

**Capital Reserve Replacement Fund Analysis  
for  
King James Court Condominium Association  
Atlantic Highlands, New Jersey**

**January 2015**



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Please observe that this document consists of three sections which are independently page numbered; the Narrative Report (whose page numbers have an “N” prefix), the Calculation Tables (whose page numbers have a “C” prefix), and the Appendix (whose page numbers have an “A” prefix).

## Community Description

King James Court Condominiums is a community consisting of forty-eight (48) condominium dwelling units split between four (4) buildings. The property is arranged along a single street (King James), with parking stalls located at the front of the buildings and at the rear of the site. An in-ground outdoor pool facility, including pool filtration equipment and a storage building also exists at the rear of the site.

The community is located off Highway 36 in Atlantic Highlands, NJ.

## Capital Reserve Replacement Analysis Overview

The function of a Capital Reserve Replacement Analysis is to inform and advise the Community Association as to the likely capital expenditures for replacement of common elements over the time frame considered by the analysis and the annual contribution levels to the Capital Reserve Replacement Fund calculated as being sufficient to avoid having to levy special assessments or take out a loan in order to support the predicted capital expenditures.

All Capital Reserve Replacement Analyses therefore assume that the Association is funding capital expenditures through the use of regular (e.g. annual, quarterly, or monthly), budgeted contributions to an account set aside for the sole purpose of funding the replacement of a designated set of common elements (often called the "Capital Reserve Fund").

A Community Association can defer common element replacement projects. Such deferrals tend to result in the gradual decrease in property values as the infrastructure and appearance of the community facilities degrade over time. In addition, such deferrals often result in the final replacement costs increasing significantly due to more extensive deterioration and additional damage to other common elements resulting from the failure of the common element to be replaced.

## Association Considerations for a Capital Reserve Replacement Analysis

Each Association has a number of choices and options to consider during the Capital Reserve Replacement Analysis process. Two of the most important decisions are the Methodology (q.v.) of the analysis and the Funding Goal (q.v.) of the Association, although there are a number of other considerations, including:

- **Budget Thresholds** – the budget threshold is simply the lowest total project cost that the Association wants to fund using the Capital Reserve Fund. This is normally a function of the Association's proclivities, operating budget size, and administrative/fiscal history – some communities will fund a \$5,000 project through the maintenance or operating budget, while others prefer to schedule and fund a \$500 project through the capital reserve budget. Many Associations never make a formal decision, leaving this to the professionals who prepare their Capital Reserve Replacement Analyses.
- **Federal Housing Authority/Housing & Urban Development Limitations** – the federal government is a significant mortgage insurance provider. The FHA/HUD mortgage insurance programs currently require that community associations fund replacement reserves for capital expenditures and deferred maintenance with at least 10% of the association budget in order to meet eligibility requirements for FHA mortgage insurance – failure to maintain this level of replacement reserve funding can trigger requests for a current (less than 12 month old) reserve study or a Fannie Mae form 1073a from lenders (see HUD Mortgagee Letter 2009-46 B).
- **Maintenance Budget** – no project should be funded in two places. Any and all maintenance contracts for common elements should be reviewed, and any common element whose complete replacement is included in the maintenance contract should be removed from consideration in the Capital Reserve Replacement Analysis, since the Association is already allocating funds to replace the element.
- **Operating Budget** – no project should be funded in two places. Any common elements that the Association is planning to replace in a series of incremental projects on an annual or irregular (as-needed) basis using the

operating budget funds should be removed from consideration in the Capital Reserve Replacement Analysis, since the Association is already allocating funds to replace the element.

- Preventive or Deferred Maintenance Budget – no project should be funded in two places. The Association should compare its capital reserve budget to its preventive/deferred maintenance budget. Line items existing in both schedules should be removed from one or the other, since the Association is already allocating funds to replace the element.
- Statutory Requirements – some jurisdictions may require that certain elements are included in a reserve fund analysis, and other municipalities agree to accept responsibility for some elements (most commonly roadways). Such factors cannot be determined by site inspection – the Association should have documentation indicating any such factors, and should certainly inform the professionals performing the Capital Reserve Replacement Analysis of these factors.
- Time Window – the time window is simply the time span that the Association desires to consider its capital reserve expenditures over. Typically, Associations do not consider common elements with a condition assessed remaining life cycle of longer than 30 years as part of the Capital Reserve Replacement Analysis. As a general rule, longer time windows are more conservative (resulting in higher annual contribution levels), with the longer time windows allows the Association a longer lead-time to accumulate funds for large projects.
- Interest and Inflation – interest (sometimes called the rate of return) and inflation can have significant influence on the capital reserve budget. Increasing interest rates tends to reduce the necessary annual contributions, as the Association is essentially collecting additional funding from investment of its capital reserve fund. Increasing inflation rates tends to increase the necessary annual contributions, as the Association needs to collect additional funds to account for the decreasing purchasing power of money. The Falcon Group generally recommends that most associations are better served by assuming interest and inflation rates of zero and updating their Capital Reserve Replacement Analysis every two to three years (thus correcting for the effects of interest and inflation every second or third year), rather than making assumptions about factors that vary significantly and unpredictably with market forces. That being said, if the Association desires, the Falcon Group can certainly assume whatever average annual interest and inflation rates the Association requests.

Besides the above considerations, there are two decisions that the Association will need to make:

### **Funding Goals**

The funding goal helps to determine the methodology used in the Capital Reserve Replacement Analysis and also is the principal reflection of the Association's fiscal policy. Funding goals can be categorized by their fiscal aggressiveness (willingness to risk the need to levy a special assessment or take out a loan) – more aggressive funding goals tend to result in lower annual levels of contribution to the capital reserve fund, with associated higher risks of shortfalls requiring special assessments or loans.

There are four basic funding goals used by communities when determining Capital Reserve Fund requirements:

- Baseline Funding is the most aggressive funding goal commonly used by associations. Baseline funding is essentially a special case of threshold funding, where the goal is to never have a negative capital reserve fund balance (in other words the threshold is zero). As this funding goal provides no margin for errors, unexpected or unforeseeable expenses, or market forces that are not in the Association's favor, The Falcon Group does not recommend this as a funding goal for the Association's capital reserve budget.
- Full Funding is the most conservative funding goal commonly used by associations. Full funding is best understood as an attempt to maintain the capital reserve fund at or near 100% of the accumulated common element depreciation. As an example: assuming element X has a life cycle of 10 years, is presently 5 years old, and has a replacement cost of \$10,000, then the full funding goal would be to have \$5,000 ( $5/10 \times \$10,000$ ) in the capital reserve fund for this item. Full funding, as defined by GAP Report #24 ("A Complete Guide to Reserve

Funding & Reserve Investment Strategies”, 4th ed., produced by CAI), appears simpler than it actually is in practice, and tends to result in over-funding if the community is starting with a capital reserve fund balance less than the current depreciation of its common elements, or to result in under-funding if the community is starting with a capital reserve fund balance greater than the current depreciation of its common elements, unless applied carefully and with the understanding that annual contributions will change over the course of time as overages and shortages are corrected, resulting in an annual contribution recommendation that decreases or increases with the passage of time in all except the simplest cases.

- Statutory Funding is a funding goal (and/or methodology) that the community is legally obligated to meet or exceed. Such funding goals are typically the result of state or local statutes or the result of one or more provisions in the governing documents of the Community Association. The relative aggressiveness of such funding goals will vary depending upon the statute or provision involved.
- Threshold Funding is normally a moderate funding goal. The essential goal of threshold funding is to avoid having a capital reserve fund balance below some predetermined level (the “threshold” or “threshold balance”), which can be determined as a percentage of the total cost to replace the considered common elements, by decree as some absolute value (e.g. the community decides that \$100,000 is the threshold balance because that is a number it is comfortable with), or as some multiple of the annual contribution (e.g. the community wants to have a capital reserve fund balance of no less than 9 months of capital reserve fund contributions). Note that Baseline Funding is essentially a threshold funding goal where the threshold balance equals zero.

## Methodology

There are essentially three methods used in Capital Reserve Analyses performed for most communities. The decision of which methodology to use is made by the Community Association, often under the advisement of its accountant, lawyer, and/or engineer. These three methodologies are:

- Cash Flow methodologies are based upon a projection of the future expenditures that the Community Association is likely to experience. The cash flow is then determined, based upon these expenditures, so that the resulting Capital Reserve Fund balances over the time window meet the funding goal.
- Component methodologies are based upon calculating the yearly contribution necessary to fund the replacement of each common element that is being considered. Each element is considered separately, producing a series of distinct line item entries of necessary contributions, which are summed to produce the total annual contribution to meet the funding goal.
- Statutory methodologies, like Statutory Funding Goals, are determined entirely by the statutes and/or governing document provisions that create the methodology. Statutory methodologies will most commonly resemble cash flow or component methodologies, but can theoretically be based upon any fiscal or legal conceptualization of the capital reserve funding.

Methodology and funding goal are normally related closely to each other. As a rule, baseline and threshold funding goals are most easily calculated using a cash flow methodology, full funding goals are normally calculated using a component methodology, and statutory funding goals and methodologies are often found together (e.g. the local government legislates both what the funding goal is and how the community calculates its reserve fund contribution to insure that the funding goal is met).

Please note that cash flow methodologies and component methodologies cannot be easily compared on a line item by line item basis, as cash flow methodologies do not generate a definite line item breakdown of how the annual funding is distributed between the various line items. Likewise, cash flow methodologies do not lend themselves to division of common element responsibilities between various entities. For instance, if an association is internally divided between several sub-groups that do not share all common elements (for instance, an association where owners of detached dwelling units do not own a share of the common elements of multifamily buildings in the association and vice versa, but all owners share responsibility for the recreational facilities and site improvements), then the proper application a cash

flow methodology would require multiple analyses, with one analysis for each division of responsibility (in the aforesaid case, there would need to be an analysis for detached dwelling unit buildings, an analysis for multifamily buildings, and an analysis for the recreational facilities and site improvements), and each analysis requiring a distinct set of initial conditions (most notably initial capital reserve fund balances).

## Analysis

A Capital Reserve Replacement Analysis consists of a series of calculations, which essentially attempt to create a mathematical model of the Association's capital reserve fund expenditures/cash flows over a designated time window, and then determine the annual contributions to the capital reserve fund necessary to support the modeled expenditures/cash flows.

Capital Reserve Replacement Analyses, as performed by The Falcon Group, performs several sets of separate, distinct, and independent calculations upon the same basic information. This permits the analysis to include a component methodology full funding calculation and several cash flow methodology threshold funding calculations (using different threshold balances) to permit the Association to more fully examine its possible capital reserve funding options. Please note that the cash flow and component methodologies cannot be directly compared on a line item by line item basis, due to the significant differences between the underlying mathematics of these methodologies.

The Capital Reserve Replacement Analysis calculations and results are shown in a series of tables and graphs that demonstrate the general viability and end results of the various scenarios. These tables and graphs allow the Association to verify that one or more of the scenarios considered meet Association requirements and do not engage in unacceptable levels of over- or under-funding, as well as allowing the Association to inspect the underlying assumptions and numerical bases of the various scenarios and compare the costs (annual contributions over the time window of the analysis) of achieving these scenarios.

Please note that this Capital Reserve Replacement Analysis is a guide, not a legally binding document. The Association should not allow itself to feel constrained from performing necessary or desirable projects simply because they are not included in this analysis, nor should it feel itself forced to perform any project simply because it has been scheduled in this analysis. If work needs to be done, then do it, and likewise, if the common element condition does not justify replacement or refurbishment, then refrain from performing the work until it needs to be done. The Falcon Group believes and recommends that every Association should have a reserve analysis performed no less than once every three years to allow the updating of estimated replacement costs to reflect inflation, technological advances, changes in the construction industry, and current market forces, as well to allow alterations in life cycle information to reflect any significant alterations in the Association's common element conditions or quantities, as well as any significant changes in industry standards or market forces.

## Limits of Inspection and Disclosures

The Falcon Group will not accept responsibility for the detection or analysis of conditions not visible to the naked eye under normal lighting conditions, or conditions located in areas which cannot be accessed by inspectors.

On-site inspections include walking the improved areas of the site and visual inspection of representative samples of the observable common elements. Please note that the Falcon Group cannot accept responsibility for detection of non-representative conditions as part of the on-site inspections.

On-site inspections are limited, most notably by the following:

- Unless otherwise stated in the Common Element Descriptions & General Comments, no non-visual examinations were conducted.
- No destructive or invasive testing of any kind was undertaken.

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- At no time was any private residence entered, nor were the interior conditions of any private residence examined.
- No security measures (locks, alarms, etc.) were circumvented, and areas within security perimeters were examined from outside said perimeter.
- No area of the site inaccessible to pedestrian traffic was examined and no areas requiring special tools to access or necessitating specific equipment or training to work in safely were entered.

Conditions stated in the report are representative of the general observed conditions of each item. Isolated areas of above or below average conditions may exist for any item. This analysis is not meant to be, nor should it be used as, a detailed condition evaluation of the common elements or a construction defect investigation.

No attempt has been made to predict either the rate of inflation or the rate of return on investments and savings that can be achieved by the Association. The Falcon Group assumes that the Association can achieve a consistent rate of return on investments and savings that equals or exceeds inflation, and that any investment income above and beyond the rate of inflation will be retained within the Capital Reserve Fund, but, for budgeting purposes, assumes that the annual rate of cost inflation and the annual rate of investment return seen by the Association is zero (0%). The Association should consult with its accountant to verify the viability of these assumptions. If the Association desires inclusion of non-zero inflation and investment return, please contact The Falcon Group with the desired annual rates of inflation and investment return so that a revised analysis can be prepared to reflect the Association's desired assumptions in this regard.

Information provided by official representatives of the Association is assumed to be reliable and accurate. This analysis is a reflection of the information supplied to The Falcon Group, and has been assembled for the Association's use; this analysis is not meant to be an audit, quality/forensic analysis, or background check of historical information. Similarly, on-site inspections performed as part of this analysis should not be considered a project audit or quality inspection of any reserve project.

## Community Specific Conditions and Commentary

### General Comments

Please note that, based upon professional judgment and information provided by the Association or the Association's management professionals, the following have not been considered as part of this Capital Reserve Replacement Analysis:

- Annual maintenance tasks (e.g. filling pot-holes & sealing pavement cracks).
- Doors and windows, both exterior and interior.
- Drainage repairs or enhancements.
- Fire suppression systems (e.g. fire sprinkler heads and valves).
- Landscaping and irrigation systems, including maintenance, replacement, or enhancement.
- Painting, sealing, or staining of exterior or interior wooden components.
- Painting of exterior or interior metal components.
- Preventive maintenance tasks (e.g. power-washing siding, annual inspections).
- Protected or concealed structural components, such as foundations, wall framing, floor/ceiling framing, roof framing, and similar components.
- Radon mitigation systems.

- Routine (e.g. sweeping stoops, snow clearing) and emergency (e.g. repairing broken stair treads) maintenance tasks.
- Underground utilities.
- Leased laundry equipment.
- Brick veneer.

Should the above list be incorrect, please notify the Falcon Group so that the analysis can be appropriately amended.

These items are excluded from this analysis because they are typically considered to be either maintenance or operating expenses, and are therefore expected to be accounted for in those budgets, or have predicted remaining life cycles that exceed the analysis time window, and are therefore not typically considered a capital expenditure (at this point in time), or are not common elements, and are therefore not the Association's responsibility. The Association should review all maintenance and operating budgets to confirm that sufficient funding is being allocated toward all maintenance and operating budget items, and the Association's legal professionals should verify the responsibilities of both Association and individual unit owners to confirm that the common element list used in the analysis is accurate.

### Calculation Table Notes

The following are notes that provide specific comments for use with the Association's current Capital Reserve Replacement Analysis. These notes are numbered and correspond to the numbers given in the analysis Calculation Tables, which immediately follow these notes.

1. Many of the items vary slightly in age and/or condition; however, the items have been given an average remaining useful life based upon observed general conditions. Single or isolated replacements may be needed and should be funded through reserves as the need arises (such as-needed replacement may be especially prevalent for concrete walkways or entry stoops). For purposes of establishing a funding plan, single (total) replacement projects are assumed in most cases (with exceptions for projects of exceptional scope and/or expense, where phasing is often used to reflect financial or other practical limitations). Performing capital reserve replacement projects as unified scopes of work will likely decrease costs from economies of scale and mobilization costs. Similarly, unit costs are typical average costs for the item understanding that specific costs can be expected to vary both above and below the unit cost used in the analysis.
2. Previous Capital Reserve Replacement Analysis quantities were utilized in the current Capital Reserve Analysis, and the accuracy of the current analysis is therefore dependent upon the accuracy of the previous analysis quantity information. It has been assumed that the Association is satisfied with the completeness, accuracy, and reliability of the common element quantity supplied by the previous analysis.
3. The roofs of the King James Court Condominiums consist of standard three tab shingles, with ventilation provided by soffit and ridge vents. Typically, roof-covering materials of this type come with a twenty-five (25) year warranty, assuming correct installation. The roof shingles are exhibiting signs of advanced aging including curling and significant staining. The replacement cost used assumes complete replacement of the existing roof systems with allowances for flashing, underlayment, and ventilation enhancements. Please note that detailed roof/attic inspections were not performed as part of this scope of work and the remaining useful life given for the roofing is based solely on the age of the roof system, information provided by the Association, and general visual observations.
4. We have included a line item for gutters and leaders as full scale replacement will likely be required or desired during the roof replacement project as the gutters will become damaged over time from ice and snow accumulations and physical abuse from ladders.

5. It is our understanding that the Association has been replacing the balcony membranes and framing on an as-needed basis. No quantities or historical record were available as to the ages of the various structures so for funding purposes a tri-annual replacement fund has been established. The balconies are constructed of wood. The balcony surfaces are composed of fiberglass. The soffits at the underside are constructed of vinyl soffit material and the framing around the balconies have been wrapped with aluminum coil. The coil will need to be replaced at the time of the decking replacement. The cost of replacement shown assumes replacement of the railings and limited deteriorated wood members. Please note that decks and balconies are areas that are subject to failure from overloading due to furniture, equipment, and/or resident/guest usage in excess of design intent. This issue is often exacerbated by deterioration of wood structural members, which occurs in wood exposed to the elements at a rate dependent upon the species and quality of the lumber used in the construction, local weather conditions and climate, usage and loading patterns, and maintenance practices. Note that we have not performed a detailed inspection of each deck/balcony in the community as part of this scope of work and detailed inspections would be required to verify the structural integrity/stability of each deck or balcony in the community. **Given the unknown condition and ages of these structures this is highly recommended and adjustments to the funding plan can be made as needed upon completion of the inspections.**
6. Please note that the existing masonry veneer should not need complete replacement within the time window of this analysis, however, no detailed analysis of the façade has been performed and it is assumed that the system currently functions properly. This type of façade requires ongoing maintenance which it is our understanding is being performed periodically. The Association should routinely monitor the maintenance activities and conditions of this system and may find it prudent to have detailed inspections of this system performed to verify proper installation and the condition of concealed materials/details if maintenance costs involving the system become excessive or leaks are developing. A re-pointing and repair item has been included in the funding schedule.
7. This item has been budgeted for future expenditures based upon the assumption that 7% of the gross element quantity will be replaced every three (3) years for the foreseeable future. Based upon actual replacement projects in the future, the Association may want to increase or decrease this number to reflect actual rates of failure propagation. Cost reflects a general average cost as there are some steps and railings that will increase the unit costs at some locations. Please note that, as a matter of best operating practice, all common area pedestrian walkways should be subjected to annual inspection for safety concerns, including trip hazards. Some trip hazards were observed. This evaluation does not purport to be an inclusive or definitive walkway safety evaluation. The railings at the pool steps and elsewhere are non-code compliant and should be replaced.
8. The upper exterior wall areas (gable ends) and entrance porticos of the King James Court Condominiums are covered with vinyl siding. Vinyl siding can be expected to be typically structurally sound for 40-50 years. Based upon the age of the community, it can be expected that the siding will require replacement within the next 20 years and therefore, funding has been included in this analysis. Please note that unless otherwise noted, no testing or removal of materials has been performed as part of the preparation of any reserve analysis performed by the Falcon Group for this community and conditions may exist behind concealed components of the exterior wall systems that may result in reduced life cycles as a result of inadequate construction such as underlayment and flashing deficiencies which may exist. The remaining life cycle used has been based solely on the age of the community, visual observations of a representative sampling of the community and information provided by the Association. The Association should routinely monitor the maintenance activities and conditions of the vinyl siding and may find it prudent to have detailed inspections of the system performed to verify proper installation and the condition of concealed materials/details.
9. It is our understanding that the degrade trim of the four (4) unit stoops will be replaced in 2015. Wood trim requires regular maintenance (and often isolated replacements of damaged/deteriorated areas) in order to retain a desirable appearance and functionality. Most notably, deteriorated areas of siding and/or trim should be replaced prior to any painting, staining, or weatherproofing projects. Increasing maintenance and replacement costs should be expected with the passage of time; most communities will experience an effective life cycle of 15-

20 years for wood trim and reserving funds for the eventual replacement of wood siding is therefore recommended. For funding purposes, we have anticipated a wood trim project to occur every 15 years.

10. Some of the existing roadway contains areas of cracking and will require enhanced repairs during the pavement project. The costs shown in the funding schedule reflect these conditions as well as drainage inlet wall repairs that are needed at some locations. The cost for this item assumes milling for drainage and surface failure and defects. The cost also includes full depth repairs (as required), installation of a new 2" thick wearing course, and line striping to match the existing layout of the community.

The Falcon Group has observed that a quality seal coat material (applied using a two coating application procedure) applied over the bituminous pavement surface approximately five (5) years after installation of the asphalt (and every four to six years thereafter until a new pavement surface is installed) to seal superficial cracks and prevent water infiltration is generally useful. In addition to its aesthetic appeal, sealcoating prevents water infiltration from occurring in small voids and small surface cracks. Large cracks in pavement should be cleaned of all debris and filled with a thicker sealant annually prior to the onset of winter as a matter of routine or preventive maintenance.

11. The elevated concrete stoops will eventually require replacement. The existing stoops vary in condition and size so for funding purposes an average square foot replacement cost is used (see note 1).
12. No inspection of the existing swimming pool was made, as the facility was closed for the season during the inspection period of this analysis. It has been reported that there are no major cracks in or known water leakage from the swimming pool. For purposes of this analysis, it is assumed that these items have aged typically and consistently from the time of the last analysis. A new liner was recently installed.
13. Please note that the given cost estimate for this equipment is for replacement of the central equipment, and does not include replacement of wiring, piping, or ductwork which is assumed to last indefinitely (typically wiring, piping, and ductwork would be repaired on an as-needed basis as an operating or maintenance expense).
14. Site lighting fixture cost estimates anticipate replacement with fixtures of similar types, styles, and functionality. No testing or analysis of underground or otherwise concealed wiring has been performed; replacement cost estimates assume that the existing wiring and/or conduits are of acceptable capacity and condition and will be retained during fixture replacement.
15. The community landscaping includes charcoal barbecue stands and a field stone masonry fireplace / barbeque pit. It is our understanding that the association does not use these facilities and they should be removed.
16. For the purpose of this study, it is our understanding that the replacement of the rear concrete patios is the responsibility of the Association.
17. It is our understanding that the boilers were recently replaced and as such future replacement should be outside the time window of this analysis. The Association should be aware that no testing or mechanical analysis has been performed on this equipment. The boiler equipment should be regularly maintained and inspected on a yearly basis by a qualified contracting firm.
18. The curb is in poor condition in some locations and aged or with little reveal in most others. Replacement of the existing concrete curbing has been coordinated to occur during the pavement improvement project. This will give the community a consistent curb reveal and new curb.





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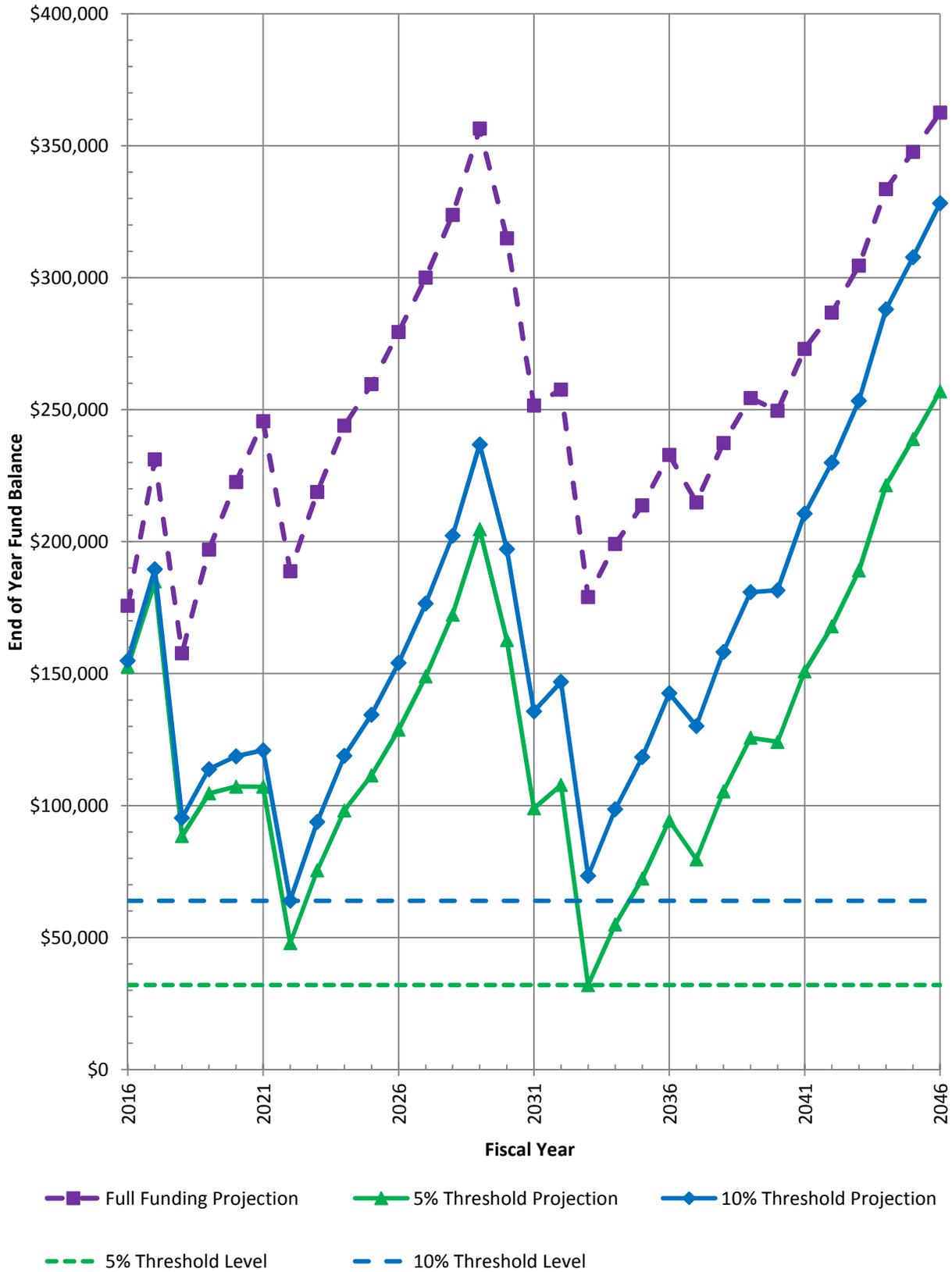




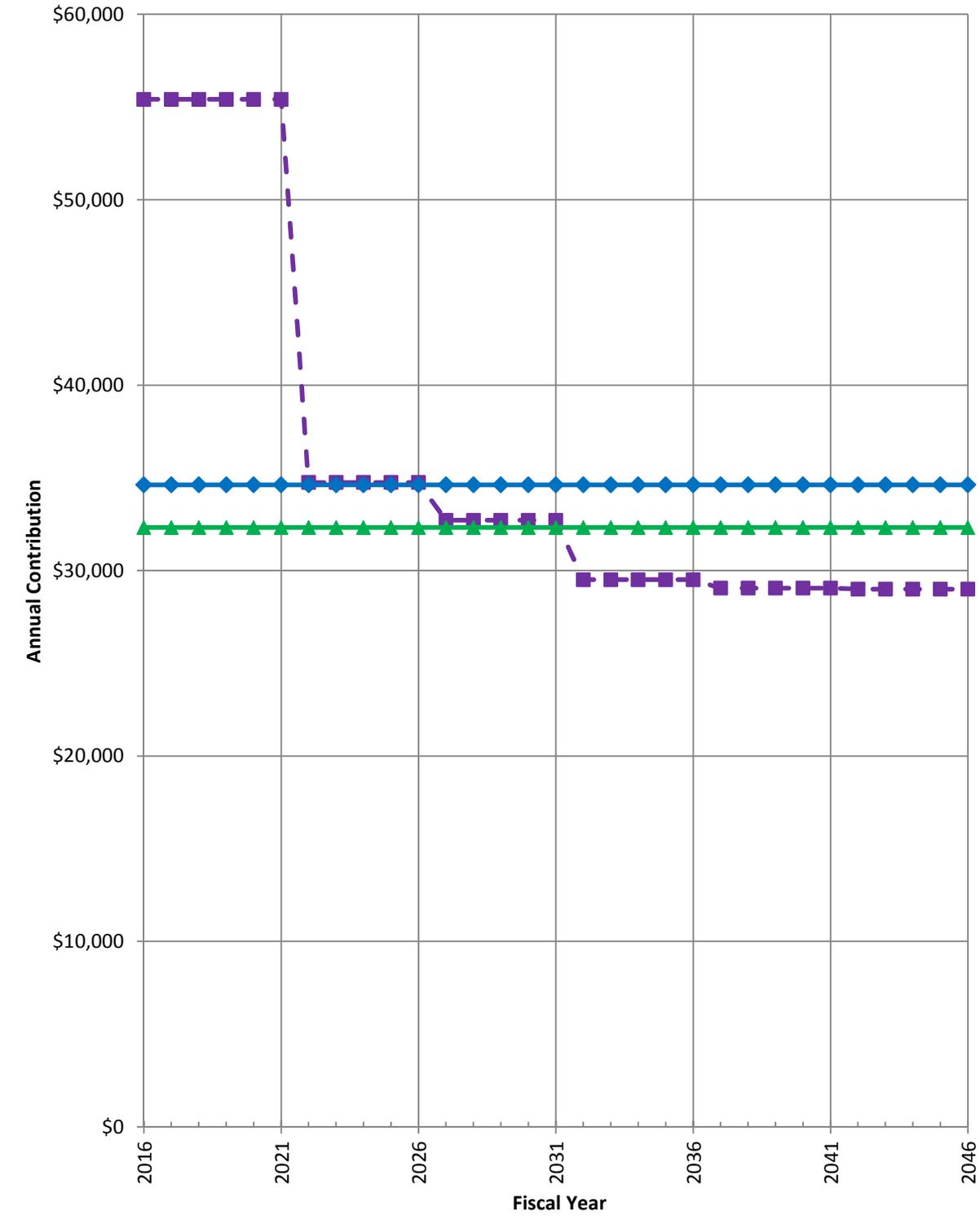
| Fiscal Year | Nominal Expenditure (in Future Dollars) in Fiscal Year | Full Funding Scenario Projection |                        |                          |
|-------------|--|----------------------------------|------------------------|--------------------------|
|             |  | Start of Year Fund Balance       | Projected Contribution | End of Year Fund Balance |
| 2016        | \$ 14,749  | \$ 135,054                       | \$ 55,413              | \$ 175,718               |
| 2017        | -  | 175,718                          | 55,413                 | 231,131                  |
| 2018        | 128,867  | 231,131                          | 55,413                 | 157,677                  |
| 2019        | 16,169   | 157,677                          | 55,413                 | 196,921                  |
| 2020        | 29,730   | 196,921                          | 55,413                 | 222,604                  |
| 2021        | 32,340   | 222,604                          | 55,413                 | 245,677                  |
| 2022        | 91,625   | 245,677                          | 34,754                 | 188,806                  |
| 2023        | 4,768  | 188,806                          | 34,754                 | 218,792                  |
| 2024        | 9,600  | 218,792                          | 34,754                 | 243,947                  |
| 2025        | 19,049   | 243,947                          | 34,754                 | 259,652                  |
| 2026        | 15,000   | 259,652                          | 34,754                 | 279,406                  |
| 2027        | 12,120   | 279,406                          | 32,716                 | 300,002                  |
| 2028        | 8,937  | 300,002                          | 32,716                 | 323,782                  |
| 2029        | -  | 323,782                          | 32,716                 | 356,498                  |
| 2030        | 74,268   | 356,498                          | 32,716                 | 314,947                  |
| 2031        | 96,109   | 314,947                          | 32,716                 | 251,555                  |
| 2032        | 23,450   | 251,555                          | 29,513                 | 257,617                  |
| 2033        | 108,160  | 257,617                          | 29,513                 | 178,970                  |
| 2034        | 9,369  | 178,970                          | 29,513                 | 199,114                  |
| 2035        | 14,880   | 199,114                          | 29,513                 | 213,747                  |
| 2036        | 10,400   | 213,747                          | 29,513                 | 232,859                  |
| 2037        | 47,017   | 232,859                          | 29,052                 | 214,895                  |
| 2038        | 6,568  | 214,895                          | 29,052                 | 237,379                  |
| 2039        | 12,000   | 237,379                          | 29,052                 | 254,432                  |
| 2040        | 33,899   | 254,432                          | 29,052                 | 249,585                  |
| 2041        | 5,580  | 249,585                          | 29,052                 | 273,058                  |
| 2042        | 15,320   | 273,058                          | 28,996                 | 286,734                  |
| 2043        | 11,137   | 286,734                          | 28,996                 | 304,594                  |
| 2044        | -  | 304,594                          | 28,996                 | 333,590                  |
| 2045        | 14,880   | 333,590                          | 28,996                 | 347,706                  |
| 2046        | 14,169   | 347,706                          | 28,996                 | 362,534                  |

| Fiscal Year | Nominal Expenditure (in Future Dollars) in Fiscal Year | 5% Threshold Funding Scenario Projection |                        |                          |                           | 10% Threshold Funding Scenario Projection |                        |                          |                           |
|-------------|--|--|------------------------|--------------------------|---------------------------|---|------------------------|--------------------------|---------------------------|
|             |  | Initial Year Threshold of \$31,966       |                        |                          |                           | Initial Year Threshold of \$63,932        |                        |                          |                           |
|             |  | Start of Year Fund Balance               | Projected Contribution | End of Year Fund Balance | Nominal Threshold in Year | Start of Year Fund Balance                | Projected Contribution | End of Year Fund Balance | Nominal Threshold in Year |
| 2016        | \$ 14,749  | \$ 135,054                               | \$ 32,325              | \$ 152,630               | \$ 31,966                 | \$ 135,054                                | \$ 34,622              | \$ 154,928               | \$ 63,932                 |
| 2017        | -  | 152,630                                  | 32,325                 | 184,955                  | 31,966                    | 154,928                                   | 34,622                 | 189,550                  | 63,932                    |
| 2018        | 128,867  | 184,955                                  | 32,325                 | 88,413                   | 31,966                    | 189,550                                   | 34,622                 | 95,306                   | 63,932                    |
| 2019        | 16,169   | 88,413                                   | 32,325                 | 104,570                  | 31,966                    | 95,306                                    | 34,622                 | 113,760                  | 63,932                    |
| 2020        | 29,730   | 104,570                                  | 32,325                 | 107,165                  | 31,966                    | 113,760                                   | 34,622                 | 118,652                  | 63,932                    |
| 2021        | 32,340   | 107,165                                  | 32,325                 | 107,150                  | 31,966                    | 118,652                                   | 34,622                 | 120,935                  | 63,932                    |
| 2022        | 91,625   | 107,150                                  | 32,325                 | 47,850                   | 31,966                    | 120,935                                   | 34,622                 | 63,932                   | 63,932                    |
| 2023        | 4,768  | 47,850                                   | 32,325                 | 75,407                   | 31,966                    | 63,932                                    | 34,622                 | 93,787                   | 63,932                    |
| 2024        | 9,600  | 75,407                                   | 32,325                 | 98,132                   | 31,966                    | 93,787                                    | 34,622                 | 118,809                  | 63,932                    |
| 2025        | 19,049   | 98,132                                   | 32,325                 | 111,409                  | 31,966                    | 118,809                                   | 34,622                 | 134,383                  | 63,932                    |
| 2026        | 15,000   | 111,409                                  | 32,325                 | 128,734                  | 31,966                    | 134,383                                   | 34,622                 | 154,006                  | 63,932                    |
| 2027        | 12,120   | 128,734                                  | 32,325                 | 148,939                  | 31,966                    | 154,006                                   | 34,622                 | 176,508                  | 63,932                    |
| 2028        | 8,937  | 148,939                                  | 32,325                 | 172,327                  | 31,966                    | 176,508                                   | 34,622                 | 202,194                  | 63,932                    |
| 2029        | -  | 172,327                                  | 32,325                 | 204,652                  | 31,966                    | 202,194                                   | 34,622                 | 236,816                  | 63,932                    |
| 2030        | 74,268   | 204,652                                  | 32,325                 | 162,710                  | 31,966                    | 236,816                                   | 34,622                 | 197,171                  | 63,932                    |
| 2031        | 96,109   | 162,710                                  | 32,325                 | 98,926                   | 31,966                    | 197,171                                   | 34,622                 | 135,685                  | 63,932                    |
| 2032        | 23,450   | 98,926                                   | 32,325                 | 107,801                  | 31,966                    | 135,685                                   | 34,622                 | 146,858                  | 63,932                    |
| 2033        | 108,160  | 107,801                                  | 32,325                 | 31,966                   | 31,966                    | 146,858                                   | 34,622                 | 73,320                   | 63,932                    |
| 2034        | 9,369  | 31,966                                   | 32,325                 | 54,923                   | 31,966                    | 73,320                                    | 34,622                 | 98,574                   | 63,932                    |
| 2035        | 14,880   | 54,923                                   | 32,325                 | 72,368                   | 31,966                    | 98,574                                    | 34,622                 | 118,316                  | 63,932                    |
| 2036        | 10,400   | 72,368                                   | 32,325                 | 94,293                   | 31,966                    | 118,316                                   | 34,622                 | 142,539                  | 63,932                    |
| 2037        | 47,017   | 94,293                                   | 32,325                 | 79,601                   | 31,966                    | 142,539                                   | 34,622                 | 130,145                  | 63,932                    |
| 2038        | 6,568  | 79,601                                   | 32,325                 | 105,358                  | 31,966                    | 130,145                                   | 34,622                 | 158,199                  | 63,932                    |
| 2039        | 12,000   | 105,358                                  | 32,325                 | 125,683                  | 31,966                    | 158,199                                   | 34,622                 | 180,822                  | 63,932                    |
| 2040        | 33,899   | 125,683                                  | 32,325                 | 124,110                  | 31,966                    | 180,822                                   | 34,622                 | 181,546                  | 63,932                    |
| 2041        | 5,580  | 124,110                                  | 32,325                 | 150,855                  | 31,966                    | 181,546                                   | 34,622                 | 210,588                  | 63,932                    |
| 2042        | 15,320   | 150,855                                  | 32,325                 | 167,860                  | 31,966                    | 210,588                                   | 34,622                 | 229,890                  | 63,932                    |
| 2043        | 11,137   | 167,860                                  | 32,325                 | 189,048                  | 31,966                    | 229,890                                   | 34,622                 | 253,376                  | 63,932                    |
| 2044        | -  | 189,048                                  | 32,325                 | 221,373                  | 31,966                    | 253,376                                   | 34,622                 | 287,999                  | 63,932                    |
| 2045        | 14,880   | 221,373                                  | 32,325                 | 238,818                  | 31,966                    | 287,999                                   | 34,622                 | 307,741                  | 63,932                    |
| 2046        | 14,169   | 238,818                                  | 32,325                 | 256,975                  | 31,966                    | 307,741                                   | 34,622                 | 328,195                  | 63,932                    |

End of Fiscal Year Fund Projection Graph



Annual Contribution in Fiscal Year Graph



- Full Funding Annual Contribution
- ▲ 5% Threshold Funding Annual Contribution
- ◆ 10% Threshold Funding Annual Contribution

| <p>2016<br/>total expenditure \$14,749<br/>consisting of these projects:</p>  | <p>2017<br/>total expenditure \$0<br/>consisting of these projects:</p> | <p>2018<br/>total expenditure \$128,867<br/>consisting of these projects:</p>  | <p>2019<br/>total expenditure \$16,169<br/>consisting of these projects:</p>   |
|---|---|--|--|
| <p>SITE WORK-Fence-4' chain link-<br/>swimming pool \$5,580</p> <p>BUILDINGS-Cladding-entry area wood<br/>posts/trim-[9] \$5,000</p> <p>SITE WORK-Pavement-sidewalk,<br/>concrete-[7] \$4,169</p> |   | <p>SITE WORK-Pavement-streets &amp; parking<br/>- asphalt-[10] \$89,400</p> <p>SITE WORK-Pavement-curbng,<br/>concrete-[18] \$34,707</p> <p>RECREATION-Swimming Pool-1-1/2 hp<br/>pump, filter, chlorinator-[12] \$2,560</p> <p>SITE WORK-Miscellaneous-storage shed<br/>\$2,200</p> | <p>BUILDINGS-Illumination-dwelling exterior<br/>coach lamps-[14] \$12,000</p> <p>SITE WORK-Pavement-sidewalk,<br/>concrete-[7] \$4,169</p> |

| <p>2020<br/>total expenditure \$29,730<br/>consisting of these projects:</p>  | <p>2021<br/>total expenditure \$32,340<br/>consisting of these projects:</p> | <p>2022<br/>total expenditure \$91,625<br/>consisting of these projects:</p>   | <p>2023<br/>total expenditure \$4,768<br/>consisting of these projects:</p> |
|---|--|--|---|
| <p>BUILDINGS-Balcony-surface membrane, fiberglass-[5] \$14,880</p> <p>BUILDINGS-Balcony-privacy screen, wood \$14,850</p> | <p>SITE WORK-Miscellaneous-retaining wall at stream, concrete \$32,340</p>   | <p>BUILDINGS-Roofing-roof shingles, older-[3] \$66,375</p> <p>BUILDINGS-Roofing-aluminum gutters-[4] \$7,614</p> <p>BUILDINGS-Roofing-aluminum leaders-[4] \$5,767</p> <p>BUILDINGS-Mechanical-water heaters, 100 gal-[13] \$4,500</p> <p>SITE WORK-Pavement-sidewalk, concrete-[7] \$4,169</p> <p>RECREATION-Swimming Pool-pool cover \$3,200</p> | <p>SITE WORK-Pavement-streets &amp; parking - seal coat-[10] \$4,768</p>    |

| <p>2024<br/>total expenditure \$9,600<br/>consisting of these projects:</p> | <p>2025<br/>total expenditure \$19,049<br/>consisting of these projects:</p>  | <p>2026<br/>total expenditure \$15,000<br/>consisting of these projects:</p>   | <p>2027<br/>total expenditure \$12,120<br/>consisting of these projects:</p> |
|---|---|--|--|
| <p>BUILDINGS-Mechanical-generator-[13]<br/>\$9,600</p>                      | <p>BUILDINGS-Balcony-surface membrane,<br/>fiberglass-[5] \$14,880</p> <p>SITE WORK-Pavement-sidewalk,<br/>concrete-[7] \$4,169</p> | <p>BUILDINGS-Exterior-basement stairways<br/>\$10,000</p> <p>BUILDINGS-Mechanical-water heater<br/>w/119 gal tank-175 MBH [13] \$5,000</p> | <p>RECREATION-Swimming Pool-liner, 60<br/>mil vinyl-[12] \$12,120</p>        |

| <p>2028<br/>total expenditure \$8,937<br/>consisting of these projects:</p>   | <p>2029<br/>total expenditure \$0<br/>consisting of these projects:</p> | <p>2030<br/>total expenditure \$74,268<br/>consisting of these projects:</p>   | <p>2031<br/>total expenditure \$96,109<br/>consisting of these projects:</p>   |
|---|---|--|--|
| <p>SITE WORK-Pavement-streets &amp; parking<br/>- seal coat-[10] \$4,768</p> <p>SITE WORK-Pavement-sidewalk,<br/>concrete-[7] \$4,169</p> |   | <p>RECREATION-Swimming Pool-<br/>apron/deck, concrete \$32,188</p> <p>SITE WORK-Fence-6' wood stockade<br/>\$27,200</p> <p>BUILDINGS-Balcony-surface membrane,<br/>fiberglass-[5] \$14,880</p> | <p>BUILDINGS-Cladding-brick masonry<br/>veneer repointing-[6] \$50,000</p> <p>BUILDINGS-Exterior-entry stoops-[11]<br/>\$33,040</p> <p>BUILDINGS-Cladding-entry area wood<br/>posts/trim-[9] \$5,000</p> <p>SITE WORK-Pavement-sidewalk,<br/>concrete-[7] \$4,169</p> <p>BUILDINGS-Door-utility and laundry<br/>rooms \$2,100</p> <p>SITE WORK-Miscellaneous-entrance<br/>sign \$1,800</p> |

| <p>2032<br/>total expenditure \$23,450<br/>consisting of these projects:</p>  | <p>2033<br/>total expenditure \$108,160<br/>consisting of these projects:</p>   | <p>2034<br/>total expenditure \$9,369<br/>consisting of these projects:</p>  | <p>2035<br/>total expenditure \$14,880<br/>consisting of these projects:</p> |
|---|---|--|--|
| <p>BUILDINGS-Roofing-roof shingles, new<br/>[3] \$20,250</p> <p>RECREATION-Swimming Pool-pool<br/>cover \$3,200</p> | <p>SITE WORK-Pavement-streets &amp; parking<br/>- asphalt-[10] \$89,400</p> <p>BUILDINGS-Cladding-vinyl siding-[8]<br/>\$16,200</p> <p>RECREATION-Swimming Pool-1-1/2 hp<br/>pump, filter, chlorinator-[12] \$2,560</p> | <p>RECREATION-Swimming Pool-shed, 11'<br/>x 17' \$5,200</p> <p>SITE WORK-Pavement-sidewalk,<br/>concrete-[7] \$4,169</p> | <p>BUILDINGS-Balcony-surface membrane,<br/>fiberglass-[5] \$14,880</p>       |

| <p>2036<br/>total expenditure \$10,400<br/>consisting of these projects:</p> | <p>2037<br/>total expenditure \$47,017<br/>consisting of these projects:</p>   | <p>2038<br/>total expenditure \$6,568<br/>consisting of these projects:</p>   | <p>2039<br/>total expenditure \$12,000<br/>consisting of these projects:</p> |
|--|--|---|--|
| <p>SITE WORK-Illumination-6' metal lamp posts-[14] \$10,400</p>              | <p>BUILDINGS-Exterior-patios, rear, concrete-[16] \$32,925</p> <p>SITE WORK-Fence-4' chain link-property line \$5,423</p> <p>BUILDINGS-Mechanical-water heaters, 100 gal-[13] \$4,500</p> <p>SITE WORK-Pavement-sidewalk, concrete-[7] \$4,169</p> | <p>SITE WORK-Pavement-streets &amp; parking - seal coat-[10] \$4,768</p> <p>SITE WORK-Illumination-refuse light \$1,800</p> | <p>BUILDINGS-Illumination-dwelling exterior coach lamps-[14] \$12,000</p>    |

| <p>2040<br/>total expenditure \$33,899<br/>consisting of these projects:</p>   | <p>2041<br/>total expenditure \$5,580<br/>consisting of these projects:</p> | <p>2042<br/>total expenditure \$15,320<br/>consisting of these projects:</p>   | <p>2043<br/>total expenditure \$11,137<br/>consisting of these projects:</p>  |
|--|---|--|---|
| <p>BUILDINGS-Balcony-surface membrane, fiberglass-[5] \$14,880</p> <p>BUILDINGS-Balcony-privacy screen, wood \$14,850</p> <p>SITE WORK-Pavement-sidewalk, concrete-[7] \$4,169</p> | <p>SITE WORK-Fence-4' chain link-swimming pool \$5,580</p>                  | <p>RECREATION-Swimming Pool-liner, 60 mil vinyl-[12] \$12,120</p> <p>RECREATION-Swimming Pool-pool cover \$3,200</p> | <p>SITE WORK-Pavement-streets &amp; parking - seal coat-[10] \$4,768</p> <p>SITE WORK-Pavement-sidewalk, concrete-[7] \$4,169</p> <p>SITE WORK-Miscellaneous-storage shed \$2,200</p> |

| 2044<br>total expenditure \$0<br>consisting of these projects: | 2045<br>total expenditure \$14,880<br>consisting of these projects: | 2046<br>total expenditure \$14,169<br>consisting of these projects:  |
|--|---|--|
|  | BUILDINGS-Balcony-surface membrane,<br>fiberglass-[5] \$14,880      | BUILDINGS-Mechanical-water heater<br>w/119 gal tank-175 MBH [13] \$5,000<br><br>BUILDINGS-Cladding-entry area wood<br>posts/trim-[9] \$5,000<br><br>SITE WORK-Pavement-sidewalk,<br>concrete-[7] \$4,169 |

## Calculation Table Explanatory Descriptions

The following sections describe the individual sheets of the Calculation Tables, in the order they appear in the report.

### Executive Summary

This page shows the basic fiscal and initial condition information upon which the remainder of the analysis has been based and includes basic information regarding the Association, the report (including its revision history), and a basic summary of the funding schedules considered in the analysis.

### Client

This entry lists the full (official) name of the Association, to the best of The Falcon Group's knowledge.

### File Number

This entry indicates the file/client number that The Falcon Group has assigned to the Association for our internal filing and archiving purposes. This number should remain constant through all of the communications that the Association has with The Falcon Group.

### Version

This entry indicates the month and year in which this analysis was performed. This information is included to allow differentiation between precedent and antecedent analyses.

### Community Information

These entries indicate the number of privately owned portions (be they detached single family dwellings, condominium units, attached single family dwellings [often called townhouses], business condominium units, or some combination thereof) within the Association, the approximate or median date of original construction, and the geographic location of the Association's physical components (which is often useful information in that construction costs tend to vary with geographic location and local market forces).

### Initial Conditions

These entries list the conditions that The Falcon Group understands to exist as of the first day of the initial fiscal year of the analysis shown (while most associations have fiscal years that run concurrent with calendar years, this is not universal, and the initial conditions therefore include an explicit listing of the last day of the Association's fiscal year), and include the initial fund balance, which is often pro-rated from the current fund balance, based upon the date of the current fund balance and the prior year's annual contribution. The initial conditions also include the initial percent funded, which gives an indication of how conservatively the Association has historically funded its capital reserve fund to the beginning of the initial fiscal year, and the initial estimated total replacement cost, which is the basis that The Falcon Group typically uses to determine the threshold levels for the cash-flow methodology fund projections.

Included in this area, for the Association's edification, is the "PV Expenditure in Time Window", which is the summation of the "Present Value of Line Item Expenditures in Time Window" column from the Expenditure Projection.

### Scope of Work

This indicates the processes undertaken as part of the analysis evaluation. The Falcon Group, besides specifying scopes of work by CAI standards (updates with and without site visits and full studies) also indicates if the Association requested field measurement of the common elements, and indicates if other work scopes (e.g. roof or siding inspections, moisture testing, etc.) beyond typical visual inspection and quantity measurement, are included in the analysis evaluation.

### Revisions

Many Capital Reserve Replacement Analyses are revised one or more times to reflect changes in assumptions, new information, or alternative funding goals. The revision entries indicate dates that The Falcon Group has revised the

current analysis, and include short descriptions of the revisions made and initials of the editor in The Falcon Group who performed the revision(s).

## **Analysis Calculation Constants**

These entries list the constants used in the analysis, including the time window (industry standard time window is thirty years), the assumed annual rate of cost inflation (The Falcon Group, unless otherwise directed by the Association, will assume this to be zero), and the assumed annual rate of investment return (The Falcon Group, unless otherwise directed by the Association, will assume this to be zero).

## **Summary of Funding Schedules Over Time Window**

These entries indicate the funding schedules (the various scenarios) considered in the analysis, along with relevant notes regarding these funding schedules, the contribution required in the initial fiscal year to comply with the funding schedule as calculated, and the maximum and minimum end of year fund balances projected to occur in each of the funding schedules.

## **Line Item Schedules**

There are two distinct line item schedules, the reserve schedule, which displays life cycle and estimated cost information that is used to develop the expenditure projection, and the depreciation schedule, which displays the depreciation and fund allocation information that is used to develop the full funding scenario projection.

### **Line Item**

These entries name the individual projects/expenditures that are expected to be funded through the Association's capital reserve fund and are therefore being considered in the analysis. Each line item name is compounded of a category (typical categories are ANCILLARY, BUILDING, and SITE), a type (such as Pavement, Roof, Swimming Pool, or Utility, among others), a description (such as asphalt, concrete, metal railing, seal coating, wood deck, or so forth), and, in some cases a miscellaneous component including secondary descriptions (such as street names, building numbers, or phase numbers) and notes (typically in the form of one or more numbers in parenthesis that reference the notes in the narrative section of the report), with all components being separated by hyphens. The line item names are constructed in this fashion so that they can be easily organized into related categories. The organization of the individual line items in a systematic fashion (arranging similar or related line items in close proximity to each other) tends to make the Line Item Schedules and Expenditure Projection of the analysis more easily read, cross-referenced, and checked.

Always be mindful of notes – due to the tabular nature of the Calculation Sheets, important qualifications, disclosures, and observations regarding individual line items typically cannot be expected to fit within the space limitations of the Calculation Sheets, so the line item notes often include vital explanatory material.

### **Life Cycle [Reserve Schedule]**

The typically expected life cycle is the number of years that The Falcon Group would expect to see between occurrences of the line item expenditure. The condition assessed remaining life cycle is the number of years that The Falcon Group expects to elapse before the next occurrence of the line item expenditure.

### **Estimated Cost [Reserve Schedule]**

The total line item cost per occurrence of the line item expenditure in the initial year is determined by multiplying the line item quantity by the line item unit cost. Please note that each line item has also been given a unit of measure – this is very important, in that a both quantity and unit cost entries cannot be appropriately interpreted without knowing the unit of measurement (for instance, there is a vast difference between a square foot of concrete and a cubic yard of concrete, and quantities and unit costs based upon cubic yards will be very different from those based upon square feet).

It must be understood that estimated costs are shown for the initial fiscal year of the analysis. If inflation is assumed to be zero, than the estimated line item cost per occurrence will be constant over the time window – otherwise estimated line item costs will change over the time window.

The individual line item unit costs (the estimated cost for which the components represented by the line item can be realistically replaced, reconstructed, or refurbished as the case may be, per unit of measurement) are based upon the cost information available to us as of the time the analysis is performed, as well as various assumptions in regards to non-visible construction details and material characteristics. The Falcon Group bases unit costs upon current R.S. Means reference books (R.S. Means is a commercially available series of cost estimating guides published by Reed Construction Data), contractor bids for similar scopes of work with which The Falcon Group has been involved, industry/manufacturer specific information, and whatever historical expenditure information that the Association has supplied to The Falcon Group for review.

The Association should remain aware that these are estimated costs. Market forces can alter individual costs significantly in comparatively short periods of time due to material price increases, labor shortages, regulatory environment changes, and etcetera. Actual costs can also be significantly altered by design requirements (e.g. use of unusual materials or design details), project or community specific requirements (e.g. unusually restricted hours of work), or other factors that are not determined until the actual project designs and specifications are created. The actual cost that the Association will see can be expected to vary to a greater or lesser degree from what has been estimated for the purposes of this Capital Reserve Replacement Analysis.

Please note that the Line Item Occurrence Cost is not necessarily identical to the Total Line Item Cost (q.v.), in that line items, for various reasons, may not be showing the entire quantity of the common element considered in the analysis (this is typically done to allow more accurate modeling of items such as concrete pedestrian walks, where replacement is often performed on an as-needed basis for comparatively small portions of the total, and is generally combined with a very short life cycle to reflect many small expenditures rather than a single large expenditure).

#### **Total Line Item Cost**

This line item entry is simply the total quantity of the common element multiplied by the unit cost. Please note that, for various reasons, the analysis tables may not be showing the total quantity of the common element in question (q.v., Estimated Cost), in which case this entry will not agree with the Line Item Occurrence Cost entry under the Reserve Schedule heading. These entries have been included for the use of accounting professionals and community managers, and do not necessarily appear elsewhere in the analysis, as expenditure projections are based upon the Line Item Occurrence Cost entries.

#### **Current Theoretical Full Funding Line Item Balance [Full Funding Schedule]**

This line item entry is essentially the difference between the estimated line item occurrence cost and the depreciated value at the beginning of the initial fiscal year of the analysis (based upon simple straight-line depreciation of the occurrence cost over the typically expected life cycle with an assumed residual value of zero), and thus represents both the value of the common element(s) represented by the line item that has been lost to senescence (aging), wear, weathering, and other forms of deterioration since the installation of said element(s) and the theoretical "ideal" level of funding expected if the Association was attempting to maintain full funding.

#### **Initial Fund Allocation [Full Funding Schedule]**

This line item entry is the portion of the initial fund balance that has been allocated to the line item for calculation purposes. The process of determining this allocation is called "pooling", and tends to become a complex issue, especially in regards to fund distribution in severely under-funded situations. The Falcon Group uses an algorithm that preferentially directs funding allocation to cover expenditures occurring in the initial fiscal year and allocates the remainder based upon the individual line item current cumulative depreciations. Note the sum of all line item initial fund allocations, by definition, is equal to the initial fund balance.

The Association should remember that pooling is essentially an accounting convenience that is used to allow the component methodology calculations, not an intrinsic characteristic of the typical capital reserve fund. It is rare for an association to explicitly divide their capital reserve fund into separate savings or investment accounts for each individual line item of their Capital Reserve Replacement Analysis, and the line item initial fund allocation is therefore not normally reflected in any administrative or fiscal structure within an association.

## **Current Coverage (+) or Shortage (-) [Full Funding Schedule]**

This line item entry is simply the difference between the initial fund allocation and the current theoretical full funding line item balance. Positive numbers indicate overages (the initial fund allocation is greater than the current theoretical full funding line item balance) while negative numbers indicates shortages (the initial fund allocation is less than the current theoretical full funding line item balance). An association that is fully funded will have neither overages nor shortages.

## **Effective Age of Component [Full Funding Schedule]**

This line item entry is essentially the numerical representation of the estimated number of full years of “typical” deterioration experienced by the components of the line item up to the initial year of the analysis. Thus, if a line item has an expected life cycle of 15 years and a condition assessed remaining life of 10 years, it has an effective age of 4, because the line item is in the midst of its 5<sup>th</sup> year.

## **Current Theoretical Full Funding Line Item Annual Contribution [Full Funding Schedule]**

This line item entry is the estimated value of the common element(s) represented by the line item that is lost each year to senescence (aging), wear, weathering, and other forms of deterioration, and is therefore a form of depreciation. This analysis assumes all depreciation to be a linear function of the line item life cycle and occurrence cost for budgeting purposes. Depreciation is an accounting convention and mathematical construction, not necessarily a true reflection of the actual physical deterioration of many common elements. Many objects tend to experience a gradually increasing rate of deterioration as they age, and their actual value often more closely resembles a logarithmic or exponential function than a linear function. The difficulties in attempting to more accurately model actual material degradation mathematically make depreciation via linear functions the favored basis of calculation for full funding analyses.

## **Expenditure Projection**

The expenditure projection sheets essentially cycle the line item life cycles, including various non-cyclical or meta-cyclical factors, over the analysis time window and generate the predicted cash-outflow from the Association’s capital reserve fund over the course of the analysis time window.

The majority of the expenditure projection takes the form of an array or grid that cross-references each line item (the rows) with each fiscal year (the columns) in the analysis time window, with line item expenditure occurrences in each fiscal year being summed to produce the nominal expenditure (in future dollars) for each fiscal year.

### **Line Item**

These entries are identical to the entries in the line item schedules.

### **Fiscal Year**

These entries indicate the fiscal year in which the entries below are occurring. Please note that, depending upon the start/end date of the Association’s fiscal year, these years may or may not match calendar periods. The Falcon Group will generally use the calendar year numeral in which the fiscal year starts as the fiscal year numeral – for instance, if an association’s fiscal year runs from April 1 to March 1, then the Falcon Group would indicate the fiscal year from April 1, 2013 to March 1, 2014 as the 2013 fiscal year.

### **Nominal Expenditure (in Future Dollars) in Fiscal Year**

These entries are the sums of the expenditures projected to occur in each individual fiscal year. These entries reflect the effects of any assumed rate of cost inflation, and are therefore in terms of future dollars for the fiscal year in which they appear.

### **Present Value of Line Item Expenditures in Time Window**

These entries are the summation of the projected expenditures for each individual line item. These entries reflect the effects of any assumed rate of cost inflation and rate of return on investment, and are therefore an estimate of the current dollar sum (present value) that is theoretically equivalent to the cash-flow represented for the line item. In other words, if

the Association has an initial reserve fund balance equal to the sum of all of the present value of line item expenditures in time window entries, then it would theoretically be able to fund all of the expenditures projected to occur within the current time window out of the reserve fund and its investment earnings without any contributions from the Association, with the last expenditures in the time window reducing the fund balance to zero. The Falcon Group has never observed such a situation, and would never advise an Association to attempt such a strategy; these entries have been included to give the Association an index by which it can determine which line items are likely to have the most influence on threshold funding scenario projections (and thus where changes are most likely to materially alter recommended annual contributions).

## **Annual Funding Projection**

The annual funding projection sheets display the projected expenditures from the capital reserve fund, contributions to the capital reserve fund, and the resulting start of year and end of year fund balances for the various funding scenarios considered in the analysis. Each sheet takes the form of an array or grid that cross-references each fiscal year (the rows) with the projected expenditures in that fiscal year, and the starting and ending fund balances, projected contribution, and (in the case of threshold funding scenarios) the nominal threshold (initial year threshold corrected for cost inflation) for each scenario considered in the analysis. Please note that each scenario is represented by the columns underneath the title of the scenario (located along the top of the sheet), and that these scenarios are each independently calculated.

### **Fiscal Year and Nominal Expenditure (in Future Dollars) in Fiscal Year**

These entries have identical values to the entries in the expenditure projection, although they have been transposed, which is to say that these entries are displayed horizontally from left to right in the expenditure projection but are displayed vertically from top to bottom in the annual funding projection.

### **Start of Year Fund Balance**

These entries are the projected capital reserve fund balance on the first day of the given fiscal year for the given scenario projection. Please observe that the start of year fund balance for all considered funding scenarios is the same in the initial fiscal year, and equals the initial fund balance.

The start of year fund balance for fiscal years after the initial year is equal to preceding fiscal years end of year fund balance for the given scenario plus any return on investment.

### **Projected Contribution**

These entries are the per annum contributions to the capital reserve fund for the given fiscal year and given scenario projection.

### **End of Year Fund Balance**

These entries are the projected capital reserve fund balances on the last day of the given fiscal year for the given scenario projection; it is essentially the sum of that fiscal year's start of year fund balance and projected contribution, less the expenditure in that fiscal year.

### **Nominal Threshold in Year**

These entries are initial year threshold (which is shown directly below the threshold scenario title), corrected for the estimated cumulative cost inflation since the initial fiscal year. Where the assumed rate of cost inflation is zero, all of these entries should be identical within a given funding scenario.

## **Projection Graphs**

These sheets contain graphic representations of subsets of the information within the annual funding projection.

The end of fiscal year fund project graph is a graphical comparison of the various scenario projections tabulated in the annual funding projection. This graph contains information given in the annual funding projection in a more accessible format that often proves helpful for qualitative judgments of the merits of the various funding scenarios offered in the

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Capital Reserve Replacement Analysis. This graph displays the end of year fund balances for the various funding scenarios, as well as the various non-zero threshold balances so as to allow for relatively simple comparison between the various scenarios over the analysis time window.

## **Expenditure Calendar**

These sheets display the total (nominal) expenditure within each fiscal year of the analysis time window, along with the list of line items and their associated expenditures (in order from greatest to least expenditure) occurring in the given fiscal year.

The expenditure calendar essentially displays the same basic information set as the expenditure projection, but organizes the information in a different format that many users find more accessible. While the expenditure projection predominantly organizes information by line item and only secondarily by year, the expenditure calendar organizes information predominantly by year.