

**Condominium
Reserve Fund Study 2015**

For

**Carleton Condominium Corporation
(CCC) #374
Ottawa, Ontario**

By

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January 9, 2015



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1. Introduction

Oaktree Engineering Ltd. was authorized by the Board of Directors Carleton Condominium Corporation (CCC) #374 to conduct a Comprehensive Reserve Fund Study. The work included the review and analysis of the civil, structural, architectural, and general exterior common elements of the condominium complex.

The purpose of the Reserve Fund Study (RFS) is to prepare a financial plan for a 30-year period that covers major repairs or replacements of the common elements of the condominium, as required by the Condominium Act of Ontario 1998.

2. General Information

2.1 Study Objectives

The purpose of the Reserve Fund Study (RFS) is to examine and analyze all major common elements of CCC #374 and establish a long-term plan for managing the expected capital expenditure requirements of the complex. The relationship between expenditures, contributions, and reserve fund levels is scrutinized for a 30-year time period. The goal is to maintain a positive reserve fund balance for the study period while allowing contribution levels to rise at a reasonable rate which is agreeable to current and future unit owners.

The study does not in itself constitute a detailed, long range financial management plan but rather presents a technical review which serves as the basis for sound financial management and reserve fund contribution planning. This study suggests reserve fund contributions and funding levels, however, these should be set by the Board of Directors in conjunction with the corporation's property management and Auditor to reflect the perceived needs and planning objectives as set out by the Board.

2.2 Scope of Work:

The Reserve Fund Study is a comprehensive overview and analysis of the condominium complex. The overview includes the visual inspection of the common elements from ground and roof top levels. All readily accessible areas of the property including the parking garage, rooftop, landscaped areas, walkways, landscapes, and the building exteriors of all units were inspected and evaluated. The interiors of six units were examined.

The report identifies and describes the common elements reviewed, the age, and assessed condition of each item, our estimate of their life expectancy, remaining service life, and repair/replacement costs. A detailed analysis of the capital expenditure and contribution requirements of the condominium is projected in the Capital Expenditure Projections and Cash Flow Analysis Chart.

2.3 Assumptions and Limitations

This technical report outlines our findings and assessments of major repairs, replacements, maintenance, and costing pertaining to the common elements of the condominium complex. A description of the physical limits of the common elements from the condominium declaration is presented in the appendices.

The accuracy of discussions, conclusions, and cost information contained in this study is limited to the extent of information available at this time. The assessment of the condition of the common property elements is based upon visual examination only. Underground site services such as piping and wiring were not visually examined and destructive testing or performance monitoring was not conducted.

Physical quantities of common element items are derived from available plans or from site measurements. The resulting material quantities are for cost estimating purposes only and should not be construed as being suitable for outside contracting possibilities.

Some items such as foundations or roof framing were inspected on a representative basis. Accordingly, it has been necessary to make certain assumptions and projections based on visible evidence and the experience and expertise of the authors. As per the requirements in the Condominium Act of Ontario, 1998, and its regulations, a full reserve fund study is required every three years.¹ These studies should accurately reflect the current common element conditions, reserve fund levels, and inflation rate trends at the time of the study.

2.4 Reference Material

2.4.1 BACKGROUND INFORMATION

On-site information gathering for this study was undertaken in November of 2014. On-site liaison and assistance was provided by Mr. Pierre Poitras of CCC #374. The draft report was delivered in December of 2014.

2.4.2 DOCUMENTATION AND DRAWINGS

Reference documentation and drawings provided us and utilized in this study include:

- CCC #374, 2014 Financial Statements (Unaudited), prepared by CCC #374.
- CCC #374, Registered Condominium Documents - Declaration and By-laws, 1987.
- Ontario Regulation 48/01
Made under the Condominium Act
March 5, 2001
- Ontario Regulation 49/01
Made under the Condominium Act
February 6, 2001
- Ontario Regulation 50/01

¹ [Ontario Regulation 48/01, p. IV, s. 31 \(3\)](#)

Made under the Registry Act
February 6, 2001

- Ontario Regulation 51/01
Made under the Land Registration and Reform Act
March 5, 2001
- Ontario Regulation 52/01
Made under the Land Registration and Reform Act
February 19, 2001

2.5 General Description of Condominium

This site was constructed in 1986 -1987. The development consists of a four story building with eight units. There are seven parking spaces accessed through the main driveway entrance located on the north side of Murray Street.

The complex is divided into eight units. Two residential, five commercial, one storefront, and one utility unit.. Construction consists of a poured concrete foundation. The general exterior is clad in stone and lapped wood. Exterior walls are wood framed, with plywood exterior. There are several exposed floors at the bay windows, over the entrance drive, and rear parking area. The windows are sealed-glazed, wood-framed fixed, awning, and casement style.

The roof is extended a full storey onto the front of the building and is referred to as a gambrel roof. This is also done on the rear wall of building. The main roof covers are asphalt shingle. The vertical gambrel roof sections are also asphalt shingle and will therefore be dealt with as a roof cover. There are several skylights in the roof. There are two decks with flat roofing under the deck boards. The interior partition walls are wood framed with painted or textured gypsum board. The flooring is ceramic tile, with wood stairs.



CCC #374 – Murray St, Ottawa, Ontario

3. Capital Expenditures

3.1 Determination of Life Expectancy and Repair/Replacement Costs

The anticipated life expectancy of building systems is based in general on manufacturer's published data and accepted industry standards in addition to the current condition of the items. The life expectancy or service life of a particular system or component can be considered to be the median time during which it remains in its original service application and then is replaced. Replacement can occur for a multitude of reasons including failure, general obsolescence, excessive maintenance cost, or changed system requirements.

The estimate of the remaining service life of individual building components represents a judgment by the authors based on industry standards, visually observable conditions, and previous experience with similar systems in other similar applications. Projections of building component life expectancy assume that the owners provide diligent and timely maintenance. The study does not make allowances for the effects of unpredictable events such as flood, fire, earthquake, lightning, etc.

The estimated replacement costs for various items are generally based on current industry standard unit prices. Material quantities are derived from architectural plan quantity take-offs and site measurement. Previous repair history at the complex and consultation with experts and contractors provide additional information in order to make as accurate a determination as possible.

3.2 Forecasting of Capital Replacements

Capital expenditures for repair and replacement of building components have been forecasted in current (2015) Canadian dollars and the most probable years when these expenditures will be required have been set out in this report. An adjustment for inflation has been made to the yearly totals in the Capital Expenditure Projections and Cash Flow Analysis Chart. The assessment of the remaining life of a system is not precise. It is influenced by factors that may occur at some future date.

3.2.1 TIMING

The timing of any given expense dependent on a number of factors, such as:

- I. *The urgency of repair or replacement:* Some building components such as roof membranes, water supply, sanitary sewers, or electrical distribution mains must operate flawlessly at all times. Interruptions in their proper operation cannot be tolerated and repair costs for these items cannot be postponed.
- II. *The perceived importance of a repair or replacement:* Items such as paving, painting, or caulking can be delayed for periods of time at the discretion of The Board of Directors subject to financial or other considerations.
- III. *Changes to the regulatory environment:* Rulings by government agencies or standards bureaus may require unanticipated replacement or updating of equipment.

In most cases, expenses for each building component have been budgeted for the specific year in which the repair/replacement is anticipated. Some costs are assigned over a number of contiguous years to reflect the potential range of years for an individual replacement and also to attempt to distribute the effects of large expenditures. Substantial deviations from the scheduled dates of major building component replacements should be undertaken with caution and professional advice.

4. Reserve Fund

The Condominium Act of Ontario states that the “corporation shall establish and maintain one or more reserve funds”.² The act further states that “a reserve fund shall be used solely for the purpose of major repair and replacement of the common elements and assets of the corporation”.³ Common elements to be included in the reserve fund are generalized and individual corporations will set out specific items that will be covered by the fund, as stipulated in the condominium declaration. There is considerable discretion accredited to the Board of Directors to assign costs and timing to individual capital cost expenditures.

4.1 Contributions

The Act states that “The corporation shall collect contributions to the reserve fund from the owners, as part of their contributions to the common expenses”.⁴ Upon completion of the first reserve fund study of the condominium, “the total amount of the contributions to the reserve fund ... shall be the amount that is reasonably expected to provide sufficient funds for the major repair and replacement of the common elements and assets of the corporation, calculated on the basis of the expected repair and replacement costs and the life expectancy of the common elements of the corporation.”⁵

The annual budget of the corporation specifies the revenue, operating expenditures, and reserve fund contributions necessary to functioning and long term planning pertaining to the condominium complex. The annual reserve fund contributions have as their goal the maintenance of a surplus amount in the reserve fund while adequately allowing for necessary periodic capital expenditures.

The annual reserve fund contribution amount represents a portion of the total expenditures of the corporation which are paid for by the common charges and special assessments assigned to unit owners, and income earned from interest or miscellaneous sources. Increases or decreases in the annual contributions to the reserve fund are not necessarily reflected in direct common charges assessed to the unit owners. Adjustments to some operating costs may be periodically possible which can free up funds to add to the reserve fund. Alternatively, contributions to the fund can be lowered to allow for unexpected expenditures. The Board of Directors and the Property Manager of the condominium have

² [Condominium Act of Ontario, 1998, c.19, s. 93 \(1\)](#)

³ Ibid., c.19, s. 93 (2)

⁴ Ibid., c.19, s. 93 (4)

⁵ Ibid., c.19, s. 93 (6)

as their responsibility and their discretion, the setting of funding and expenditure levels as reflected by the perceived needs and planning objectives of the corporation.

4.2 Expenditures

Operating costs for the condominium common items and services such as utilities, insurance, minor repairs, summer and winter ground maintenance, etc., are annually budgeted and expended from operating funds separate from the reserve fund. Only major expenditures as defined in the study are paid for by the reserve fund.

5. Examination of Common Elements – Component Inventory

The component inventory of common elements is a catalogue of the constituent components of systems and assets of the condominium corporation. As per the Condominium Act, it is “an assessment of each item in the component inventory that states its actual or estimated year of acquisition, its present or estimated age, its normal or expected lifespan, its remaining life expectancy, the estimated year of its major repair or replacement, its estimated cost of repair or replacement as of the date of the study.”⁶

The Reserve Fund Component Inventory Table on the next pages has the following parameters for each component:

1. Actual or estimated year of acquisition.
2. Expected life span.
3. Present or estimated age.
4. Next year that a major expense is expected.
5. Quantity of the component if applicable.
6. Year 1 to 30 (all years) expense totals in current non-inflated dollars.
7. Year 1 to 10 expense totals in current non-inflated dollars.
8. Year 11 to 30 expense totals in current non-inflated dollars.
9. Component costs in future inflated dollars at the specified rate of inflation.

Each component is further expanded upon in the data boxes in the pages beyond the Reserve Fund Component Inventory Table. In addition to the information that is included in the inventory table, the data boxes contain notes and/or recommendations pertaining to each component and the details of expenses for the first ten years of the study.

⁶ [Condominium Act of Ontario, 1998, Regulation 48/01, p. IV, s. 29 \(2\)\(b\)](#)

5.1.1 RESERVE FUND COMPONENT INVENTORY

CCC #374 - 2015 Oaktree Engineering Ltd. File: 52015 - 12/17/2014 RESERVE FUND COMPONENTS		Reserve Fund Component Inventory						
		YEAR OF ACQUISITION	EXPECTED LIFE SPAN	CURRENT AGE	NEXT YEAR OF MAJOR EXPENSE	QUANTITY	YEAR 1-30 TOTAL COSTS	FUTURE COSTS (3.0%)
1.	Building Services	1987	60-75	28	2018	1 system	\$9,600	\$16,900
2.	Asphalt Paving	1987	25-35	28	2015	2,800 ft²	\$21,500	\$28,100
3.	Curbs & Bollards	1987	38	28	2024	1 system	\$2,500	\$3,400
4.	Fencing	2003	20-25	12	2022	100 lin. ft.	\$2,000	\$3,600
5.	Landscaping	1987	--	2	2022	1 system	\$3,200	\$5,900
6.	Stone Wall Cladding	1987	50-75	28	2024	600 ft²	\$7,500	\$14,500
7.	Wood Wall Cladding	1987	35-50	28	2029	1,700 ft²	\$28,000	\$46,300
8.	Stairway & Corridor Wall And Ceiling Finish	1987	10-12	28	2019	2,100 ft²	\$13,500	\$23,200
9.	Flooring - Common Area	1987	20-30	28	2021	--	\$15,900	\$20,100
10.	Asphalt Shingle Roofing	1987	18-24	28	2015	3,100 ft²	\$44,500	\$66,000
11.	Rubberized Roofing	2009	30-40	6	2019	230 ft²	\$13,500	\$26,400
12.	Balconies	2009	25-30	6	2036	2 balconies	\$6,000	\$11,500
13.	Trim, Soffit & Fascia	1987	40-55	28	2029	1 system	\$12,000	\$19,900
14.	Windows & Doors	1987	35-50	28	2024	--	\$45,000	\$64,200
15.	Exterior Painting	--	5-8	--	2015	1 system	\$52,000	\$80,400
16.	Caulking	NA	10-20	NA	2034	1 system	\$2,500	\$4,500
17.	Fire Alarm System	1987	30-40	28	2024	1 system	\$5,500	\$7,400
18.	Parging	1987	30-40	28	2016	1 system	\$7,000	\$9,500
19.	Structural Elements	1987	60-75	28	2019	1 system	\$7,500	\$12,500
20.	Reserve Fund Studies	--	3	--	2015	--	\$27,500	\$43,000
TOTALS							\$326,700	\$507,300

1. Building Services

CCC #374 - 2015

The underground civil plumbing elements of the condominium include water supply, sanitary sewer, and storm sewer. This piping does have a normal life span of 60 to 75 years. There are events that can occur that will require repair, however, these are unpredictable and unspecified. A contingency has been added to the reserve fund every three years for such occurrences. We recommend that the sewer lines be cleaned and video inspected at least every five to six years. Potential problems can be spotted before they become larger issues.

The catch basin near the front entrance to the drive thru appears to be clogged with debris and requires cleaning. The main water shut-off and sewer cleanouts are located in the basement area under the retail store at the front. There is a sump pit and pump in this area for storm water. At present, the drain piping from the sump is not connected to any discharge location.

Electrical service equipment is located in a room accessible from the exterior at the main level. There is a three-phase, 400-amp service switch. The service is split into 100-amp services with meters, for each occupancy. No significant repairs are expected for the next 30 years, however, electrician should be between to torque terminal lugs as required.

CHRONOLOGY	QUANTITY / COST SUMS	COSTS FOR NEXT 10 YEARS	
Year Acquired: 1987	Item Quantity: 1 system	2015 -	2020 -
Expected Service Life: 60-75	Year 1-10 : \$2,600	2016 -	2021 -
Current Age: 28	Year 11-30: \$7,000	2017 -	2022 -
Next Major Expense: 2018	Year 1-30 (All): \$9,600	2018 - \$1,200	2023 - \$1,400
	Inflation Adj. Total (3.0%): \$16,900	2019 -	2024 -

2. Asphalt Paving

CCC #374 - 2015

The drive thru and parking area are paved with asphalt and concrete. Generally, this material has a lifespan of around 25 to 35 years. The current painting is in poor condition generally. There are significant potholes and crumbled asphalt. We advised that some localized patching be undertaken in the near future. The overall re-paving is scheduled for 10th year of this study. Note that this is discretionary and the timing can be adjusted as the budget allows.

CHRONOLOGY	QUANTITY / COST SUMS	COSTS FOR NEXT 10 YEARS	
Year Acquired: 1987	Item Quantity: 2,800 ft²	2015 - \$2,500	2020 -
Expected Service Life: 25-35	Year 1-10 : \$21,500	2016 -	2021 -
Current Age: 28	Year 11-30: \$0	2017 -	2022 -
Next Major Expense: 2015	Year 1-30 (All): \$21,500	2018 -	2023 -
	Inflation Adj. Total (3.0%): \$28,100	2019 -	2024 - \$19,000

3. Curbs & Bollards		CCC #374 - 2015	
<p>There is a short concrete curb bordering the driveway and along the rear of the parking lot. This study budgets for repair of the curbs during the repaving in about 10 years. A cursory inspection confirmed some damage to the curbs likely as a result of snow removal and general wear and tear. It is expected any of these minor repairs are coming from the operating budget. Curb repairs consist of cutting out and replacing the damaged sections.</p>			
CHRONOLOGY	QUANTITY / COST SUMS	COSTS FOR NEXT 10 YEARS	
Year Acquired: 1987	Item Quantity: 1 system	2015 -	2020 -
Expected Service Life: 38	Year 1-10 : \$2,500	2016 -	2021 -
Current Age: 28	Year 11-30: \$0	2017 -	2022 -
Next Major Expense: 2024	Year 1-30 (All): \$2,500	2018 -	2023 -
	Inflation Adj. Total (3.0%): \$3,400	2019 -	2024 - \$2,500

4. Fencing		CCC #374 - 2015	
<p>There is a wood fence at the North West corner of the property. The fencing is damaged due to a large tree. A metal section of fence connects to the wood fencing and completes the boarder along the North side of the property. The metal fence is in good condition and does require periodic maintenance. As part of the exterior painting, the metal fence should be touched up. If properly maintained the metal fence should last beyond the horizon for this study.</p>			
CHRONOLOGY	QUANTITY / COST SUMS	COSTS FOR NEXT 10 YEARS	
Year Acquired: 2003	Item Quantity: 100 lin. ft.	2015 -	2020 -
Expected Service Life: 20-25	Year 1-10 : \$1,000	2016 -	2021 -
Current Age: 12	Year 11-30: \$1,000	2017 -	2022 - \$1,000
Next Major Expense: 2022	Year 1-30 (All): \$2,000	2018 -	2023 -
	Inflation Adj. Total (3.0%): \$3,600	2019 -	2024 -

5. Landscaping		CCC #374 - 2015	
<p>There is a small landscaped section between the one story front portion of the building and the main structure. The landscape consists of various small trees and shrubs. There is an amount budgeted every 10 years for unspecified but not unexpected landscaping element replacements.</p>			
CHRONOLOGY	QUANTITY / COST SUMS	COSTS FOR NEXT 10 YEARS	
Year Acquired: 1987	Item Quantity: 1 system	2015 -	2020 -
Expected Service Life: --	Year 1-10 : \$800	2016 -	2021 -
Current Age: 2	Year 11-30: \$2,400	2017 -	2022 - \$800
Next Major Expense: 2022	Year 1-30 (All): \$3,200	2018 -	2023 -
	Inflation Adj. Total (3.0%): \$5,900	2019 -	2024 -

6. Stone Wall Cladding

CCC #374 - 2015

There is a stone veneer on the south faces of the building and in the courtyard on the east side. The stone is attached to the wood framed building and serves as cladding. This type of wall cladding does generally have a robust life span. There are provisions in this study for unspecified but not unexpected masonry repairs at ten-year intervals in this study.

CHRONOLOGY	QUANTITY / COST SUMS	COSTS FOR NEXT 10 YEARS	
Year Acquired: 1987	Item Quantity: 600 ft²	2015 -	2020 -
Expected Service Life: 50-75	Year 1-10 : \$2,000	2016 -	2021 -
Current Age: 28	Year 11-30: \$5,500	2017 -	2022 -
Next Major Expense: 2024	Year 1-30 (All): \$7,500	2018 -	2023 -
	Inflation Adj. Total (3.0%): \$14,500	2019 -	2024 - \$2,000

7. Wood Wall Cladding

CCC #374 - 2015

There is wood wall cladding at the front, drive-thru, and the rear of the building. This material will likely be useful for at least the next 10 to 15 years. At that time, it is expected that at least some sections will require replacement. The sunnier south exposures are most vulnerable.

CHRONOLOGY	QUANTITY / COST SUMS	COSTS FOR NEXT 10 YEARS	
Year Acquired: 1987	Item Quantity: 1,700 ft²	2015 -	2020 -
Expected Service Life: 35-50	Year 1-10 : \$0	2016 -	2021 -
Current Age: 28	Year 11-30: \$28,000	2017 -	2022 -
Next Major Expense: 2029	Year 1-30 (All): \$28,000	2018 -	2023 -
	Inflation Adj. Total (3.0%): \$46,300	2019 -	2024 -

8. Stairway & Corridor Wall And Ceiling Finishes

CCC #374 - 2015

The interior common area walls and ceilings consist of finished gypsum board. The paint quality is generally in marginal condition. This is a discretionary expense so it can be timed to fit the budget.

CHRONOLOGY	QUANTITY / COST SUMS	COSTS FOR NEXT 10 YEARS	
Year Acquired: 1987	Item Quantity: 2,100 ft²	2015 -	2020 -
Expected Service Life: 10-12	Year 1-10 : \$4,500	2016 -	2021 -
Current Age: 28	Year 11-30: \$9,000	2017 -	2022 -
Next Major Expense: 2019	Year 1-30 (All): \$13,500	2018 -	2023 -
	Inflation Adj. Total (3.0%): \$23,200	2019 - \$4,500	2024 -

9. Flooring - Common Area		CCC #374 - 2015	
<p>The flooring in the common areas consists of ceramic tile and carpeting. The existing ceramic flooring is in serviceable condition. There are some cracks noted in the ceramic flooring. The carpeting is only marginally serviceable but is old and worn, particularly at the rear stairwell. The Board would be advised to replace the carpeting sooner than six years as funding allows.</p>			
CHRONOLOGY	QUANTITY / COST SUMS	COSTS FOR NEXT 10 YEARS	
Year Acquired: 1987	Item Quantity: --	2015 -	2020 -
Expected Service Life: 20-30	Year 1-10 : \$15,900	2016 -	2021 - \$5,300
Current Age: 28	Year 11-30: \$0	2017 -	2022 - \$5,300
Next Major Expense: 2021	Year 1-30 (All): \$15,900	2018 -	2023 - \$5,300
	Inflation Adj. Total (3.0%): \$20,100	2019 -	2024 -

10. Asphalt Shingle Roofing		CCC #374 - 2015	
<p>There are sloped roofs above the lower commercial section, the upper part of the building, and at the steep gambrel sections at the upper front and rear. The condition of the roofing varies from very deteriorated at the upper slopes to still serviceable on the lower commercial section and the gambrels. The roofing of the upper sections also contains skylights. Roofing replacements are urgently required to the upper sections. The gambrel and lower shingles could wait a few years.</p>			
CHRONOLOGY	QUANTITY / COST SUMS	COSTS FOR NEXT 10 YEARS	
Year Acquired: 1987	Item Quantity: 3,100 ft ²	2015 - \$14,000	2020 -
Expected Service Life: 18-24	Year 1-10 : \$21,000	2016 -	2021 -
Current Age: 28	Year 11-30: \$23,500	2017 -	2022 -
Next Major Expense: 2015	Year 1-30 (All): \$44,500	2018 -	2023 -
	Inflation Adj. Total (3.0%): \$66,000	2019 - \$7,000	2024 -

11. Rubberized Roofing		CCC #374 - 2015	
<p>There are rubberized roofing membranes under the balconies at the upper front and rear. They were replaced in 2009 along with the wood decking of the balconies above. This type of roofing will tend to have a longer life span when under wood decking than when it is directly exposed to the elements.</p>			
CHRONOLOGY	QUANTITY / COST SUMS	COSTS FOR NEXT 10 YEARS	
Year Acquired: 2009	Item Quantity: 230 ft²	2015 -	2020 -
Expected Service Life: 30-40	Year 1-10 : \$4,500	2016 -	2021 -
Current Age: 6	Year 11-30: \$9,000	2017 -	2022 -
Next Major Expense: 2019	Year 1-30 (All): \$13,500	2018 -	2023 -
	Inflation Adj. Total (3.0%): \$26,400	2019 - \$4,500	2024 -

12. Balconies		CCC #374 - 2015			
There are two wooden balconies at the front and rear of the main building. They were rebuilt in 2009 and should be useful for at least 20 to 25 more years.					
CHRONOLOGY		QUANTITY / COST SUMS		COSTS FOR NEXT 10 YEARS	
Year Acquired: 2009		Item Quantity: 2 balconies		2015 - 2020 -	
Expected Service Life: 25-30		Year 1-10 : \$0		2016 - 2021 -	
Current Age: 6		Year 11-30: \$6,000		2017 - 2022 -	
Next Major Expense: 2036		Year 1-30 (All): \$6,000		2018 - 2023 -	
		Inflation Adj. Total (3.0%): \$11,500		2019 - 2024 -	

13. Trim, Soffit & Fascia		CCC #374 - 2015	
<p>The eaves of the roofs consist of wood soffits and fascias. They are in overall serviceable condition. There are however deteriorated areas with holes at the upper sections. Animal entry is a concern. These areas require repair. Along with the wood siding, the soffit and fascia elements require regular prepping and painting maintenance. We anticipate that major replacement work will not be required for at least 15 years.</p>			
CHRONOLOGY	QUANTITY / COST SUMS	COSTS FOR NEXT 10 YEARS	
Year Acquired: 1987	Item Quantity: 1 system	2015 -	2020 -
Expected Service Life: 40-55	Year 1-10 : \$0	2016 -	2021 -
Current Age: 28	Year 11-30: \$12,000	2017 -	2022 -
Next Major Expense: 2029	Year 1-30 (All): \$12,000	2018 -	2023 -
	Inflation Adj. Total (3.0%): \$19,900	2019 -	2024 -

14. Windows & Doors

CCC #374 - 2015

All of the windows and doors are original from 1987. The windows are wooden frame double-glazed units and there are approximately 30 in number. This study budgets for replacement of the windows within the next 10 years. There are exterior doors in the building and doors to hallways, corridors, and units. They will have varying life spans due to their location and exposure. It appears that at least some of the doors will require replacement within the next 10 years, however, others may be useful for much longer.

CHRONOLOGY	QUANTITY / COST SUMS	COSTS FOR NEXT 10 YEARS	
Year Acquired: 1987	Item Quantity: --	2015 -	2020 -
Expected Service Life: 35-50	Year 1-10 : \$9,000	2016 -	2021 -
Current Age: 28	Year 11-30: \$36,000	2017 -	2022 -
Next Major Expense: 2024	Year 1-30 (All): \$45,000	2018 -	2023 -
	Inflation Adj. Total (3.0%): \$64,200	2019 -	2024 - \$9,000

15. Exterior Painting

CCC #374 - 2015

The original exterior finish on the building includes wood trim at the windows and doors, the soffit and fascia, as well as the wood sidings. All exterior wood requires prepping and painting on a regular basis. The front had been re-painted in 2007 and the rear in 2008. The front is the sunny exposure and it will require re-painting more frequently than the rear would. This study budgets for a re-painting of the front every seven years and the rear every 13 years.

CHRONOLOGY	QUANTITY / COST SUMS	COSTS FOR NEXT 10 YEARS	
Year Acquired: --	Item Quantity: 1 system	2015 - \$10,000	2020 -
Expected Service Life: 5-8	Year 1-10 : \$32,000	2016 -	2021 -
Current Age: --	Year 11-30: \$20,000	2017 -	2022 - \$10,000
Next Major Expense: 2015	Year 1-30 (All): \$52,000	2018 -	2023 -
	Inflation Adj. Total (3.0%): \$80,400	2019 - \$12,000	2024 -

16. Caulking

CCC #374 - 2015

The weather strip caulking sealant at the window and door seams is generally in good condition. Replacement or touch-ups of the caulking should be undertaken by the exterior wood painting contractor as part of the paint job. The caulking on windows and doors should last about 15 years. When new windows and doors are installed, they should be caulked by the installation contractor. Periodic touch up of calking can be completed as part of the exterior painting budget.

CHRONOLOGY	QUANTITY / COST SUMS	COSTS FOR NEXT 10 YEARS	
Year Acquired: NA	Item Quantity: 1 system	2015 -	2020 -
Expected Service Life: 10-20	Year 1-10 : \$0	2016 -	2021 -
Current Age: NA	Year 11-30: \$2,500	2017 -	2022 -
Next Major Expense: 2034	Year 1-30 (All): \$2,500	2018 -	2023 -
	Inflation Adj. Total (3.0%): \$4,500	2019 -	2024 -

17. Fire Alarm System

CCC #374 - 2015

There is a fire alarm system including a control panel, emergency lighting, and fire/smoke detectors that was installed in 1987. Some battery packs and heat/smoke detectors were replaced recently. It is possible to make replacements to older systems such as this, however, the availability of parts and feasibility of repairs does diminish with time. This study budgets for the replacement of the control panel at year 10 in the study.

CHRONOLOGY	QUANTITY / COST SUMS	COSTS FOR NEXT 10 YEARS	
Year Acquired: 1987	Item Quantity: 1 system	2015 -	2020 -
Expected Service Life: 30-40	Year 1-10 : \$5,500	2016 -	2021 -
Current Age: 28	Year 11-30: \$0	2017 -	2022 -
Next Major Expense: 2024	Year 1-30 (All): \$5,500	2018 -	2023 -
	Inflation Adj. Total (3.0%): \$7,400	2019 -	2024 - \$5,500

18. Parging

CCC #374 - 2015

The cementous parging on the face of the exposed foundation walls is in poor condition. Spalling and cracked sections are numerous. Although discretionary, the repair is scheduled for year 2 of this study.

CHRONOLOGY	QUANTITY / COST SUMS	COSTS FOR NEXT 10 YEARS	
Year Acquired: 1987	Item Quantity: 1 system	2015 -	2020 -
Expected Service Life: 30-40	Year 1-10 : \$3,500	2016 - \$3,500	2021 -
Current Age: 28	Year 11-30: \$3,500	2017 -	2022 -
Next Major Expense: 2016	Year 1-30 (All): \$7,000	2018 -	2023 -
	Inflation Adj. Total (3.0%): \$9,500	2019 -	2024 -

19. Structural Elements

CCC #374 - 2015

Structural elements such as poured concrete foundations and wood floor, wall, and roof framing are generally considered to be constructed to endure for the life of a building. Since these elements in CCC #374 are about 28 years old, major replacement work is not anticipated during this study's planning horizon. Failures or defects will likely occur however, which will require attention in the future.

Settlement or shrinkage cracks are common in poured concrete foundation walls. Although these cracks may not be structurally serious, they have the potential for leakage into the basements. Repair and sealing of leaky cracks can be expected to be necessary from time to time. Foundation damage due to soil changes caused by large trees is also a possibility. This usually takes the form of wall cracks and settlement. Problem trees should be removed and resulting foundation cracks sealed to prevent moisture infiltration into basements as necessary.

It was noted during our inspection that the small basement area under the retail store at the front was damp and had appeared to have undergone significant leakage in the past.

CHRONOLOGY	QUANTITY / COST SUMS	COSTS FOR NEXT 10 YEARS	
Year Acquired: 1987	Item Quantity: 1 system	2015 -	2020 -
Expected Service Life: 60-75	Year 1-10 : \$2,000	2016 -	2021 -
Current Age: 28	Year 11-30: \$5,500	2017 -	2022 -
Next Major Expense: 2019	Year 1-30 (All): \$7,500	2018 -	2023 -
	Inflation Adj. Total (3.0%): \$12,500	2019 - \$2,000	2024 -

20. Reserve Fund Studies

CCC #374 - 2015

A reserve fund study is required every three years as per the Condominium Act of Ontario.

CHRONOLOGY	QUANTITY / COST SUMS	COSTS FOR NEXT 10 YEARS	
Year Acquired: --	Item Quantity: --	2015 - \$3,500	2020 -
Expected Service Life: 3	Year 1-10 : \$11,000	2016 -	2021 - \$3,500
Current Age: --	Year 11-30: \$16,500	2017 -	2022 -
Next Major Expense: 2015	Year 1-30 (All): \$27,500	2018 - \$2,000	2023 -
	Inflation Adj. Total (3.0%): \$43,000	2019 -	2024 - \$2,000

6. Capital Expenditures and Cash Flow

The Capital Expenditure Projections and Cash Flow Analysis is a forecasting tool, which present the common items reviewed in the report, in a tabular form. The main purpose of the cash flow chart is to determine the annual reserve fund contributions that will be required to maintain a positive balance in the reserve fund while covering all foreseeable expenditures for the planning horizon of the study (30 years).

The actual capital costs may vary somewhat from those predicted due to unforeseen events as previously noted and the yearly inflation rate will fluctuate during the years in the study. Accordingly, adjustments to capital cost requirements or interest and inflation rates can be made during the regular Reserve Fund Studies which are required every three years

The cash flow analysis chart contains the following rows:

- A. **Year Ending**
The year number and calendar year at fiscal year-end.
- B. **Opening Balance**
The opening balance of the year.
- C. **Reserve Fund Contributions**
Reserve fund contributions from fees collected from unit owners.
- D. **Contribution Change From Previous Year**
The change in contribution level from the previous year expressed as a percentage.
- E. **Reserve Fund Interest Income {%**
Interest earned from monies in the reserve fund. The method used to calculate the interest is the "mid-year interest calculation". This is an accepted method of long-term financial planning and is shown below:

$$\text{Interest} = \text{Interest Rate} \times (\text{Starting Balance} - \text{Expenses}/2 + \text{Annual Contribution}/2)$$
- F. **Total Cash Resources**
The sum of reserve fund contributions, special assessments, interest income, less any loan repayments.
- G. **Current Expenditures {Current CAN Dollars}**
The sum of annual reserve fund expenses in non-inflated Canadian dollars.
- H. **Future Expenditures {% Inflation}**
The sum of annual reserve fund expenses in future inflated Canadian dollars at the stipulated rate of inflation..
- I. **Contingency {% of Annual Expenditures}**
A contingency amount expressed in dollars as a percentage of annual expenses. Any unused contingency amounts should be kept in the reserve fund.
- J. **Net Total**
Sum of annual future inflated expenditures and contingency.
- K. **Closing Balance**
The closing balance for the fiscal year.

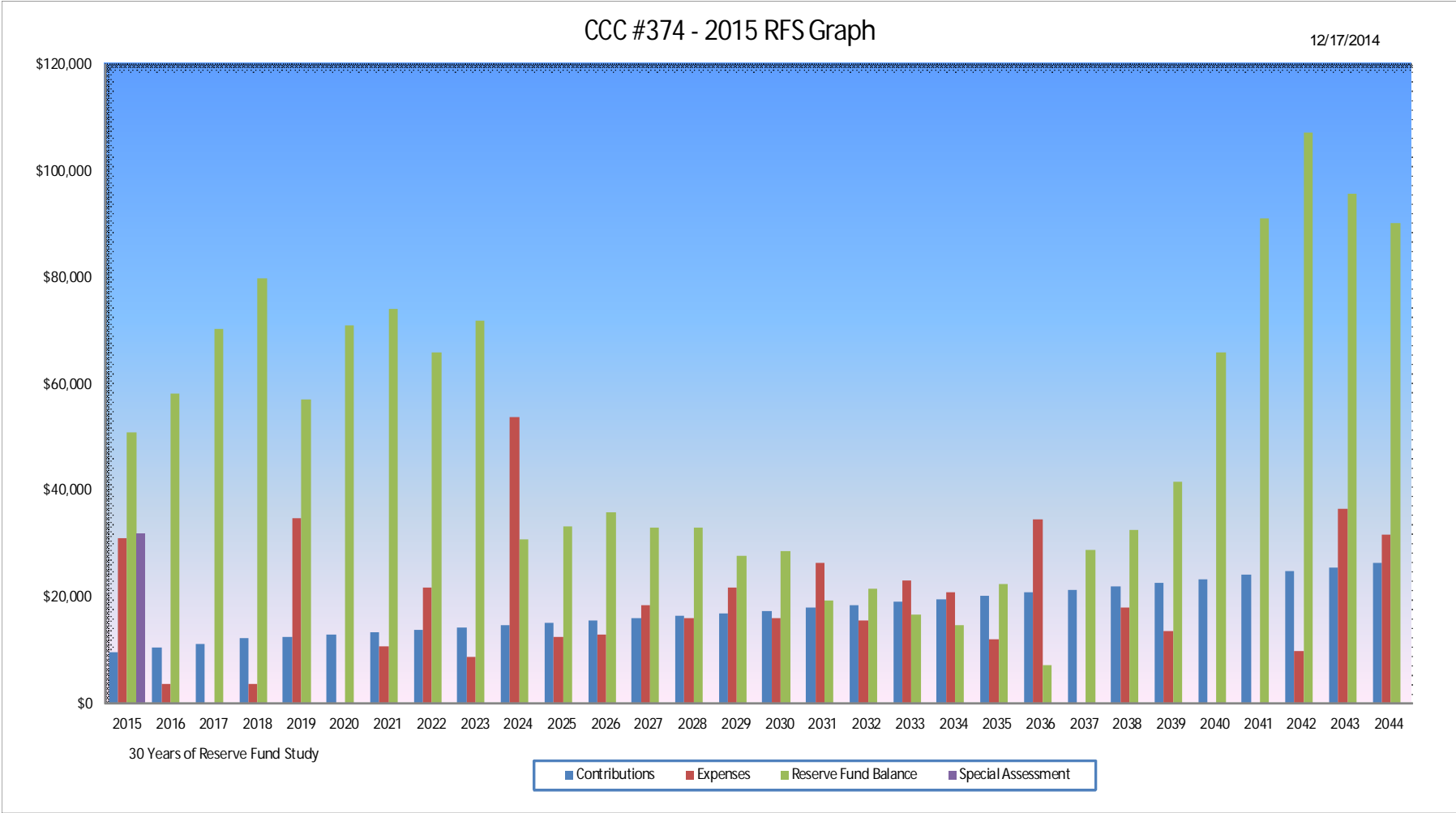
6.1 Capital Expenditure Projections and Cash Flow Analysis

6.1.1 YEAR 1 -30 (COMPLETE CHART)

This page should be printed on 11" X 17" sized paper.

CCC #374 - 2015 Oaktree Engineering Ltd. File: 52015 - 12/17/2014																							Capital Expenditure Projections and Cash Flow Analysis																
	Prior Year	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Year 21	Year 22	Year 23	Year 24	Year 25	Year 26	Year 27	Year 28	Year 29	Year 30	Year 1-30							
(A) Study Years	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	Totals							
(B) Opening Balance	32,232	41,000	50,900	58,200	70,400	79,900	57,000	70,900	74,000	65,900	71,900	30,800	33,200	35,800	32,900	33,100	27,600	28,600	19,200	21,600	16,600	14,600	22,400	7,200	28,900	32,600	41,600	65,800	91,100	107,100	95,800								
(C) Reserve Fund Contributions	8,800	9,550	10,360	11,240	12,195	12,560	12,940	13,325	13,725	14,135	14,560	15,000	15,450	15,910	16,390	16,880	17,385	17,910	18,445	19,000	19,570	20,155	20,760	21,385	22,025	22,685	23,365	24,070	24,790	25,535	26,300	527,600							
(D) Contribution Change From Previous Year		8.5%	8.5%	8.5%	8.5%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%								
(E) Special Assessments		32,000																														32,000							
(F) Reserve Fund Interest Income (1.5%)		700	800	1,000	1,100	1,000	1,000	1,100	1,000	1,000	800	500	500	500	500	500	400	400	300	300	200	300	200	300	500	600	800	1,200	1,500	1,500	1,400	21,900							
(G) Total Cash Resources	41,000	83,300	62,100	70,400	83,700	93,500	70,900	85,300	88,700	81,000	87,300	46,300	49,200	52,200	49,800	50,500	45,400	46,900	37,900	40,900	36,400	35,100	43,400	28,900	51,400	55,900	65,800	91,100	117,400	134,100	123,500								
RESERVE FUND COMPONENTS																																							
1. Building Services					1,200						1,400				1,500						1,700								1,800			2,000	9,600						
2. Asphalt Paving		2,500										19,000																					21,500						
3. Curbs & Bollards												2,500																					2,500						
4. Fencing										1,000																				1,000			2,000						
5. Landscaping										800										1,100										1,300			3,200						
6. Stone Wall Cladding											2,000										2,500											3,000	7,500						
7. Wood Wall Cladding																5,600	5,600	5,600	5,600	5,600													28,000						
8. Stairway & Corridor Wall And Ceiling Finishes						4,500												4,500												4,500			13,500						
9. Flooring - Common Area								5,300	5,300	5,300																							15,900						
10. Asphalt Shingle Roofing		14,000				7,000										3,500					6,500	6,500			7,000								44,500						
11. Rubberized Roofing						4,500																								9,000			13,500						
12. Balconies																							6,000										6,000						
13. Trim, Soffit & Fascia																2,400	2,400	2,400	2,400	2,400													12,000						
14. Windows & Doors											9,000	9,000	9,000	9,000	9,000																		45,000						
15. Exterior Painting		10,000				12,000			10,000														10,000									10,000		52,000					
16. Caulking																					2,500												2,500						
17. Fire Alarm System											5,500																						5,500						
18. Parging			3,500															3,500															7,000						
19. Structural Elements						2,000										2,500											3,000						7,500						
20. Reserve Fund Studies and Engineering		3,500			2,000			3,500			2,000			3,500			2,000			3,500			2,000				3,500		2,000				27,500						
(H) Current Expenditures (Current CAN Dollars)		30,000	3,500		3,200	30,000		8,800	17,100	6,700	40,000	9,000	9,000	12,500	10,500	14,000	10,000	16,000	9,100	13,200	11,500	6,500	18,000		8,800	6,500			4,300	15,500	13,000	326,700							
(I) Future Expenditures (3.0% Inflation)		30,900	3,700		3,600	34,800		10,800	21,700	8,700	53,800	12,500	12,800	18,400	15,900	21,800	16,000	26,400	15,500	23,100	20,800	12,100	34,500		17,900	13,600			9,800	36,500	31,600	507,200							
(J) Contingency (5% of Annual Expenditures)		1,500	200		200	1,700		500	1,100	400	2,700	600	600	900	800	1,100	800	1,300	800	1,200	1,000	600	1,700		900	700			500	1,800	1,600	25,200							
(K) Total Annual Expenditures (Rows I + J)		32,400	3,900		3,800	36,500		11,300	22,800	9,100	56,500	13,100	13,400	19,300	16,700	22,900	16,800	27,700	16,300	24,300	21,800	12,700	36,200		18,800	14,300			10,300	38,300	33,200								
(L) Closing Balance	41,000	50,900	58,200	70,400	79,900	57,000	70,900	74,000	65,900	71,900	30,800	33,200	35,800	32,900	33,100	27,600	28,600	19,200	21,600	16,600	14,600	22,400	7,200	28,900	32,600	41,600	65,800	91,100	107,100	95,800	90,300								

6.1.2 CASH FLOW ANALYSIS GRAPH



7. Executive Summary

The authors conducted a comprehensive physical and financial analysis of CCC #374. The information from the analysis has been compiled into this Reserve Fund Study for the year 2015.

The condominium facility generally appears to be in sound condition. Some or all of the following items will likely require major expense within the next ten years:

- Asphalt paving
- Stairway and corridor painting
- At least some flooring in the common areas
- Asphalt shingle roofing
- Some rubberized roofing under the balcony deck of unit 402
- Exterior painting
- Fire alarm control unit
- Cement parging
- At least some windows and doors

The condominium is facing major expenses in the last 20 years of the planning horizon of this study in the following areas:

- Wood siding and eave details (soffit and fascia)
- The remainder of the original windows and doors
- Exterior painting

During our site inspection a concern was raised that the occupants of the suites directly above the drive-thru were experiencing cold floors in the winter. The most feasible solution appears to be to re-insulate the exposed floor with a closed cell spray foam application. Rough measurements taken on site indicate that there would be 1,250 to 1,300 square feet of floor affected. The cost of removing the existing soffit and insulation, then applying the spray foam and re-instating the soffit would likely be between 12 and 15 dollars per square foot. This is very preliminary however and more detailed specifications would be required. This cost is not included in this study.

7.1 Reserve Fund

The most recent financial statements indicate that the reserve fund had a balance of \$32,232, as of April 30, 2014, which is the end of the corporation's most recent fiscal year. The first year of planning for this reserve fund study is 2015. Using the stated contributions to the reserve fund for fiscal 2013-2014 of \$8,800 and extrapolating them through to the fiscal 2014-2015 contribution, the reserve fund is assumed to have an opening balance of

approximately \$41,000 for 2015. This assumes no expenses from the reserve fund for the remainder of 2014-2015.

In order to fund the anticipated future expenses, it is necessary to raise contributions to the reserve fund by amounts greater than have been added in the past few years. We foresee two likely scenarios:

1. Contributions rise from the present level by 8.5% for four years, then level off at 3% starting in 2019, for remainder of the study planning horizon. A \$32,000 special assessment would be required in 2015 or 2016. This is the scenario presented in the report.
2. Contributions rise from the present level by 11.5% for four years, then level off at 3% starting in 2019, for remainder of the study planning horizon. No special assessments required.

In both scenarios the rate of increase to the reserve fund is no greater than the rate of inflation, after 2018. This is due to the stipulations in the Condominium Act that state the corporation shall be fully funded after 15 years from the first reserve fund study that was undertaken after the Act has taken force in 2001.⁷⁷ This first study is assumed to have been accepted by the condominium in 2004.

Appendix B of this report outlines these two above scenarios as well as two others for comparison purposes.

As an aside, the corporation may want to consider using the calendar year as the fiscal year. All reserve fund studies seen by the authors use the calendar fiscal year and there does not seem to be any advantage in using a different fiscal period. This may also reduce potential confusion and accounting errors.

We trust this report contains the information you desire. Should you have any questions, please do not hesitate to contact the undersigned at your convenience.

Yours very truly,

OAKTREE ENGINEERING LIMITED

David Glennie, CET, RHI
Construction Engineering

Phil Bottriell, P. Eng., RHI
Civil Engineering

⁷⁷ [Ontario Regulation 48/01, p. IV, s. 31 \(2\)](#)

Appendix A.

Appendix B. Funding Scenarios

This page should be printed on 11" X 17" sized paper.

Scenarios Assumptions

Inflation Rate: 3.0%
Interest Rate: 1.5%
No. of Units: 8

2015 Opening Reserve Fund (RF) Balance: \$41,000
Previous Year Contribution to RF: \$8,800

Scenario 1

Contributions rise from the present level by 8.5% for four years, then level off at 3% starting in 2019, for remainder of the study planning horizon. A \$32,000 special assessment would be required in 2015 or 2016. This is the scenario presented in the report.

Study Year Number:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Year:	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
RF Opening Balance:	\$41,000	\$50,900	\$58,200	\$70,400	\$79,900	\$57,000	\$70,900	\$74,000	\$65,900	\$71,900	\$30,800	\$33,200	\$35,800	\$32,900	\$33,100	\$27,600	\$28,600	\$19,200	\$21,600	\$16,600	\$14,600	\$22,400	\$7,200	\$28,900	\$32,600	\$41,600	\$65,800	\$91,100	\$107,100	\$95,800
RF Contribution:	\$9,550	\$10,360	\$11,240	\$12,195	\$12,560	\$12,940	\$13,325	\$13,725	\$14,135	\$14,560	\$15,000	\$15,450	\$15,910	\$16,390	\$16,880	\$17,385	\$17,910	\$18,445	\$19,000	\$19,570	\$20,155	\$20,760	\$21,385	\$22,025	\$22,685	\$23,365	\$24,070	\$24,790	\$25,535	\$26,300
Contribution Increase From Previous Year:	8.5%	8.5%	8.5%	8.5%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Special Assessment:	\$32,000																													
Interest Income:	\$700	\$800	\$1,000	\$1,100	\$1,000	\$1,000	\$1,100	\$1,000	\$1,000	\$800	\$500	\$500	\$500	\$500	\$500	\$400	\$400	\$300	\$300	\$200	\$300	\$200	\$300	\$500	\$600	\$800	\$1,200	\$1,500	\$1,500	\$1,400
RF Expenses (Inflated Amounts & Contingency):	\$32,400	\$3,900	\$0	\$3,800	\$36,500	\$0	\$11,300	\$22,800	\$9,100	\$56,500	\$13,100	\$13,400	\$19,300	\$16,700	\$22,900	\$16,800	\$27,700	\$16,300	\$24,300	\$21,800	\$12,700	\$36,200	\$0	\$18,800	\$14,300	\$0	\$0	\$10,300	\$38,300	\$33,200
RF Closing Balance:	\$50,900	\$58,200	\$70,400	\$79,900	\$57,000	\$70,900	\$74,000	\$65,900	\$71,900	\$30,800	\$33,200	\$35,800	\$32,900	\$33,100	\$27,600	\$28,600	\$19,200	\$21,600	\$16,600	\$14,600	\$22,400	\$7,200	\$28,900	\$32,600	\$41,600	\$65,800	\$91,100	\$107,100	\$95,800	\$90,300
RF Contribution Per Unit Per Year:	\$1,194	\$1,295	\$1,405	\$1,524	\$1,570	\$1,618	\$1,666	\$1,716	\$1,767	\$1,820	\$1,875	\$1,931	\$1,989	\$2,049	\$2,110	\$2,173	\$2,239	\$2,306	\$2,375	\$2,446	\$2,519	\$2,595	\$2,673	\$2,753	\$2,836	\$2,921	\$3,009	\$3,099	\$3,192	\$3,288

Scenario 2

Contributions rise from the present level by 11.5% for four years, then level off at 3% starting in 2019, for remainder of the study planning horizon. No special assessments required.

Study Year Number:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Year:	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
RF Opening Balance:	\$41,000	\$18,800	\$26,100	\$38,800	\$49,300	\$27,400	\$42,300	\$46,600	\$39,700	\$47,000	\$7,100	\$10,800	\$14,800	\$13,400	\$15,200	\$11,300	\$14,100	\$6,600	\$11,000	\$8,000	\$8,100	\$18,100	\$5,300	\$29,500	\$35,800	\$47,400	\$74,400	\$102,500	\$121,500	\$113,400
RF Contribution:	\$9,810	\$10,940	\$12,200	\$13,600	\$14,010	\$14,430	\$14,860	\$15,305	\$15,765	\$16,240	\$16,725	\$17,230	\$17,745	\$18,275	\$18,825	\$19,390	\$19,970	\$20,570	\$21,190	\$21,825	\$22,480	\$23,155	\$23,850	\$24,565	\$25,300	\$26,060	\$26,840	\$27,645	\$28,475	\$29,330
Contribution Increase From Previous Year:	11.5%	11.5%	11.5%	11.5%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Special Assessment:																														
Interest Income:	\$400	\$300	\$500	\$700	\$600	\$500	\$700	\$600	\$600	\$400	\$100	\$200	\$200	\$200	\$200	\$200	\$200	\$100	\$100	\$100	\$200	\$200	\$300	\$500	\$600	\$900	\$1,300	\$1,700	\$1,700	\$1,700
Expenses (Inflated Costs + Contingency):	\$32,400	\$3,900	\$0	\$3,800	\$36,500	\$0	\$11,300	\$22,800	\$9,100	\$56,500	\$13,100	\$13,400	\$19,300	\$16,700	\$22,900	\$16,800	\$27,700	\$16,300	\$24,300	\$21,800	\$12,700	\$36,200	\$0	\$18,800	\$14,300	\$0	\$0	\$10,300	\$38,300	\$33,200
RF Closing Balance:	\$18,800	\$26,100	\$38,800	\$49,300	\$27,400	\$42,300	\$46,600	\$39,700	\$47,000	\$7,100	\$10,800	\$14,800	\$13,400	\$15,200	\$11,300	\$14,100	\$6,600	\$11,000	\$8,000	\$8,100	\$18,100	\$5,300	\$29,500	\$35,800	\$47,400	\$74,400	\$102,500	\$121,500	\$113,400	\$111,200
RF Contribution Per Unit Per Year:	\$1,226	\$1,368	\$1,525	\$1,700	\$1,751	\$1,804	\$1,858	\$1,913	\$1,971	\$2,030	\$2,091	\$2,154	\$2,218	\$2,284	\$2,353	\$2,424	\$2,496	\$2,571	\$2,649	\$2,728	\$2,810	\$2,894	\$2,981	\$3,071	\$3,163	\$3,258	\$3,355	\$3,456	\$3,559	\$3,666

Scenario 3

Contributions rise from the present level by 3% for the entire study planning horizon. An \$84,000 special assessment would be required in 2015 or 2016.

Study Year Number:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Year:	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
RF Opening Balance:	\$41,000	\$102,800	\$109,800	\$121,100	\$129,100	\$104,500	\$116,600	\$117,800	\$107,900	\$111,900	\$68,500	\$68,600	\$68,700	\$63,300	\$60,800	\$52,400	\$50,500	\$38,000	\$37,300	\$28,900	\$23,400	\$27,500	\$8,500	\$26,200	\$25,700	\$30,200	\$49,800	\$70,200	\$81,100	\$64,600
RF Contribution:	\$9,065	\$9,335	\$9,615	\$9,905	\$10,200	\$10,510	\$10,825	\$11,150	\$11,480	\$11,825	\$12,180	\$12,545	\$12,925	\$13,310	\$13,710	\$14,120	\$14,545	\$14,980	\$15,430	\$15,895	\$16,370	\$16,860	\$17,370	\$17,890	\$18,425	\$18,980	\$19,545	\$20,135	\$20,740	\$21,360
Contribution Increase From Previous Year:	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Special Assessment:	\$84,000																													
Interest Income:	\$1,100	\$1,600	\$1,700	\$1,900	\$1,700	\$1,600	\$1,700	\$1,700	\$1,600	\$1,300	\$1,000	\$1,000	\$1,000	\$900	\$800	\$800	\$700	\$600	\$500	\$400	\$400	\$300	\$300	\$400	\$400	\$600	\$900	\$1,100	\$1,100	\$900
Expenses (Inflated Costs + Contingency):	\$32,400	\$3,900	\$0	\$3,800	\$36,500	\$0	\$11,300	\$22,800	\$9,100	\$56,500	\$13,100	\$13,400	\$19,300	\$16,700	\$22,900	\$16,800	\$27,700	\$16,300	\$24,300	\$21,800	\$12,700	\$36,200	\$0	\$18,800	\$14,300	\$0	\$0	\$10,300	\$38,300	\$33,200
RF Closing Balance:	\$102,800	\$109,800	\$121,100	\$129,100	\$104,500	\$116,600	\$117,800	\$107,900	\$111,900	\$68,500	\$68,600	\$68,700	\$63,300	\$60,800	\$52,400	\$50,500	\$38,000	\$37,300	\$28,900	\$23,400	\$27,500	\$8,500	\$26,200	\$25,700	\$30,200	\$49,800	\$70,200	\$81,100	\$64,600	\$53,700
RF Contribution Per Unit Per Year:	\$1,133	\$1,167	\$1,202	\$1,238	\$1,275	\$1,314	\$1,353	\$1,394	\$1,435	\$1,478	\$1,523	\$1,568	\$1,616	\$1,664	\$1,714	\$1,765	\$1,818	\$1,873	\$1,929	\$1,987	\$2,046	\$2,108	\$2,171	\$2,236	\$2,303	\$2,373	\$2,443	\$2,517	\$2,593	\$2,670

Scenario 4

Contributions rise from the present level by 3% for the entire study planning horizon. No special assessments shown, however, the reserve fund would be deficient by year 10 and remain so for the duration of the study planning horizon. This is not a realistic or allowable scenario but is presented for comparison purposes.

Study Year Number:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Calendar Year:	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
RF Opening Balance:	\$41,000	\$18,100	\$23,800	\$33,800	\$40,500	\$14,600	\$25,400	\$25,300	\$14,000	\$16,600	\$13,100	\$13,400	\$19,300	\$16,700	\$22,900	\$16,800	\$27,700	\$16,300	\$24,300	\$21,800	\$12,700	\$36,200	\$0	\$18,800	\$14,300	\$0	\$0	\$10,300	\$38,300	\$33,200
RF Contribution:	\$9,065	\$9,335	\$9,615	\$9,905	\$10,200	\$10,510	\$10,825	\$11,150	\$11,480	\$11,825	\$12,180	\$12,545	\$12,925	\$13,310	\$13,710	\$14,120	\$14,545	\$14,980	\$15,430	\$15,895	\$16,370	\$16,860	\$17,370	\$17,890	\$18,425	\$18,980	\$19,545	\$20,135	\$20,740	\$21,360
Contribution Increase From Previous Year:	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Special Assessment:																														
Interest Income:	\$400	\$300	\$400	\$600	\$400	\$300	\$400	\$300	\$200	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Expenses (Inflated Costs + Contingency):	\$32,400	\$3,900	\$0	\$3,800	\$36,500	\$0	\$11,300	\$22,800	\$9,100	\$56,500	\$13,100	\$13,400	\$19,300	\$16,700	\$22,900	\$16,800	\$27,700	\$16,300	\$24,300	\$21,800	\$12,700	\$36,200	\$0	\$18,800	\$14,300	\$0	\$0	\$10,300	\$38,300	\$33,200
RF Closing Balance:	\$18,100	\$23,800	\$33,800	\$40,500	\$14,600	\$25,400	\$25,300	\$14,000	\$16,600	(\$28,075)	(\$28,995)	(\$29,850)	(\$36,225)	(\$39,615)	(\$48,805)	(\$51,485)	(\$64,640)	(\$65,960)	(\$74,830)	(\$80,735)	(\$77,065)	(\$96,405)	(\$79,035)	(\$79,945)	(\$75,820)	(\$56,840)	(\$37,295)	(\$27,460)	(\$45,020)	(\$56,860)
RF Contribution Per Unit Per Year:	\$1,133	\$1,167	\$1,202	\$1,238	\$1,275	\$1,314	\$1,353	\$1,394	\$1,435	\$1,478	\$1,523	\$1,568	\$1,616	\$1,664	\$1,714	\$1,765	\$1,818	\$1,873	\$1,929	\$1,987	\$2,046	\$2,108	\$2,171	\$2,236	\$2,303	\$2,373	\$2,443	\$2,517	\$2,593	\$2,670