair condition.



Typical swing sets. Areas beneath
swings need leveling and additional
mulch.



Typical bench at tot lot areas. Many
boards are splintered, warped and not
level.



Merry-go-round, located in tot lot area
near pool, needs leveling and additional
mulch.

We noted that the playground does not have adequate protective surface under the equipment and around it. Random measurement of the wood chips indicates approximately 1 1/2" to 2" maximum depth under the play equipment. The area under the swing set was basically bare. The safety of each individual piece of playground equipment as well as the layout of the entire play area should be considered when evaluating a playground for safety. The installation and maintenance of protective surfacing under and around all equipment is crucial. Information for playground design and safety can be found in the "Handbook for Public Playground Safety", U.S. Consumer Product Safety Commission, Washington, DC 20207. (Pub. No.325). The publication can be downloaded at www.cpsc.gov.

Our estimates for playground equipment are based on comparing photos of the existing equipment with equipment of a similar size in manufacturer's catalogs. We use the pricing that is quoted by the manufacturer and add 30% for the disposal of the old equipment and the labor to install the new equipment.

Water Mains. The Association is responsible for the maintenance of the water mains located under the roadways within the community. No engineering drawings were available to accurately determine distances, sizes of lines, and materials used for underground components of the system. Accordingly, we have provided an estimate of the approximate replacement cost based on our experience with other communities of similar size and on our inspection of the visible components while on site. Inspection of the underground lines and structures is beyond the scope of work of this study.

Storm Water System. We have included the catch basins and underground piping portions of the storm water system in the Reserve Analysis. No engineering drawings were available to accurately determine distances, sizes of lines and materials used for underground components of the system. Accordingly, we have provided an estimate of the approximate replacement cost based on our experience with other communities of similar size and on our inspection of the visible components while on site. Inspection of the underground lines and structures is beyond the scope of work of this study.



Concrete reinforced banks near 8' diameter concrete storm drains and bridges.



Typical storm bulkheads where community creek goes under the city roads. Assume the maintenance of creek bed in responsibility of association but not under the roads. These costs are included in Reserve Study.

The association has eighteen such areas of varying amounts of rip rap (stone) and concrete slopes. The Reserve Study has budgeted for an allowance in this area.

This Condition Assessment is based upon our visual survey of the property. The sole purpose of the visual survey was an evaluation of the common elements of the property to ascertain the remaining useful life and the replacement costs of these common elements. Our evaluation assumed that all components met building code requirements in force at the time of construction. Our visual survey was conducted with care by experienced persons, but no warranty or guarantee is expressed or implied.

End of Condition Assessment

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CASH FLOW METHOD ACCOUNTING SUMMARY

This Forest Ridge Association - Cash Flow Method Accounting Summary is an attachment to the Forest Ridge Association - Replacement Reserve Study dated March 1, 2017 and is for use by accounting and reserve professionals experienced in Association funding and accounting principles. This Summary consists of four reports, the 2017, 2018, and 2019 Cash Flow Method Category Funding Reports (3) and a Three-Year Replacement Funding Report.

- ❑ CASH FLOW METHOD CATEGORY FUNDING REPORT, 2017, 2018, and 2019. Each of the 206 Projected Replacements listed in the Forest Ridge Association Replacement Reserve Inventory has been assigned to one of 15 categories. The following information is summarized by category in each report:
 - ❑ Normal Economic Life and Remaining Economic Life of the Projected Replacements.
 - ❑ Cost of all Scheduled Replacements in each category.
 - ❑ Replacement Reserves on Deposit allocated to the category at the beginning and end of the report period.
 - ❑ Cost of Projected Replacements in the report period.
 - ❑ Recommended Replacement Reserve Funding allocated to the category during the report period as calculated by the Cash Flow Method.
- ❑ THREE-YEAR REPLACEMENT FUNDING REPORT. This report details the allocation of the \$77,000 Beginning Balance (at the start of the Study Year) and the \$286,941 of additional Replacement Reserve Funding in 2017 through 2019 (as calculated in the Replacement Reserve Analysis) to each of the 206 Projected Replacements listed in the Replacement Reserve Inventory. These allocations have been made using Chronological Allocation, a method developed by Miller Dodson Associates, Inc., and discussed below. The calculated data includes:
 - ❑ Identification and estimated cost of each Projected Replacement scheduled in years 2017 through 2019.
 - ❑ Allocation of the \$77,000 Beginning Balance to the Projected Replacements by Chronological Allocation.
 - ❑ Allocation of the \$286,941 of additional Replacement Reserve Funding recommended in the Replacement Reserve Analysis in years 2017 through 2019, by Chronological Allocation.
- ❑ CHRONOLOGICAL ALLOCATION. Chronological Allocation assigns Replacement Reserves to Projected Replacements on a "first come, first serve" basis in keeping with the basic philosophy of the Cash Flow Method. The Chronological Allocation methodology is outlined below.
 - ❑ The first step is the allocation of the \$77,000 Beginning Balance to the Projected Replacements in the Study Year. Remaining unallocated funds are next allocated to the Projected Replacements in subsequent years in chronological order until the total of Projected Replacements in the next year is greater than the unallocated funds. Projected Replacements in this year are partially funded with each replacement receiving percentage funding. The percentage of funding is calculated by dividing the unallocated funds by the total of Projected Replacements in the partially funded year.

At Forest Ridge Association the Beginning Balance funds all Scheduled Replacements in the Study Year through 2018 and provides partial funding (57%) of replacements scheduled in 2019.
 - ❑ The next step is the allocation of the \$95,647 of 2017 Cash Flow Method Reserve Funding calculated in the Replacement Reserve Analysis. These funds are first allocated to fund the partially funded Projected Replacements and then to subsequent years in chronological order as outlined above.

At Forest Ridge Association the Beginning Balance and the 2017 Replacement Reserve Funding, funds replacements through 2020 and partial funds (20.9%) replacements in 2021.
 - ❑ Allocations of the 2018 and 2019 Reserve Funding are done using the same methodology.
 - ❑ The Three-Year Replacement Funding Report details component by component allocations made by Chronological Allocation.

2017 - CASH FLOW METHOD CATEGORY FUNDING REPORT

Each of the 206 Projected Replacements included in the Forest Ridge Association Replacement Reserve Inventory has been assigned to one of the 15 categories listed in TABLE CF1 below. This calculated data is a summary of data provided in the Three-Year Replacement Funding Report and Replacement Reserve Inventory. The accuracy of this data is dependent upon many factors including the following critical financial data:

- ☐ A Beginning Balance of \$77,000 as of the first day of the Study Year, January 1, 2017.
- ☐ Total reserve funding (including the Beginning Balance) of \$172,647 in the Study Year.
- ☐ No expenditures from Replacement Reserves other than those specifically listed in the Replacement Reserve Inventory.

If any of these critical factors are inaccurate, do not use the data and please contact Miller Dodson Associates to arrange for an update of the Replacement Reserve Study.

2017 - CASH FLOW METHOD CATEGORY FUNDING - TABLE CF1

CATEGORY	NORMAL ECONOMIC LIFE	REMAINING ECONOMIC LIFE	ESTIMATED REPLACEMENT COST	2017 BEGINNING BALANCE	2017 RESERVE FUNDING	2017 PROJECTED REPLACEMENTS	2017 END OF YEAR BALANCE
SITE COMPONENTS	5 to 60 years	3 to 57 years	\$64,667		\$7,038		\$7,038
SITE COMPONENTS (cont.)	60 years	6 to 60 years	\$194,778				
SITE COMPONENTS (cont.)	60 years	3 to 57 years	\$94,561		\$9,456		\$9,456
SITE COMPONENTS (cont.)	15 to 45 years	3 to 25 years	\$51,577		\$2,509		\$2,509
SITE COMPONENTS (cont.)	10 to 60 years	6 to 60 years	\$52,082				
SITE COMPONENTS (cont.)	10 to 80 years	4 to 40 years	\$36,160		\$854		\$854
SITE COMPONENTS (cont.)	10 to 60 years	7 to 25 years	\$92,410				
POOLHOUSE / MAINT.BLDG .	5 to 50 years	2 to 30 years	\$71,658	\$7,553	\$8,548		\$16,101
POOLHOUSE / MAINT.BLDG ,con'd	10 to 50 years	8 to 20 years	\$41,665				
MAINTENANCE BLDG EQUIP.	15 to 25 years	10 to 20 years	\$56,800				
RECREATION	5 to 40 years	1 to 20 years	\$825,342	\$53,061	\$46,310		\$99,370
RECREATION (cont.)	10 to 20 years	1 to 10 years	\$18,025	\$450			\$450
RECREATION (cont.)	10 to 15 years	4 to 6 years	\$30,690		\$2,137		\$2,137
RECREATION (cont.)	5 to 30 years	1 to 20 years	\$231,812	\$1,631	\$1,280		\$2,911
RECREATION (cont.)	3 to 30 years	2 to 10 years	\$68,180	\$14,305	\$17,515		\$31,820

2018 - CASH FLOW METHOD CATEGORY FUNDING REPORT

Each of the 206 Projected Replacements included in the Forest Ridge Association Replacement Reserve Inventory has been assigned to one of the 15 categories listed in TABLE CF2 below. This calculated data is a summary of data provided in the Three-Year Replacement Funding Report and Replacement Reserve Inventory. The accuracy of this data is dependent upon many factors including the following critical financial data:

- ☐ Replacement Reserves on Deposit totaling \$172,647 on January 1, 2018.
- ☐ Total reserve funding (including the Beginning Balance) of \$268,294 from 2017 through 2018.
- ☐ No expenditures from Replacement Reserves other than those specifically listed in the Replacement Reserve Inventory.
- ☐ All Projected Replacements scheduled in the Replacement Reserve Inventory in 2018 being accomplished in 2018 at a cost of \$2,861.

If any of these critical factors are inaccurate, do not use the data and please contact Miller Dodson Associates to arrange for an update of the Replacement Reserve Study.

2018 - CASH FLOW METHOD CATEGORY FUNDING - TABLE CF2

CATEGORY	NORMAL ECONOMIC LIFE	REMAINING ECONOMIC LIFE	ESTIMATED REPLACEMENT COST	2018 BEGINNING BALANCE	2018 RESERVE FUNDING	2018 PROJECTED REPLACEMENTS	2018 END OF YEAR BALANCE
SITE COMPONENTS	5 to 60 years	2 to 56 years	\$64,667	\$7,038	\$4,052		\$11,089
SITE COMPONENTS (cont.)	60 years	5 to 59 years	\$194,778		\$2,996		\$2,996
SITE COMPONENTS (cont.)	60 years	2 to 56 years	\$94,561	\$9,456			\$9,456
SITE COMPONENTS (cont.)	15 to 45 years	2 to 24 years	\$51,577	\$2,509	\$659		\$3,169
SITE COMPONENTS (cont.)	10 to 60 years	5 to 59 years	\$52,082		\$714		\$714
SITE COMPONENTS (cont.)	10 to 80 years	3 to 39 years	\$36,160	\$854	\$4,574		\$5,428
SITE COMPONENTS (cont.)	10 to 60 years	6 to 24 years	\$92,410				
POOLHOUSE / MAINT.BLDG .	5 to 50 years	1 to 29 years	\$71,658	\$16,101	\$13,352		\$29,453
POOLHOUSE / MAINT.BLDG ,con'd	10 to 50 years	7 to 19 years	\$41,665				
MAINTENANCE BLDG EQUIP.	15 to 25 years	9 to 19 years	\$56,800				
RECREATION	5 to 40 years	0 to 19 years	\$825,342	\$99,370	\$38,930	(\$780)	\$137,520
RECREATION (cont.)	10 to 20 years	0 to 9 years	\$18,025	\$450	\$5,140	(\$450)	\$5,140
RECREATION (cont.)	10 to 15 years	3 to 5 years	\$30,690	\$2,137	\$20,569		\$22,706
RECREATION (cont.)	5 to 30 years	0 to 19 years	\$231,812	\$2,911	\$3,612	(\$1,631)	\$4,892
RECREATION (cont.)	3 to 30 years	1 to 9 years	\$68,180	\$31,820	\$1,049		\$32,869

2019 - CASH FLOW METHOD CATEGORY FUNDING REPORT

Each of the 206 Projected Replacements included in the Forest Ridge Association Replacement Reserve Inventory has been assigned to one of the 15 categories listed in TABLE CF3 below. This calculated data is a summary of data provided in the Three-Year Replacement Funding Report and Replacement Reserve Inventory.

The accuracy of this data is dependent upon many factors including the following critical financial data:

- ☐ Replacement Reserves on Deposit totaling \$265,433 on January 1, 2019.
- ☐ Total Replacement Reserve funding (including the Beginning Balance) of \$363,941 from 2017 to 2019.
- ☐ No expenditures from Replacement Reserves other than those specifically listed in the Replacement Reserve Inventory.
- ☐ All Projected Replacements scheduled in the Replacement Reserve Inventory in 2019 being accomplished in 2019 at a cost of \$129,567.

If any of these critical factors are inaccurate, do not use the data and please contact Miller Dodson Associates to arrange for an update of the Replacement Reserve Study.

2019 - CASH FLOW METHOD CATEGORY FUNDING - TABLE CF3

CATEGORY	NORMAL ECONOMIC LIFE	REMAINING ECONOMIC LIFE	ESTIMATED REPLACEMENT COST	2019 BEGINNING BALANCE	2019 RESERVE FUNDING	2019 PROJECTED REPLACEMENTS	2019 END OF YEAR BALANCE
SITE COMPONENTS	5 to 60 years	1 to 55 years	\$64,667	\$11,089			\$11,089
SITE COMPONENTS (cont.)	60 years	4 to 58 years	\$194,778	\$2,996	\$16,482		\$19,478
SITE COMPONENTS (cont.)	60 years	1 to 55 years	\$94,561	\$9,456			\$9,456
SITE COMPONENTS (cont.)	15 to 45 years	1 to 23 years	\$51,577	\$3,169			\$3,169
SITE COMPONENTS (cont.)	10 to 60 years	4 to 58 years	\$52,082	\$714	\$3,930		\$4,644
SITE COMPONENTS (cont.)	10 to 80 years	2 to 38 years	\$36,160	\$5,428	\$5,298		\$10,726
SITE COMPONENTS (cont.)	10 to 60 years	5 to 23 years	\$92,410		\$10,801		\$10,801
POOLHOUSE / MAINT.BLDG .	5 to 50 years	0 to 28 years	\$71,658	\$29,453	\$0	(\$13,200)	\$16,253
POOLHOUSE / MAINT.BLDG ,con'd	10 to 50 years	6 to 18 years	\$41,665				
MAINTENANCE BLDG EQUIP.	15 to 25 years	8 to 18 years	\$56,800				
RECREATION	5 to 40 years	0 to 18 years	\$825,342	\$137,520	\$3,566	(\$91,367)	\$49,720
RECREATION (cont.)	10 to 20 years	3 to 19 years	\$18,025	\$5,140	\$5,812		\$10,952
RECREATION (cont.)	10 to 15 years	2 to 4 years	\$30,690	\$22,706	\$7,984		\$30,690
RECREATION (cont.)	5 to 30 years	1 to 18 years	\$231,812	\$4,892	\$1,580		\$6,472
RECREATION (cont.)	3 to 30 years	0 to 8 years	\$68,180	\$32,869	\$40,194	(\$25,000)	\$48,063

CASH FLOW METHOD - THREE-YEAR REPLACEMENT FUNDING REPORT

TABLE CF4 below details the allocation of the \$77,000 Beginning Balance, as reported by the Association and the \$286,941 of Replacement Reserve Funding calculated by the Cash Flow Method from 2017 to 2019, to the 206 Projected Replacements listed in the Replacement Reserve Inventory. These allocations have been made by Chronological Allocation, a method developed by Miller Dodson Associates, Inc., and outlined on Page CF1.

The accuracy of the allocations is dependent upon many factors including the following critical financial data:

- ☐ Replacement Reserves on Deposit totaling \$77,000 on January 1, 2017.
- ☐ Replacement Reserves on Deposit totaling \$172,647 on January 1, 2018.
- ☐ Replacement Reserves on Deposit totaling \$265,433 on January 1, 2019.
- ☐ Total Replacement Reserve funding (including the Beginning Balance) of \$363,941 from 2017 to 2019.
- ☐ No expenditures from Replacement Reserves other than those specifically listed in the Replacement Reserve Inventory.
- ☐ All Projected Replacements scheduled in the Replacement Reserve Inventory from 2017 to 2019 being accomplished as scheduled in the Replacement Reserve Inventory at a cost of \$132,428.

If any of these critical factors are inaccurate, do not use the data and please contact Miller Dodson Associates, Inc., to arrange for an update of the Replacement Reserve Study.

[illegible]

CASH FLOW METHOD - THREE-YEAR REPLACEMENT FUNDING - TABLE CF4 cont'd

Item #	Description of Projected Replacement	Estimated Replacement Costs	Allocation of Beginning Balance	2017 Reserve Funding	2017 Projected Replacements	2017 End of Year Balance	2018 Reserve Funding	2018 Projected Replacements	2018 End of Year Balance	2019 Reserve Funding	2019 Projected Replacements	2019 End of Year Balance
40	Concrete pool deck (6%)	8,604										
41	Concrete pool deck (6%)	8,604										
42	Concrete pool deck (6%)	8,604										
43	Concrete pool deck (6%)	8,604										
44	Concrete pool deck (6%)	8,604										
45	Concrete pool deck (6%)	8,604										
46	Concrete curb, barrier (6%)(rp)	852		852		852			852			852
47	Concrete curb, barrier (6%)(rp)	852										
48	Concrete curb, barrier (6%)(rp)	852										
49	Concrete curb, barrier (6%)(rp)	852										
50	Concrete curb, barrier (6%)(rp)	852										
51	Concrete curb, barrier (6%)(rp)	852										
52	Concrete curb, barrier (6%)(rp)	852										
53	Concrete curb, barrier (6%)(rp)	852										
54	Concrete curb, barrier (6%)(rp)	852										
55	Concrete curb, barrier (6%)(rp)	852										
SITE COMPONENTS (cont.)												
56	Wood walkway, PTL structure, ramp 7	2,340										
57	Wood ped. bridge, PTL structure	13,205										
58	Wood PTL decking	3,645										
59	Wood PTL railing, 2-bd	2,335		2,335		2,335			2,335			2,335
60	Wood ped. bridge, PTL structure 4'w	7,755										
61	Wood ped. bridge, PTL deck	1,665										
62	Metal pipe railing, 2-strand	2,660										
63	Wood ped/ trk. bridge, PTL struc. 12'w	11,196										
64	Wood ped/ trk. bridge, PTL, deck	2,025										
65	Wood PTL railing, 3-bd w/handrail	834		175		175	659		834			834
66	Retaining walls, r-ties, along bank	3,918										
SITE COMPONENTS (cont.)												
67	Concrete culvert bnk. slopes (6%)	4,644					714		714	3,930		4,644
68	Concrete culvert bnk. slopes (6%)	4,644										
69	Concrete culvert bnk. slopes (6%)	4,644										
70	Concrete culvert bnk. slopes (6%)	4,644										
71	Concrete culvert bnk. slopes (6%)	4,644										
72	Concrete culvert bnk. slopes (6%)	4,644										
73	Concrete culvert bnk. slopes (6%)	4,644										
74	Concrete culvert bnk. slopes (6%)	4,644										
75	Concrete culvert bnk. slopes (6%)	4,644										
76	Concrete culvert bnk. slopes (6%)	4,644										
77	Concrete culvert bulkheads (14)(10%)	5,642										
SITE COMPONENTS (cont.)												
78	Vehicular entry gate, swing (3) (pl,rc)	5,940					914		914	5,026		5,940
79	Entrance mon, asphalt shingle roof (e)	796										
80	Entrance monument, wood trim, soffit	1,190										
81	Entrance monument, granite carved si	2,250										
82	Entrance mon., 4' flou. lights/soffit (2)	280								271		271
83	Entrance monument, floods (em, flp)	1,200										
84	Entrance mon. brk. tuckpoint (10%) (3)	438					438		438			438
85	Flagpole, aluminum, 15'hi	1,250										
86	Light fixtures, attached to tele. poles.	2,700										
87	Gazebo, 14' octagon, PLT-wood w/as	16,040										
88	Concrete stamped brick sidewalk (6%)	408		85		85	322		408			408
89	Concrete stamped brick sidewalk (6%)	408		85		85	322		408			408
90	Concrete stamped brick sidewalk (6%)	408		85		85	322		408			408
91	Concrete stamped brick sidewalk (6%)	408		85		85	322		408			408
92	Concrete stamped brick sidewalk (6%)	408		85		85	322		408			408
93	Concrete stamped brick sidewalk (6%)	408		85		85	322		408			408
94	Concrete stamped brick sidewalk (6%)	408		85		85	322		408			408
95	Concrete stamped brick sidewalk (6%)	408		85		85	322		408			408
96	Concrete stamped brick sidewalk (6%)	408		85		85	322		408			408
97	Concrete stamped brick sidewalk (6%)	408		85		85	322		408			408
SITE COMPONENTS (cont.)												
98	Domestic water laterals (10%) (allow)	28,350										
99	Domestic water risers, CPVC(ph)	5,760										
100	Sanitary laterals (10%)(allow.)	24,750										
101	Sewer ejector pump, 12 gpm, 70 gal. (	2,250										
102	Sewer ejector pump, 24 gpm, 275 gal (	7,350										
103	Water booster pump system. 5 hp (eq)	11,150								10,801		10,801

CASH FLOW METHOD - THREE-YEAR REPLACEMENT FUNDING - TABLE CF4 cont'd

Item #	Description of Projected Replacement	Estimated Replacement Costs	Allocation of Beginning Balance	2017 Reserve Funding	2017 Projected Replacements	2017 End of Year Balance	2018 Reserve Funding	2018 Projected Replacements	2018 End of Year Balance	2019 Reserve Funding	2019 Projected Replacements	2019 End of Year Balance
104	Storm water management (10% allowance)	9,200										
105	Sanitary risers & vents, cast iron (ph)	3,600										
POOLHOUSE / MAINT.BLDG .												
106	Roofing, asphalt shingles (ph)	14,766										
107	Gutter & dwnspts,5" alum (ph,mb1,2)	3,107										
108	Vinyl trim soffits (ph)	1,850										
109	Wood siding, T-111 vertical,gable end	1,280										
110	Wood ceiling, planks /spacing (ph)	4,998										
111	Exterior doors , metal, (ph, mb1,2)	5,950										
112	Exterior doors, wood (rr)	600										
113	Exterior windows (ph,mb1).	504										
114	Exterior window screens/vents (ph)	2,400					2,400		2,400			2,400
115	Rubber EPDM poured flooring (ent,rr)	13,200	7,553	5,647		13,200			13,200		(13,200)	
116	Shower plumbing fixtures (8) (rr)	2,800		586		586	2,214		2,800			2,800
117	Restroom showers, rubber mat (rr)	1,053		221		221	832		1,053			1,053
118	Sinks/mirrors (rr)	1,250										
119	Toilets/partitions (rr)	6,000										
120	Urinal/partitions (rr)	800										
121	Hot water heater (rr)	1,100										
122	Handicap access.(rr)/upgrades (allow)	10,000		2,094		2,094	7,906		10,000			10,000
POOLHOUSE / MAINT.BLDG,cont'd												
123	Office desk, shelving, counter (ph)	5,500										
124	Drinking fountain (ph)	550										
125	Ceiling ventilation fan (pmr)	450										
126	Storage bldg. mtl, w/shingle, (2) (ph)	3,800										
127	Light fixtures,floresent ,4'1) (rr,entm,,	1,040										
128	Light fixtures, ceiling mt., (pc,hw)	1,200										
129	Security cameras (ph,mb1,2)	1,800										
130	Roofing, corr. metal, (2 bldg) (mb1,2)	9,923										
131	Exterior metal siding,trim. (mb1,2)	7,527										
132	Exterior light fixt. floods, (mb1,2)	525										
133	Electric ceiling / wall heater, 5 kw (mb1,2)	1,100										
134	Office cabnets, kit., racks, tool bench (ph)	5,100										
135	Garage door 10x14, comm./oper.(mb1,2)	1,900										
136	Garage door 16x7, comm./oper(mb2)	1,250										
MAINTENANCE BLDG EQUIP.												
137	Tractor, heated enclosed ,4 wheel	14,000										
138	Grasshopper, lawnmower, lg	8,500										
139	Lazyboy lawnmower small	1,100										
140	Land rover, small, 4- wheeler	9,500										
141	Chipper, Vermeer, attach.	8,500										
142	Air compressor, attach.	2,400										
143	Tractor bucket, attach	3,200										
144	Edgers, hand	1,500										
145	Garden water tanks w/trailer, attach.	1,500										
146	Lawn mower trailer, attach.	2,200										
147	Seed spreader, funnel, attach.	2,500										
148	Chemical weed mtl tank spreader, attach	1,900										
RECREATION												
149	Swimming pool structure(3)	630,530										
150	Swimming pool, whitecoat	66,819	38,234	28,585		66,819			66,819		(66,819)	
151	Swimming pool waterline tile (6x6)	6,618	3,787	2,831		6,618			6,618		(6,618)	

CASH FLOW METHOD - THREE-YEAR REPLACEMENT FUNDING - TABLE CF4 cont'd												
Item #	Description of Projected Replacement	Estimated Replacement Costs	Allocation of Beginning Balance	2017 Reserve Funding	2017 Projected Replacements	2017 End of Year Balance	2018 Reserve Funding	2018 Projected Replacements	2018 End of Year Balance	2019 Reserve Funding	2019 Projected Replacements	2019 End of Year Balance
165	Pool pump 2.5 HP (eq)	6,000								5,812		5,812
166	Pool pump 2.5HP (eq)	2,000										
167	Pool filter, cartridge .50 sf (eq)	1,150										
168	Pool filter, cartridge, 150 sf (eq)	1,690					1,690		1,690			1,690
169	Pool filter, cartridge, 150 sf (eq)	2,130					2,130		2,130			2,130
170	Chemical chlorination tank (eq)	1,185										
171	Chemical feed pump (eq)	1,320					1,320		1,320			1,320
172	Pool vacuum system (pd)	2,100										
173	Drinking fountain, (tc)	450	450			450		(450)				
	RECREATION (cont.)											
174	Pool furniture, lounge, vinyl strap	4,940		1,035		1,035	3,905		4,940			4,940
175	Pool furniture, chair, vinyl strap	5,265		1,103		1,103	4,162		5,265			5,265
176	Pool benches, metal	1,200					185		185	1,015		1,200
177	Pool furniture, round table,	3,250					3,250		3,250			3,250
178	Pool table chairs	7,800					7,800		7,800			7,800
179	Pool benches, metal	1,200					185		185	1,015		1,200
180	Pool furniture, umbrella	4,485					690		690	3,795		4,485
181	Wood picnic tables w/benches	1,050					161		161	889		1,050
182	Pool benches, metal, wood.	1,500					231		231	1,269		1,500
	RECREATION (cont.)											
183	Tennis court, asphalt overlay (4)	100,400										
184	Tennis court, color coat (4)	25,100										
185	Tennis court, post & footings	10,240										
186	Tennis court, net	1,280		1,280		1,280			1,280			1,280
187	Tennis court chain link fencing 12' hi (	37,125										
188	MP court, asphalt overlay (2)	32,624										
189	MP court, asphalt coating (2)	1,631	1,631			1,631		(1,631)		1,580		1,580
190	Basketball pole & backboard	6,000										
191	MP fence, 10' hi galv.chain link	10,800										
192	Baseball chain link fence, 4' hi	1,512					1,512		1,512			1,512
193	Baseball chain link backstop 15' hi	2,100					2,100		2,100			2,100
194	Baseball bench wd/metal (2)	500										
195	Bike rack, 9 bikes	2,500										
	RECREATION (cont.)											
196	Tot lot, ADA MP structure, 2 platform	25,000	14,305	10,695		25,000			25,000		(25,000)	
197	Tot lot merry-go-round	1,100								1,066		1,066
198	Tot lot, spring ride (small)	825										
199	Tot lot, half moon climber	5,250								5,086		5,086
200	Tot lot, 2 seat teeter totter 6'	1,080								1,046		1,046
201	Tot lot slide	9,000								8,718		8,718
202	Tot lot, A-frame swing, 2 seat	10,465								10,138		10,138
203	Tot lot, 3.5" arch-frame swing, 2 seat	1,790								1,734		1,734
204	Tot lot, horizontal ladder 10'	5,250								5,086		5,086
205	Tot lot metal climber	1,600								1,550		1,550
206	Tot lot surfacing, wood mulch 3"	6,820		6,820		6,820	1,049		7,869	5,771		13,640

COMPONENT METHOD



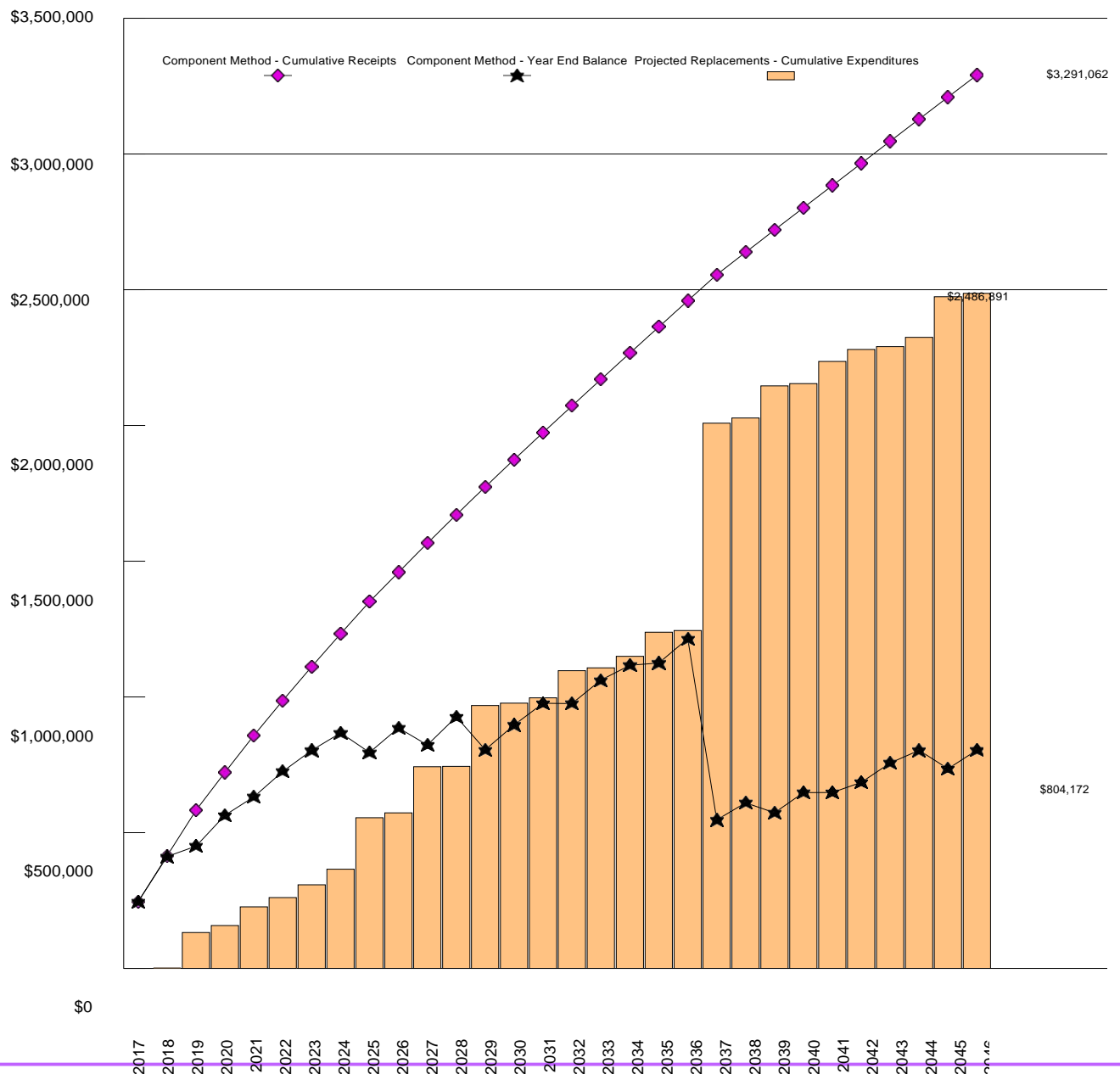
\$169,089

COMPONENT METHOD RECOMMENDED ANNUAL FUNDING OF REPLACEMENT RESERVES IN THE STUDY YEAR, 2017.

\$12.55 Per unit (average), recommended monthly funding of Replacement Reserves

General. The Component Method (also referred to as the Full Funded Method) is a very conservative mathematical model developed by HUD in the early 1980s. Each of the 206 Projected Replacements listed in the Replacement Reserve Inventory is treated as a separate account. The Beginning Balance is allocated to each of the individual accounts, as is all subsequent funding of Replacement Reserves. These funds are "locked" in these individual accounts and are not available to fund other Projected Replacements. The calculation of Recommended Annual Funding of Replacement Reserves is a multi-step process outlined in more detail on Page CM2.

Component Method - Cumulative Receipts and Expenditures Graph



COMPONENT METHOD (cont'd)

- **Current Funding Objective.** A Current Funding Objective is calculated for each of the Projected Replacements listed in the Replacement Reserve Inventory. Replacement Cost is divided by the Normal Economic Life to determine the nominal annual contribution. The Remaining Economic Life is then subtracted from the Normal Economic Life to calculate the number of years that the nominal annual contribution should have been made. The two values are then multiplied to determine the Current Funding Objective. This is repeated for each of the 206 Projected Replacements. The total, \$906,495, is the Current Funding Objective.

For an example, consider a very simple Replacement Reserve Inventory with one Projected Replacement, a fence with a \$1,000 Replacement Cost, a Normal Economic Life of 10 years, and a Remaining Economic Life of 2 years. A contribution to Replacement Reserves of \$100 (\$1,000 ÷ 10 years) should have been made in each of the previous 8 years (10 years - 2 years). The result is a Current Funding Objective of \$800 (8 years x \$100 per year).

- **Funding Percentage.** The Funding Percentage is calculated by dividing the Beginning Balance (\$77,000) by the Current Funding Objective (\$906,495). At Forest Ridge Association the Funding Percentage is 8.5%
- **Allocation of the Beginning Balance.** The Beginning Balance is divided among the 206 Projected Replacements in the Replacement Reserve Inventory. The Current Funding Objective for each Projected Replacement is multiplied by the Funding Percentage and these funds are then "locked" into the account of each item.

If we relate this calculation back to our fence example, it means that the Association has not accumulated \$800 in Reserves (the Funding Objective), but rather at 8.5 percent funded, there is \$68 in the account for the fence.

- **Annual Funding.** The Recommended Annual Funding of Replacement Reserves is then calculated for each Projected Replacement. The funds allocated to the account of the Projected Replacement are subtracted from the Replacement Cost. The result is then divided by the number of years until replacement, and the result is the annual funding for each of the Projected Replacements. The sum of these is \$169,089, the Component Method Recommended Annual Funding of Replacement Reserves in the Study Year (2017).

In our fence example, the \$68 in the account is subtracted from the \$1,000 Total Replacement Cost and divided by the 2 years that remain before replacement, resulting in an annual deposit of \$466. Next year, the deposit remains \$466, but in the third year, the fence is replaced and the annual funding adjusts to \$100.

- **Adjustment to the Component Method for interest and inflation.** The calculations in the Replacement Reserve Analysis do not account for interest earned on Replacement Reserves, inflation, or a constant annual increase in Annual Funding of Replacement Reserves. The Component Method is a very conservative method and if the Analysis is updated regularly, adequate funding will be maintained without the need for adjustments.

Component Method Data - Years 1 through 30

Year	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Beginning balance	\$77,000									
Recommended annual funding	\$169,089	\$169,089	\$168,192	\$138,945	\$136,673	\$127,842	\$125,075	\$121,587	\$117,694	\$108,090
Interest on reserves										
Expenditures		\$2,861	\$129,567	\$25,855	\$68,584	\$34,184	\$47,097	\$57,596	\$189,609	\$17,914
Year end balance	\$246,089	\$412,317	\$450,943	\$564,033	\$632,122	\$725,780	\$803,759	\$867,749	\$795,834	\$886,010
Cumulative Expenditures		\$2,861	\$132,428	\$158,283	\$226,867	\$261,050	\$308,147	\$365,743	\$555,353	\$573,267
Cumulative Receipts	\$246,089	\$415,178	\$583,371	\$722,316	\$858,989	\$986,831	\$1,111,906	\$1,233,493	\$1,351,187	\$1,459,277
Year	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Recommended annual funding	\$107,324	\$104,047	\$104,047	\$99,371	\$99,371	\$99,310	\$96,997	\$96,997	\$96,997	\$96,074
Interest on reserves										
Expenditures	\$169,977	\$780	\$224,817	\$8,291	\$19,623	\$100,043	\$10,620	\$42,544	\$88,539	\$6,318
Year end balance	\$823,357	\$926,624	\$805,854	\$896,934	\$976,681	\$975,948	\$1,062,325	\$1,116,777	\$1,125,235	\$1,214,991
Cumulative Expenditures	\$743,244	\$744,024	\$968,841	\$977,132	\$996,755	\$1,096,798	\$1,107,418	\$1,149,962	\$1,238,501	\$1,244,819
Cumulative Receipts	\$1,566,601	\$1,670,648	\$1,774,695	\$1,874,066	\$1,973,436	\$2,072,746	\$2,169,742	\$2,266,739	\$2,363,735	\$2,459,810
Year	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046
Recommended annual funding	\$96,074	\$82,296	\$82,032	\$82,032	\$82,032	\$81,517	\$81,405	\$81,405	\$81,230	\$81,230
Interest on reserves										
Expenditures	\$763,770	\$19,141	\$118,717	\$7,844	\$81,815	\$43,928	\$10,620	\$34,141	\$149,499	\$12,597
Year end balance	\$547,296	\$610,451	\$573,766	\$647,953	\$648,170	\$685,758	\$756,544	\$803,808	\$735,539	\$804,172
Cumulative Expenditures	\$2,008,588	\$2,027,729	\$2,146,446	\$2,154,290	\$2,236,105	\$2,280,033	\$2,290,653	\$2,324,794	\$2,474,294	\$2,486,891
Cumulative Receipts	\$2,555,884	\$2,638,180	\$2,720,212	\$2,802,243	\$2,884,275	\$2,965,792	\$3,047,197	\$3,128,602	\$3,209,832	\$3,291,062

COMPONENT METHOD ACCOUNTING SUMMARY

This Forest Ridge Association - Component Method Accounting Summary is an attachment to the Forest Ridge Association - Replacement Reserve Study dated March 1, 2017 and is for use by accounting and reserve professionals experienced in Association funding and accounting principles. This Summary consists of four reports, the 2017, 2018, and 2019 Component Method Category Funding Reports (3) and a Three-Year Replacement Funding Report.

- COMPONENT METHOD CATEGORY FUNDING REPORT, 2017, 2018, and 2019. Each of the 206 Projected Replacements listed in the Forest Ridge Association Replacement Reserve Inventory has been assigned to one of 15 categories. The following information is summarized by category in each report:
 - Normal Economic Life and Remaining Economic Life of the Projected Replacements.
 - Cost of all Scheduled Replacements in each category.
 - Replacement Reserves on Deposit allocated to the category at the beginning and end of the report period.
 - Cost of Projected Replacements in the report period.
 - Recommended Replacement Reserve Funding allocated to the category during the report period as calculated by the Component Method.
- THREE-YEAR REPLACEMENT FUNDING REPORT. This report details the allocation of the \$77,000 Beginning Balance (at the start of the Study Year) and the \$506,371 of additional Replacement Reserve funding from 2017 to 2019 (as calculated in the Replacement Reserve Analysis) to each of the 206 Projected Replacements listed in the Replacement Reserve Inventory. These allocations have been made using the Component Method as outlined in the Replacement Reserve Analysis. The calculated data includes:
 - Identification and estimated cost of each Projected Replacement schedule in years 2017 through 2019.
 - Allocation of the \$77,000 Beginning Balance to the Projected Replacements by the Component Method.
 - Allocation of the \$506,371 of additional Replacement Reserve Funding recommended in the Replacement Reserve Analysis in years 2017 through 2019, by the Component Method.

2017 - COMPONENT METHOD CATEGORY FUNDING REPORT

Each of the 206 Projected Replacements included in the Forest Ridge Association Replacement Reserve Inventory has been assigned to one of the 15 categories listed in TABLE CM1 below. This calculated data is a summary of data provided in the Three-Year Replacement Funding Report and Replacement Reserve Inventory. The accuracy of this data is dependent upon many factors including the following critical financial data:

- ☐ A Beginning Balance of \$77,000 as of the first day of the Study Year, January 1, 2017.
- ☐ Total reserve funding (including the Beginning Balance) of \$246,089 in the Study Year.
- ☐ No expenditures from Replacement Reserves other than those specifically listed in the Replacement Reserve Inventory.

If any of these critical factors are inaccurate, do not use the data and please contact Miller Dodson Associates to arrange for an update of the Replacement Reserve Study.

2017 - COMPONENT METHOD CATEGORY FUNDING - TABLE CM1

CATEGORY	NORMAL ECONOMIC LIFE	REMAINING ECONOMIC LIFE	ESTIMATED REPLACEMENT COST	2017 BEGINNING BALANCE	2017 RESERVE FUNDING	2017 PROJECTED REPLACEMENTS	2017 END OF YEAR BALANCE
SITE COMPONENTS	5 to 60 years	3 to 57 years	\$64,667	\$2,396	\$6,861		\$9,256
SITE COMPONENTS (cont.)	60 years	6 to 60 years	\$194,778	\$7,197	\$8,295		\$15,492
SITE COMPONENTS (cont.)	60 years	3 to 57 years	\$94,561	\$3,882	\$5,380		\$9,262
SITE COMPONENTS (cont.)	15 to 45 years	3 to 25 years	\$51,577	\$1,848	\$3,728		\$5,577
SITE COMPONENTS (cont.)	10 to 60 years	6 to 60 years	\$52,082	\$1,716	\$2,115		\$3,831
SITE COMPONENTS (cont.)	10 to 80 years	4 to 40 years	\$36,160	\$1,128	\$3,074		\$4,202
SITE COMPONENTS (cont.)	10 to 60 years	7 to 25 years	\$92,410	\$1,341	\$8,311		\$9,652
POOLHOUSE / MAINT.BLDG .	5 to 50 years	2 to 30 years	\$71,658	\$3,735	\$10,209		\$13,944
POOLHOUSE / MAINT.BLDG ,con'd	10 to 50 years	8 to 20 years	\$41,665	\$1,202	\$2,256		\$3,458
MAINTENANCE BLDG EQUIP.	15 to 25 years	10 to 20 years	\$56,800	\$910	\$3,578		\$4,488
RECREATION	5 to 40 years	1 to 20 years	\$825,342	\$36,223	\$70,156		\$106,379
RECREATION (cont.)	10 to 20 years	1 to 10 years	\$18,025	\$540	\$2,353		\$2,893
RECREATION (cont.)	10 to 15 years	4 to 6 years	\$30,690	\$1,115	\$5,038		\$6,152
RECREATION (cont.)	5 to 30 years	1 to 20 years	\$231,812	\$9,810	\$24,029		\$33,839
RECREATION (cont.)	3 to 30 years	2 to 10 years	\$68,180	\$3,957	\$13,708		\$17,665

2018 - COMPONENT METHOD CATEGORY FUNDING REPORT

Each of the 206 Projected Replacements included in the Forest Ridge Association Replacement Reserve Inventory has been assigned to one of the 15 categories listed in TABLE CM2 below. This calculated data is a summary of data provided in the Three-Year Replacement Funding Report and Replacement Reserve Inventory. The accuracy of this data is dependent upon many factors including the following critical financial data:

- ☐ Replacement Reserves on Deposit totaling \$246,089 on January 1, 2018.
- ☐ Total reserve funding (including the Beginning Balance) of \$415,178 from 2017 through 2018.
- ☐ No expenditures from Replacement Reserves other than those specifically listed in the Replacement Reserve Inventory.
- ☐ All Projected Replacements scheduled in the Replacement Reserve Inventory in 2018 being accomplished in 2018 at a cost of \$2,861.

If any of these critical factors are inaccurate, do not use the data and please contact Miller Dodson Associates to arrange for an update of the Replacement Reserve Study.

2018 - COMPONENT METHOD CATEGORY FUNDING - TABLE CM2

CATEGORY	NORMAL ECONOMIC LIFE	REMAINING ECONOMIC LIFE	ESTIMATED REPLACEMENT COST	2018 BEGINNING BALANCE	2018 RESERVE FUNDING	2018 PROJECTED REPLACEMENTS	2018 END OF YEAR BALANCE
SITE COMPONENTS	5 to 60 years	2 to 56 years	\$64,667	\$9,256	\$6,861		\$16,117
SITE COMPONENTS (cont.)	60 years	5 to 59 years	\$194,778	\$15,492	\$8,295		\$23,786
SITE COMPONENTS (cont.)	60 years	2 to 56 years	\$94,561	\$9,262	\$5,380		\$14,642
SITE COMPONENTS (cont.)	15 to 45 years	2 to 24 years	\$51,577	\$5,577	\$3,728		\$9,305
SITE COMPONENTS (cont.)	10 to 60 years	5 to 59 years	\$52,082	\$3,831	\$2,115		\$5,946
SITE COMPONENTS (cont.)	10 to 80 years	3 to 39 years	\$36,160	\$4,202	\$3,074		\$7,276
SITE COMPONENTS (cont.)	10 to 60 years	6 to 24 years	\$92,410	\$9,652	\$8,311		\$17,963
POOLHOUSE / MAINT.BLDG .	5 to 50 years	1 to 29 years	\$71,658	\$13,944	\$10,209		\$24,152
POOLHOUSE / MAINT.BLDG ,con'd	10 to 50 years	7 to 19 years	\$41,665	\$3,458	\$2,256		\$5,713
MAINTENANCE BLDG EQUIP.	15 to 25 years	9 to 19 years	\$56,800	\$4,488	\$3,578		\$8,066
RECREATION	5 to 40 years	0 to 19 years	\$825,342	\$106,379	\$70,156	\$780	\$175,754
RECREATION (cont.)	10 to 20 years	0 to 9 years	\$18,025	\$2,893	\$2,353	\$450	\$4,795
RECREATION (cont.)	10 to 15 years	3 to 5 years	\$30,690	\$6,152	\$5,038		\$11,190
RECREATION (cont.)	5 to 30 years	0 to 19 years	\$231,812	\$33,839	\$24,029	\$1,631	\$56,237
RECREATION (cont.)	3 to 30 years	1 to 9 years	\$68,180	\$17,665	\$13,708		\$31,373

2019 - COMPONENT METHOD CATEGORY FUNDING REPORT

Each of the 206 Projected Replacements included in the Forest Ridge Association Replacement Reserve Inventory has been assigned to one of the 15 categories listed in TABLE CM3 below. This calculated data is a summary of data provided in the Three-Year Replacement Funding Report and Replacement Reserve Inventory.

The accuracy of this data is dependent upon many factors including the following critical financial data:

- ☐ Replacement Reserves on Deposit totaling \$412,317 on January 1, 2019.
- ☐ Total Replacement Reserve funding (including the Beginning Balance) of \$583,371 from 2017 to 2019.
- ☐ No expenditures from Replacement Reserves other than those specifically listed in the Replacement Reserve Inventory.
- ☐ All Projected Replacements scheduled in the Replacement Reserve Inventory in 2019 being accomplished in 2019 at a cost of \$129,567.

If any of these critical factors are inaccurate, do not use the data and please contact Miller Dodson Associates to arrange for an update of the Replacement Reserve Study.

2019 - COMPONENT METHOD CATEGORY FUNDING - TABLE CM3

CATEGORY	NORMAL ECONOMIC LIFE	REMAINING ECONOMIC LIFE	ESTIMATED REPLACEMENT COST	2019 BEGINNING BALANCE	2019 RESERVE FUNDING	2019 PROJECTED REPLACEMENTS	2019 END OF YEAR BALANCE
SITE COMPONENTS	5 to 60 years	1 to 55 years	\$64,667	\$16,117	\$6,861		\$22,978
SITE COMPONENTS (cont.)	60 years	4 to 58 years	\$194,778	\$23,786	\$8,295		\$32,081
SITE COMPONENTS (cont.)	60 years	1 to 55 years	\$94,561	\$14,642	\$5,380		\$20,022
SITE COMPONENTS (cont.)	15 to 45 years	1 to 23 years	\$51,577	\$9,305	\$3,728		\$13,034
SITE COMPONENTS (cont.)	10 to 60 years	4 to 58 years	\$52,082	\$5,946	\$2,115		\$8,062
SITE COMPONENTS (cont.)	10 to 80 years	2 to 38 years	\$36,160	\$7,276	\$3,074		\$10,350
SITE COMPONENTS (cont.)	10 to 60 years	5 to 23 years	\$92,410	\$17,963	\$8,311		\$26,274
POOLHOUSE / MAINT.BLDG .	5 to 50 years	0 to 28 years	\$71,658	\$24,152	\$10,209	\$13,200	\$21,161
POOLHOUSE / MAINT.BLDG ,con'd	10 to 50 years	6 to 18 years	\$41,665	\$5,713	\$2,256		\$7,969
MAINTENANCE BLDG EQUIP.	15 to 25 years	8 to 18 years	\$56,800	\$8,066	\$3,578		\$11,644
RECREATION	5 to 40 years	0 to 18 years	\$825,342	\$175,754	\$69,941	\$91,367	\$154,329
RECREATION (cont.)	10 to 20 years	3 to 19 years	\$18,025	\$4,795	\$2,167		\$6,962
RECREATION (cont.)	10 to 15 years	2 to 4 years	\$30,690	\$11,190	\$5,038		\$16,227
RECREATION (cont.)	5 to 30 years	1 to 18 years	\$231,812	\$56,237	\$23,532		\$79,769
RECREATION (cont.)	3 to 30 years	0 to 8 years	\$68,180	\$31,373	\$13,708	\$25,000	\$20,081

COMPONENT METHOD - THREE-YEAR REPLACEMENT FUNDING REPORT

TABLE CM4 below details the allocation of the \$77,000 Beginning Balance, as reported by the Association and the \$506,371 of Replacement Reserve Funding calculated by the Cash Flow Method from 2017 to 2019, to the 206 Projected Replacements listed in the Replacement Reserve Inventory. These allocations have been made by Chronological Allocation, a method developed by Miller Dodson Associates, Inc., and outlined on Page CF1.

The accuracy of the allocations is dependent upon many factors including the following critical financial data:

- Replacement Reserves on Deposit totaling \$77,000 on January 1, 2017.
- Replacement Reserves on Deposit totaling \$246,089 on January 1, 2018.
- Replacement Reserves on Deposit totaling \$412,317 on January 1, 2019.
- Total Replacement Reserve funding (including the Beginning Balance) of \$583,371 from 2017 to 2019.
- No expenditures from Replacement Reserves other than those specifically listed in the Replacement Reserve Inventory.
- All Projected Replacements scheduled in the Replacement Reserve Inventory from 2017 to 2019 being accomplished as scheduled in the Replacement Reserve Inventory at a cost of \$132,428.

If any of these critical factors are inaccurate, do not use the data and please contact Miller Dodson Associates, Inc., to arrange for an update of the Replacement Reserve Study.

CO MPONENT METHOD - THREE-YEAR REPLACEMENT FUNDING - TABLE CM4

Item #	Description of Projected Replacement	Estimated Replacement	Allocation of Beginning Balance	2017 Reserve Funding	2017 Projected Replacements	2017 End of Year Balance	2018 Reserve Funding	2018 Projected Replacements	2018 End of Year Balance	2019 Reserve Funding	2019 Projected Replacements	2019 End of Year Costs
SITE COMPONENTS												
1	Asphalt pavement, mill & overlay, (pp)	33,335	1,274	2,915		4,189	2,915		7,103	2,915		10,018
2	Asphalt pavement, mill & overlay (rp)	11,045	422	966		1,388	966		2,354	966		3,319
3	Asphalt pavement, seal coat (pp, rp)	5,379	91	1,322		1,413	1,322		2,735	1,322		4,057
4	Gravel area (replen. 3/8"/sf)(mb, tc pr)	5,125	218	981		1,199	981		2,181	981		3,162
5	Concrete apron (4) (6%) (pp, rp, mb)	585	46	135		181	135		316	135		450
6	Concrete apron (4) (6%) (pp, rp, mb)	585	41	54		96	54		150	54		204
7	Concrete apron (4) (6%) (pp, rp, mb)	585	36	34		71	34		105	34		139
8	Concrete apron (4) (6%) (pp, rp, mb)	585	31	25		57	25		82	25		107
9	Concrete apron (4) (6%) (pp, rp, mb)	585	27	20		46	20		66	20		86
10	Concrete apron (4) (6%) (pp, rp, mb)	585	22	17		38	17		55	17		71
11	Concrete apron (4) (6%) (pp, rp, mb)	585	17	14		31	14		45	14		59
12	Concrete apron (4) (6%) (pp, rp, mb)	585	12	12		24	12		37	12		49
13	Concrete apron (4) (6%) (pp, rp, mb)	585	7	11		18	11		29	11		40
14	Concrete apron (4) (6%) (pp, rp, mb)	585	2	10		12	10		22	10		32
15	Concrete, wheel stops (pp)	3,933	150	344		494	344		838	344		1,182
SITE COMPONENTS (cont.)												
16	Concrete picnic slab (6%)(ph)	750	56	99		155	99		254	99		354
17	Concrete picnic slab (6%)(ph)	750	50	54		104	54		158	54		211
18	Concrete picnic slab (6%)(ph)	750	44	37		81	37		118	37		155
19	Concrete picnic slab (6%)(ph)	750	37	29		66	29		94	29		123
20	Concrete picnic slab (6%)(ph)	750	31	23		54	23		77	23		100
21	Concrete picnic slab (6%)(ph)	750	24	20		44	20		64	20		83
22	Concrete picnic slab (6%)(ph)	750	18	17		35	17		52	17		69
23	Concrete picnic slab (6%)(ph)	750	12	15		27	15		42	15		57
24	Concrete picnic slab (6%)(ph)	750	5	14		19	14		32	14		46
25	Concrete picnic slab (6%)(ph)	750		12		12	12		25	12		37
26	Concrete sidewalk (6%)	18,728	1,405	2,475		3,880	2,475		6,355	2,475		8,829
27	Concrete sidewalk (6%)	18,728	1,246	1,345		2,591	1,345		3,936	1,345		5,280
28	Concrete sidewalk (6%)	18,728	1,087	928		2,015	928		2,944	928		3,872
29	Concrete sidewalk (6%)	18,728	928	712		1,640	712		2,352	712		3,064
30	Concrete sidewalk (6%)	18,728	769	579		1,348	579		1,928	579		2,507
31	Concrete sidewalk (6%)	18,728	610	490		1,099	490		1,589	490		2,079
32	Concrete sidewalk (6%)	18,728	451	425		876	425		1,301	425		1,726
33	Concrete sidewalk (6%)	18,728	292	376		668	376		1,044	376		1,420
34	Concrete sidewalk (6%)	18,728	133	338		471	338		809	338		1,147
35	Concrete sidewalk (6%)	18,728		307		307	307		614	307		921
SITE COMPONENTS (cont.)												
36	Concrete pool deck (6%)	8,604	682	1,980		2,663	1,980		4,643	1,980		6,624
37	Concrete pool deck (6%)	8,604	609	800		1,409	800		2,208	800		3,008
38	Concrete pool deck (6%)	8,604	536	504		1,040	504		1,544	504		2,049
39	Concrete pool deck (6%)	8,604	463	370		833	370		1,203	370		1,573

COMPONENT METHOD - THREE-YEAR REPLACEMENT FUNDING - TABLE CM4 cont'd												
Item #	Description of Projected Replacement	Estimated Replacement Costs	Allocation of Beginning Balance	2017 Reserve Funding	2017 Projected Replacements	2017 End of Year Balance	2018 Reserve Funding	2018 Projected Replacements	2018 End of Year Balance	2019 Reserve Funding	2019 Projected Replacements	2019 End of Year Balance
40	Concrete pool deck (6%)	8,604	390	293		683	293		977	293		1,270
41	Concrete pool deck (6%)	8,604	317	244		560	244		804	244		1,048
42	Concrete pool deck (6%)	8,604	244	209		453	209		662	209		871
43	Concrete pool deck (6%)	8,604	171	183		354	183		537	183		721
44	Concrete pool deck (6%)	8,604	97	164		261	164		425	164		588
45	Concrete pool deck (6%)	8,604	24	148		172	148		320	148		468
46	Concrete curb, barrier (6%)(rp)	852	68	196		264	196		460	196		656
47	Concrete curb, barrier (6%)(rp)	852	60	79		139	79		219	79		298
48	Concrete curb, barrier (6%)(rp)	852	53	50		103	50		153	50		203
49	Concrete curb, barrier (6%)(rp)	852	46	37		82	37		119	37		156
50	Concrete curb, barrier (6%)(rp)	852	39	29		68	29		97	29		126
51	Concrete curb, barrier (6%)(rp)	852	31	24		55	24		80	24		104
52	Concrete curb, barrier (6%)(rp)	852	24	21		45	21		66	21		86
53	Concrete curb, barrier (6%)(rp)	852	17	18		35	18		53	18		71
54	Concrete curb, barrier (6%)(rp)	852	10	16		26	16		42	16		58
55	Concrete curb, barrier (6%)(rp)	852	2	15		17	15		32	15		46
SITE COMPONENTS (cont.)												
56	Wood walkway, PTL structure, ramp 7	2,340	40	144		184	144		327	144		471
57	Wood ped. bridge, PTL structure	13,205	523	793		1,316	793		2,109	793		2,901
58	Wood PTL decking	3,645	83	324		406	324		730	324		1,054
59	Wood PTL railing, 2-bd	2,335	145	547		693	547		1,240	547		1,787
60	Wood ped. bridge, PTL structure 4'w	7,755	307	465		773	465		1,238	465		1,704
61	Wood ped. bridge, PTL deck	1,665	38	148		186	148		334	148		482
62	Metal pipe railing, 2-strand	2,660	95	99		194	99		293	99		391
63	Wood ped/ trk. bridge, PTL struc. 12'w	11,196	444	672		1,116	672		1,788	672		2,460
64	Wood ped/ trk. bridge, PTL, deck	2,025	109	174		283	174		457	174		632
65	Wood PTL railing, 3-bd w/handrail	834	47	157		205	157		362	157		519
66	Retaining walls, r-ties, along bank	3,918	17	205		222	205		427	205		633
SITE COMPONENTS (cont.)												
67	Concrete culvert bnk. slopes (6%)	4,644	348	614		962	614		1,576	614		2,189
68	Concrete culvert bnk. slopes (6%)	4,644	309	333		642	333		976	333		1,309
69	Concrete culvert bnk. slopes (6%)	4,644	270	230		500	230		730	230		960
70	Concrete culvert bnk. slopes (6%)	4,644	230	177		407	177		583	177		760
71	Concrete culvert bnk. slopes (6%)	4,644	191	144		334	144		478	144		622
72	Concrete culvert bnk. slopes (6%)	4,644	151	121		273	121		394	121		515
73	Concrete culvert bnk. slopes (6%)	4,644	112	105		217	105		323	105		428
74	Concrete culvert bnk. slopes (6%)	4,644	72	93		166	93		259	93		352
75	Concrete culvert bnk. slopes (6%)	4,644	33	84		117	84		201	84		284
76	Concrete culvert bnk. slopes (6%)	4,644		76		76	76		152	76		228
77	Concrete culvert bulkheads (14) (10%)	5,642		138		138	138		275	138		413
SITE COMPONENTS (cont.)												
78	Vehicular entry gate, swing (3) (pl,rc)	5,940	151	827		978	827		1,805	827		2,632
79	Entrance mon, asphalt shingle roof (e)	796	32	48		79	48		127	48		175
80	Entrance monument, wood trim, soffit	1,190	57	103		160	103		263	103		366
81	Entrance monument, granite carved si	2,250	93	53		146	53		198	53		251
82	Entrance mon., 4' flou, lights/soffit (2)	280	14	33		47	33		81	33		114
83	Entrance monument, floods (em, flp)	1,200	46	105		151	105		256	105		361
84	Entrance mon. brk, tuckpoint (10%) (3)	438	15	70		85	70		156	70		226
85	Flagpole, aluminum, 15'hi	1,250	74	131		205	131		336	131		466
86	Light fixtures, attached to tele. poles.	2,700	110	199		309	199		509	199		708
87	Gazebo, 14' octagon, PLT-wood w/as	16,040	218	753		971	753		1,725	753		2,478
88	Concrete stamped brick sidewalk (6%)	408	32	75		107	75		182	75		257
89	Concrete stamped brick sidewalk (6%)	408	32	75		107	75		182	75		257
90	Concrete stamped brick sidewalk (6%)	408	32	75		107	75		182	75		257
91	Concrete stamped brick sidewalk (6%)	408	32	75		107	75		182	75		257
92	Concrete stamped brick sidewalk (6%)	408	32	75		107	75		182	75		257
93	Concrete stamped brick sidewalk (6%)	408	32	75		107	75		182	75		257
94	Concrete stamped brick sidewalk (6%)	408	32	75		107	75		182	75		257
95	Concrete stamped brick sidewalk (6%)	408	32	75		107	75		182	75		257
96	Concrete stamped brick sidewalk (6%)	408	32	75		107	75		182	75		257
97	Concrete stamped brick sidewalk (6%)	408	32	75		107	75		182	75		257
SITE COMPONENTS (cont.)												
98	Domestic water laterals (10%) (allow)	28,350		2,577		2,577	2,577		5,155	2,577		7,732
99	Domestic water risers, CPVC(ph)	5,760	359	338		696	338		1,034	338		1,372
100	Sanitary laterals (10%)(allow.)	24,750		2,250		2,250	2,250		4,500	2,250		6,750
101	Sewer ejector pump, 12 gpm, 70 gal. (	2,250	86	197		283	197		479	197		676
102	Sewer ejector pump, 24 gpm, 275 gal (	7,350	281	643		924	643		1,566	643		2,209
103	Water booster pump system. 5 hp (eq)	11,150	442	1,339		1,780	1,339		3,119	1,339		4,457

COMPONENT METHOD - THREE-YEAR REPLACEMENT FUNDING - TABLE CM4 cont'd												
Item #	Description of Projected Replacement	Estimated Replacement Costs	Allocation of Beginning Balance	2017 Reserve Funding	2017 Projected Replacements	2017 End of Year Balance	2018 Reserve Funding	2018 Projected Replacements	2018 End of Year Balance	2019 Reserve Funding	2019 Projected Replacements	2019 End of Year Balance
104	Storm water management (10% allowa	9,200		836		836	836		1,673	836		2,509
105	Sanitary risers & vents, cast iron (ph)	3,600	173	132		305	132		437	132		569
POOLHOUSE / MAINT.BLDG .												
106	Roofing, asphalt shingles (ph)	14,766	711	1,081		1,792	1,081		2,873	1,081		3,954
107	Gutter & dwnspts,5" alum (ph,mb1,2)	3,107	150	227		377	227		605	227		832
108	Vinyl trim soffits (ph)	1,850	60	58		117	58		175	58		233
109	Wood siding, T-111 vertical,gable en	1,280	69	110		179	110		289	110		399
110	Wood ceiling, planks /spacing (ph)	4,998	153	303		456	303		758	303		1,064
111	Exterior doors , metal, (ph, mb1,2)	5,950	286	436		722	436		1,158	436		1,593
112	Exterior doors, wood (rr)	600	29	52		80	52		132	52		184
113	Exterior windows (ph,mb1).	504	24	44		68	44		111	44		155
114	Exterior window screens/vents (ph)	2,400	143	376		519	376		895	376		1,271
115	Rubber EPDM poured flooring (ent,rr,	13,200	785	4,138		4,923	4,138		9,062	4,138	(13,200)	
116	Shower plumbing fixtures (8) (rr)	2,800	159	528		687	528		1,215	528		1,743
117	Restroom showers, rubber mat (rr)	1,053		211		211	211		421	211		632
118	Sinks/mirrors (rr)	1,250	59	108		168	108		276	108		384
119	Toilets/partitions (rr)	6,000	285	520		805	520		1,324	520		1,844
120	Urnal/partitions (rr)	800	38	69		107	69		177	69		246
121	Hot water heater (rr)	1,100	42	96		138	96		234	96		331
122	Handicap access.(rr)/upgrades (allow)	10,000	743	1,851		2,595	1,851		4,446	1,851		6,297
POOLHOUSE / MAINT.BLDG,con't												
123	Office desk, shelving, counter (ph)	5,500	112	284		396	284		679	284		963
124	Drinking fountain (ph)	550	30	58		88	58		145	58		203
125	Ceiling ventilation fan (pmr)	450	17	39		57	39		96	39		135
126	Storage bldg. mtl, w/shingle, (2) (ph)	3,800	77	196		273	196		469	196		665
127	Light fixtures,floresent ,4'1) (rr,entm,,	1,040	31	78		109	78		186	78		264
128	Light fixtures, ceiling mt., (pc,hw)	1,200	46	105		151	105		256	105		361
129	Security cameras (ph,mb1,2)	1,800	69	157		226	157		384	157		541
130	Roofing, corr. metal, (2 bldg) (mb1,2)	9,923	489	449		938	449		1,387	449		1,837
131	Exterior metal siding,trim. (mb1,2)	7,527	102	354		456	354		809	354		1,163
132	Exterior light fixt. floods, (mb1,2)	525	9	32		41	32		73	32		106
133	Electric ceiling / wall heater, 5 kw (mb	1,100	9	121		131	121		252	121		373
134	Office cabinets, kit., racks, tool bench (	5,100	130	237		367	237		603	237		840
135	Garage door 10x14, comm./oper.(mb1	1,900	48	88		137	88		225	88		313
136	Garage door 16x7, comm./oper(mb2)	1,250	32	58		90	58		148	58		206
MAINTENANCE BLDG EQUIP.												
137	Tractor, heated enclosed ,4 wheel	14,000	190	658		848	658		1,505	658		2,163
138	Grasshopper, lawnmower, lg	8,500	116	399		515	399		914	399		1,313
139	Lazyboy lawnmower small	1,100	25	98		123	98		220	98		318
140	Land rover, small, 4- wheeler	9,500	108	722		830	722		1,553	722		2,275
141	Chipper, Vermcer, attach.	8,500	193	755		948	755		1,703	755		2,458
142	Air compressor, attach.	2,400	71	179		250	179		430	179		609
143	Tractor bucket, attach	3,200	14	168		181	168		349	168		517
144	Edgers, hand	1,500	17	114		131	114		245	114		359
145	Garden water tanks w/trailer, attach.	1,500	6	79		85	79		164	79		242
146	Lawn mower trailer, attach.	2,200	30	103		133	103		237	103		340
147	Seed spreader, funnel, attach.	2,500	85	161		246	161		407	161		568
148	Chemical weed mtl tank spreader, atta	1,900	56	142		198	142		340	142		482
RECREATION												
149	Swimming pool structure(3)	630,530	25,440	28,814		54,254	28,814		83,068	28,814		111,882
150	Swimming pool, whitecoat	66,819	3,973	20,949		24,922	20,949		45,870	20,949	(66,819)	
151	Swimming pool waterline tile (6x6)	6,618	393	2,075		2,468	2,075		4,543	2,075	(6,618)	
152	Swimming pool coping, precast conc.	17,930	1,295	5,545		6,840	5,545		12,385	5,545	(17,930)	
153	Pool deck, caulking (10%)	780	40	370		410	370	(780)		156		156
154	Pool diving blocks	3,000	119	360		479	360		839	360		1,199
155	Pool cover, safety mesh (3)	11,544	490	1,842		2,333	1,842		4,175	1,842		6,017
156	Pool perimeter chainlink fence(10' hi)	20,952	1,009	1,534		2,543	1,534		4,077	1,534		5,611
157	Pool perimeter chainlink fence (3 hi)	1,700	67	102		169	102		271	102		373
158	Pool lifeguard chair, mounted	22,000	1,402	4,120		5,521	4,120		9,641	4,120		13,761
159	Pool diving stand, metal,, 1 meter	11,750	749	2,200		2,949	2,200		5,149	2,200		7,349
160	Pool diving board, 8'	740	31	142		173	142		315	142		457
161	Pool site light, standard triple head,	6,960	266	609		875	609		1,483	609		2,092
162	Pool site light, 12' aluminum pole	17,100	678	1,026		1,704	1,026		2,731	1,026		3,757
163	Pool site light, standard single head	1,920	73	168		241	168		409	168		577
164	Pool site light, 10 ' metal pole	5,000	198	300		498	300		798	300		1,099
RECREATION (cont.)												

COMPONENT METHOD - THREE-YEAR REPLACEMENT FUNDING - TABLE CM4 cont'd

Item #	Description of Projected Replacement	Estimated Replacement Costs	Allocation of Beginning Balance	2017 Reserve Funding	2017 Projected Replacements	2017 End of Year Balance	2018 Reserve Funding	2018 Projected Replacements	2018 End of Year Balance	2019 Reserve Funding	2019 Projected Replacements	2019 End of Year Balance
165	Pool pump 2.5 HP (eq)	6,000	102	737		839	737		1,576	737		2,314
166	Pool pump 2.5HP (eq)	2,000		182		182	182		364	182		545
167	Pool filter, cartridge .50 sf (eq)	1,150	44	101		145	101		245	101		346
168	Pool filter, cartridge, 150 sf (eq)	1,690	100	265		365	265		630	265		895
169	Pool filter, cartridge, 150 sf (eq)	2,130	127	334		461	334		794	334		1,128
170	Chemical chlorination tank (eq)	1,185	40	127		167	127		295	127		422
171	Chemical feed pump (eq)	1,320	45	213		257	213		470	213		682
172	Pool vacuum system (pd)	2,100	48	187		234	187		421	187		607
173	Drinking fountain, (tc)	450	34	208		242	208	(450)		23		23
RECREATION (cont.)												
174	Pool furniture, lounge, vinyl strap	4,940	210	946		1,156	946		2,102	946		3,048
175	Pool furniture, chair, vinyl strap	5,265	224	1,008		1,232	1,008		2,240	1,008		3,248
176	Pool benches, metal	1,200	31	167		198	167		365	167		532
177	Pool furniture, round table,	3,250	110	523		634	523		1,157	523		1,680
178	Pool table chairs	7,800	265	1,256		1,521	1,256		2,777	1,256		4,033
179	Pool benches, metal	1,200	31	167		198	167		365	167		532
180	Pool furniture, umbrella	4,485	159	618		777	618		1,395	618		2,013
181	Wood picnic tables w/benches	1,050	48	143		191	143		334	143		477
182	Pool benches, metal, wood.	1,500	38	209		247	209		456	209		665
RECREATION (cont.)												
183	Tennis court, asphalt overlay (4)	100,400	4,691	10,634		15,325	10,634		25,959	10,634		36,594
184	Tennis court, color coat (4)	25,100	213	2,765		2,978	2,765		5,744	2,765		8,509
185	Tennis court, post & footings	10,240	478	1,085		1,563	1,085		2,648	1,085		3,732
186	Tennis court, net	1,280	22	315		336	315		651	315		965
187	Tennis court chain link fencing 12' hi (	37,125	2,207	3,880		6,087	3,880		9,967	3,880		13,847
188	MP court, asphalt overlay (2)	32,624	970	2,435		3,405	2,435		5,840	2,435		8,275
189	MP court, asphalt coating (2)	1,631	92	769		862	769	(1,631)		272		272
190	Basketball pole & backboard	6,000	280	636		916	636		1,551	636		2,187
191	MP fence, 10' hi galv. chain link	10,800	520	791		1,311	791		2,101	791		2,892
192	Baseball chain link fence, 4' hi	1,512	103	235		338	235		572	235		807
193	Baseball chain link backstop 15' hi	2,100	143	326		469	326		795	326		1,121
194	Baseball bench wd/metal (2)	500	27	43		70	43		113	43		156
195	Bike rack, 9 bikes	2,500	64	116		180	116		296	116		412
RECREATION (cont.)												
196	Tot lot, ADA MP structure, 2 platform	25,000	1,699	7,767		9,466	7,767		17,233	7,767	(25,000)	
197	Tot lot merry-go-round	1,100	69	129		197	129		326	129		455
198	Tot lot, spring ride (small)	825	44	71		115	71		186	71		257
199	Tot lot, half moon climber	5,250	327	615		942	615		1,558	615		2,173
200	Tot lot, 2 seat teeter totter 6'	1,080	67	127		194	127		320	127		447
201	Tot lot slide	9,000	561	1,055		1,616	1,055		2,670	1,055		3,725
202	Tot lot, A-frame swing, 2 seat	10,465	652	1,227		1,879	1,227		3,105	1,227		4,332
203	Tot lot, 3.5" arch-frame swing, 2 seat	1,790	112	210		321	210		531	210		741
204	Tot lot, horizontal ladder 10'	5,250	327	615		942	615		1,558	615		2,173
205	Tot lot metal climber	1,600	100	188		287	188		475	188		662
206	Tot lot surfacing, wood mulch 3"	6,820		1,705		1,705	1,705		3,410	1,705		5,115

1. COMMON INTEREST DEVELOPMENTS - AN OVERVIEW

Over the past 40 years, the responsibility for community facilities and infrastructure around many of our homes has shifted from the local government to Community Associations. Thirty years ago, a typical new town house abutted a public street on the front and a public alley on the rear. Open space was provided by a nearby public park and recreational facilities were purchased ala carte from privately owned country clubs, swim clubs, tennis clubs, and gymnasiums. Today, 60% of all new residential construction, i.e. townhouses, single family homes, condominiums, and cooperatives, is in Common Interest Developments (CID). In a CID, a home owner is bound to a Community Association that owns, maintains, and is responsible for periodic replacements of various components that may include the roads, curbs, sidewalks, playgrounds, street lights, recreational facilities, and other community facilities and infrastructure.

The growth of Community Associations has been explosive. In 1965 there were only 500 Community Associations in the United States. According to the U.S. Census, there were 130,000 Community Associations in 1990. Community Associations Institute (CAI), a national trade association, estimates there were more than 200,000 Community Associations in the year 2000, and that the number of Community Associations will continue to multiply.

The shift of responsibility for billions of dollars of community facilities and infrastructure from the local government and private sector to Community Associations has generated new and unanticipated problems. Although Community Associations have succeeded in solving many short term problems, many Associations have failed to properly plan for the tremendous expenses of replacing community facilities and infrastructure components. When inadequate replacement reserve funding results in less than timely replacements of failing components, home owners are exposed to the burden of special assessments, major increases in Association fees, and a decline in property values.

2. REPLACEMENT RESERVE STUDY

The purpose of a Replacement Reserve Study is to provide the Association with an inventory of the common community facilities and infrastructure components that require periodic replacement, a general view of the condition of these components, and an effective financial plan to fund projected periodic replacements. The Replacement Reserve Study consists of the following:

- Replacement Reserve Study Introduction. The introduction provides a description of the property, reviews the intent of the Replacement Reserve Study, and lists documents and site evaluations upon which the Replacement Reserve Study is based.
- Section A Replacement Reserve Analysis. Many components owned by the Association have a limited life and require periodic replacement. Therefore it is essential the Association have a financial plan that provides funding for the timely replacement of these components in order to protect the safety, appearance, and value of the community. In conformance with American Institute of Certified Public Accountant guidelines, Section A Replacement Reserve Analysis evaluates the current funding of Replacement Reserves as reported by the Association and recommends annual funding of Replacement Reserves by two generally accepted accounting methods; the Cash Flow Method and the Component Method. Section A Replacement Reserve Analysis includes graphic and tabular presentations of these methods and current Association funding.
- Section B Replacement Reserve Inventory. The Replacement Reserve Inventory lists the commonly-owned components within the community that require periodic replacement using funding from Replacement Reserves. The Replacement Reserve Inventory also provides information about components excluded from the Replacement Reserve Inventory whose replacement is not scheduled for funding from Replacement Reserves.

Replacement Reserve Inventory includes estimates of the normal economic life and the remaining economic life for those components whose replacement is scheduled for funding from Replacement Reserves.

- Section C Projected Annual Replacements. The Calendar of Projected Annual Replacements provides a year-by-year listing of the Projected Replacements based on the data in the Replacement Reserve Inventory.
- Section D Condition Assessment. Several of the items listed in the Replacement Reserve Inventory are discussed in more detail. The Condition Assessment includes a narrative and photographs that document conditions at the property observed during our visual evaluation.
- Section E Attachments. The Appendix is provided as an attachment to the Replacement Reserve Study. Additional attachments may include supplemental photographs to document conditions at the property and additional information specific to the property cited in the Conditions Assessment (i.e. Consumer Product Safety Commission, Handbook for Public Playground Safety, information on segmental retaining walls, manufacturer recommendations for asphalt shingles or siding, etc).

3. METHODS OF ANALYSIS

The Replacement Reserve industry generally recognizes two different methods of accounting for Replacement Reserve Analysis. Due to the difference in accounting methodologies, these methods lead to different calculated values for the Minimum Annual Contribution to the Reserves. The results of both methods are presented in this report. The Association should obtain the advice of its accounting professional as to which method is more appropriate for the Association. The two methods are:

- ☐ **Component Method.** This method is a time tested mathematical model developed by HUD in the early 1980s. It treats each item in the replacement schedule as an individual line item budget. Generally, the Minimum Annual Contribution to Reserves is higher when calculated by the Component Method. The mathematical model for this method works as follows:

First, the total Current Objective is calculated, which is the reserve amount that would have accumulated had all of the items on the schedule been funded from initial construction at their current replacement costs. Next, the Reserves Currently on Deposit (as reported by the Association) are distributed to the components in the schedule in proportion to the Current Objective. The Minimum Annual Deposit for each component is equal to the Estimated Replacement Cost, minus the Reserves on Hand, divided by the years of life remaining.

- ☐ **Cash Flow Method.** The Cash Flow Method is sometimes referred to as the "Pooling Method." It calculates the minimum constant annual contribution to reserves (Minimum Annual Deposit) required to meet projected expenditures without allowing total reserves on hand to fall below the specified minimum level in any year. This method usually results in a calculated requirement for annual contribution somewhat less than that arrived at by the Component Method of analysis.

First, the Minimum Recommended Reserve Level to be Held on Account is determined based on the age, condition, and replacement cost of the individual components. The mathematical model then allocates the estimated replacement costs to the future years in which they are projected to occur. Based on these expenditures, it then calculates the minimum constant yearly contribution (Minimum Annual Deposit) to the reserves necessary to keep the reserve balance at the end of each year above the Minimum Recommended Reserve Level to be Held on Account. The Cash Flow Analysis assumes that the Association will have authority to use all of the reserves on hand for replacements as the need occurs. This method usually results in a Minimum Annual Deposit which is less than that arrived at by the Component Method.

- ☐ **Adjusted Cash Flow Analysis.** This program has the ability to modify the Cash Flow Method to take into account forecasted inflation and interest rates, thereby producing an Adjusted Cash Flow Analysis. Attempting to forecast future inflation and interest rates and the impact of changing technology is highly tenuous. Therefore, in most cases it is preferable to make a new schedule periodically rather than attempt to project far into the future. We will provide more information on this type of analysis upon request.

4. REPLACEMENT RESERVE STUDY DATA

- **Identification of Reserve Components.** The Reserve Analyst has only two methods of identifying Reserve Components; 1) information provided by the Association and 2) observations made at the site. It is important that the Reserve Analyst be provided with all available information detailing the components owned by the Association. It is our policy to request such information prior to bidding on a project and to meet with the individuals responsible for maintaining the community after acceptance of our proposal. After completion of the Study, the Study should be reviewed by the Board of Directors, individuals responsible for maintaining the community, and the Association's accounting professionals. We are dependent upon the Association for correct information, documentation, and drawings.

- ☐ **Unit Costs.** Unit costs are developed using nationally published standards and estimating guides and are adjusted by state or region. In some instances, recent data received in the course of our work is used to modify these figures.

Contractor proposals or actual cost experience may be available as part of the Association records. This is useful information which should be incorporated into your report. Please bring any such available data to our attention, preferably before the report is commenced.

- ☐ **Replacement vs. Repair and Maintenance.** A Replacement Reserve Study addresses the required funding for Capital Replacement Expenditures. This should not be confused with operational costs or cost of repairs or maintenance.

5. DEFINITIONS

Adjusted Cash Flow Analysis. Cash flow analysis adjusted to take into account annual cost increases due to inflation and interest earned on invested reserves. In this method, the annual contribution is assumed to grow annually at the inflation rate.

Annual Deposit if Reserves Were Fully Funded. Shown on the Summary Sheet A1 in the Component Method summary, this would be the amount of the Annual Deposit needed if the Reserves Currently on Deposit were equal to the Total Current Objective.

Cash Flow Analysis. See Cash Flow Method, above.

Component Analysis. See Component Method, above.

Contingency. An allowance for unexpected requirements. Roughly the same as the Minimum Recommended Reserve Level to be Held on Account used in the Cash Flow Method of analysis.

Critical Year. In the Cash Flow Method, a year in which the reserves on hand are projected to fall to the established minimum level. See Minimum Recommended Reserve Level to be Held on Account.

Current Objective. This is the reserve amount that would have accumulated had the item been funded from initial construction at its current replacement cost. It is equal to the estimated replacement cost divided by the estimated economic life, times the number of years expended (the difference between the Estimated Economic Life and the Estimated Life Left). The Total Current Objective can be thought of as the amount of reserves the Association should now have on hand based on the sum of all of the Current Objectives.

Cyclic Replacement Item. A component item that typically begins to fail after an initial period (Estimated Initial Replacement), but which will be replaced in increments over a number of years (the Estimated Replacement Cycle). The Reserve Analysis program divides the number of years in the Estimated Replacement Cycle into five equal increments. It then allocates the Estimated Replacement Cost equally over those five increments. (As distinguished from Normal Replacement Items, see below)

Estimated Economic Life. Used in the Normal Replacement Schedules. This represents the industry average number of years that a new item should be expected to last until it has to be replaced. This figure is sometimes modified by climate, region, or original construction conditions.

Estimated Economic Life Left. Used in the Normal Replacement Schedules. Number of years until the item is expected to need replacement. Normally, this number would be considered to be the difference between the Estimated Economic Life and the age of the item. However, this number must be modified to reflect maintenance practice, climate, original construction and quality, or other conditions. For the purpose of this report, this number is determined by the Reserve Analyst based on the present condition of the item relative to the actual age.

Estimated Initial Replacement. For a Cyclic Replacement Item (see above), the number of years until the replacement cycle is expected to begin.

Estimated Replacement Cycle. For a Cyclic Replacement Item, the number of years over which the remainder of the component's replacement occurs.

Minimum Annual Deposit. Shown on the Summary Sheet A1. The calculated requirement for annual contribution to reserves as calculated by the Cash Flow Method (see above).

Minimum Deposit in the Study Year. Shown on the Summary Sheet A1. The calculated requirement for contribution to reserves in the study year as calculated by the Component Method (see above).

Minimum Recommended Reserve Level to be Held on Account. Shown on the Summary Sheet A1, this number is used in the Cash Flow Method only. This is the prescribed level below which the reserves will not be allowed to fall in any year. This amount is determined based on the age, condition, and replacement cost of the individual components. This number is normally given as a percentage of the total Estimated Replacement Cost of all reserve components.

Normal Replacement Item. A component of the property that, after an expected economic life, is replaced in its entirety. (As distinguished from Cyclic Replacement Items, see above.)

Normal Replacement Schedules. The list of Normal Replacement Items by category or location. These items appear on pages designated.

Number of Years of the Study. The number of years into the future for which expenditures are projected and reserve levels calculated. This number should be large enough to include the projected replacement of every item on the schedule, at least once. This study covers a 40-year period.

One Time Deposit Required to Fully Fund Reserves. Shown on the Summary Sheet A1 in the Component Method summary, this is the difference between the Total Current Objective and the Reserves Currently on Deposit.

Reserves Currently on Deposit. Shown on the Summary Sheet A1, this is the amount of accumulated reserves as reported by the Association in the current year.

Reserves on Hand. Shown in the Cyclic Replacement and Normal Replacement Schedules, this is the amount of reserves allocated to each component item in the Cyclic or Normal Replacement schedules. This figure is based on the ratio of Reserves Currently on Deposit divided by the total Current Objective.

Replacement Reserve Study. An analysis of all of the components of the common property of the Association for which a need for replacement should be anticipated within the economic life of the property as a whole. The analysis involves estimation for each component of its estimated Replacement Cost, Estimated Economic Life, and Estimated Life Left. The objective of the study is to calculate a recommended annual contribution to the Association's Replacement Reserve Fund.

Total Replacement Cost. Shown on the Summary Sheet A1, this is total of the Estimated Replacement Costs for all items on the schedule if they were to be replaced once.

Unit Replacement Cost. Estimated replacement cost for a single unit of a given item on the schedule.

Unit (of Measure). Non-standard abbreviations are defined on the page of the Replacement Reserve Inventory where the item appears. The following standard abbreviations are used in this report:

EA: each FT: feet LS: lump sum PR: pair SF: square feet SY: square yard

6. LIST OF RECOMMENDED REPAIRS - PROCEDURES

A List of Recommended Repairs is offered as a supplemental report to the Replacement Reserve Study (at an additional fee) to assist the Association in understanding the financial implications of all items owned by the Association, not just the items included for funding by Replacement Reserves listed in the Replacement Reserve Inventory. The following information relates to the List of Recommended Repairs:

- ☐ Repair costs. Cost range estimates given in the repair list assume that all work by a given trade will be done together as a single project. If repairs are done piece-meal, the costs would be significantly higher. The costs of any repairs to be funded out of the Reserve Fund should be subtracted from the Reserves Currently on Deposit figure. The Board or Property Manager should coordinate this decision with the Reserve Analyst as part of the revision process.
- ☐ Completion of repairs. The Replacement Reserve Analysis assumes that all repairs cited in the Repair List will be completed within a twelve-month period of time. Estimated Life Left in the Replacement Reserve Study has been factored under this assumption. Any deletions or delays of the projects included in the List of Recommended Repairs may result in major inaccuracies in the Replacement Reserve Analysis.
- ☐ Safety issues. If safety issues have been cited, they should be given the highest priority and should be done immediately upon receipt of this report. The Board must recognize that from a liability standpoint, they have been made aware of the existence of these unsafe conditions, if any, once the report is delivered for their review.
- ☐ Unit costs. Nationally published standards and standard estimating manuals have been used in the development of this report. Contractor proposals or actual cost experience may be available as part of the Association records. We will adjust our figures to conform to your experience if the material or information is disclosed to us and/or made available for our use.

What is a Reserve Study?
Who are we?



<https://youtu.be/m4BcOE6q3Aw>

What kind of property uses a Reserve Study?
Who are our clients?



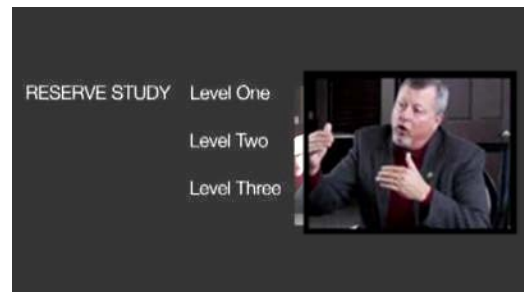
<https://youtu.be/40SodajTW1g>

Who conducts a Reserve Study?
Reserve Specialist (RS) what does this mean?



<https://youtu.be/pYSMZ013VjQ>

When should a Reserve Study be updated?
What are the different types of Reserve Studies?



<https://youtu.be/Qx8WHB9Cgnc>

What is in a Reserve Study and what is out?
Improvement vs Component, is there a difference?



<https://youtu.be/ZfBoAEhtf3E>

What is my role as a Community Manager?
Will the report help me explain Reserves to my clients?



<https://youtu.be/1J2h7FIU3qw>

What is my role as a Board Member?
Will a Reserve Study meet my community's needs?



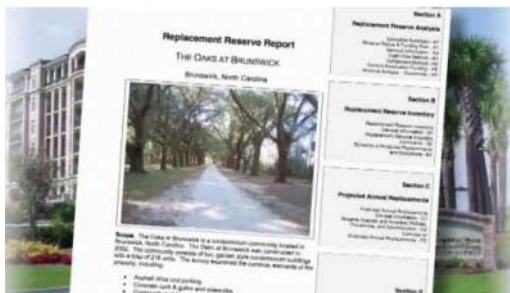
<https://youtu.be/aARD1B1Oa3o>

Community dues, how can a Reserve Study help?
Will a study help keep my property competitive?



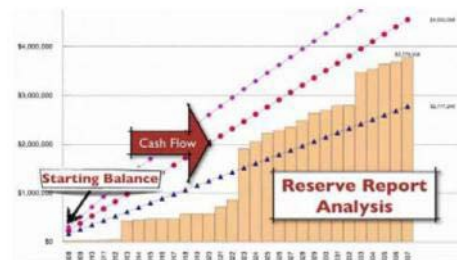
<https://youtu.be/diZfM1lyJYU>

How do I read the report?
Will I have a say in what the report contains?



<https://youtu.be/qCeVJhFf9ag>

Where do the numbers come from?
Cumulative expenditures and funding, what?



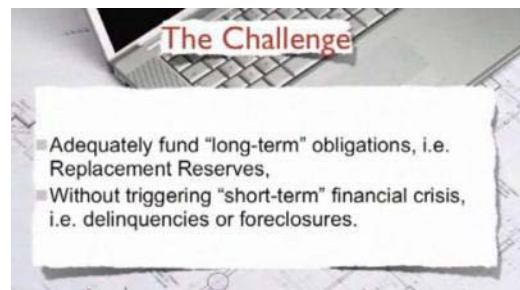
<https://youtu.be/SePdwVDvHWI>

How are interest and inflation addressed?
What should we look at when considering inflation?



<https://youtu.be/W8CDLwRlv68>

A community needs more help, where do we go?
What is a Strategic Funding Plan?



<https://youtu.be/hlxV9X1tlcA>