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Callingwood Court Condominium

Plan No. CDE 8476

2015 Reserve Fund Study

Edmonton, Alberta

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1.0 TERMS OF REFERENCE

Read Jones Christoffersen Ltd. (RJC) was commissioned by KDM Management Inc. on behalf of the Board of Directors, to perform a capital replacement reserve fund study for the Callingwood Court condominium complex. The intent and terms of this study are outlined in our proposal and include the following:

- Determine the inventory of all major common property as stipulated in the Condominium plan.
- Perform inspections of the common property components to form an opinion of their general condition, and assess the remaining life of the components.
- Review the operation and maintenance history of the complex, including the associated costs, with the resident manager.
- Determine the repair and replacement requirements for the major common property components based upon their age, condition and expected remaining life.
- Offer an opinion of probable cost for work required.
- Develop financial requirements to establish and maintain a capital replacement reserve fund to finance the future repair and replacement of the common property.

Original construction drawings were not available for our initial review and reference. Condominium Plan drawings were used to determine various quantity take-offs.

A summary of our condition survey and corresponding photos is provided in Appendix A. Reserve Fund calculation sheets are provided in Appendix B.

1.1 Capital Replacement Reserve Fund

Those definitions provided in the Province of Alberta Condominium Property Act, Revised Statutes of Alberta 2000 Chapter C-22 current as of May 27, 2013 and in conjunction with the Condominium Property Regulations 168/2000 with amendments up to and including Alberta regulations 103/2011 were used for the purposes of this reserve fund study. Copies of the Act and Regulations may be obtained from the Alberta Queen's printer or on line at http://www.qp.alberta.ca/Laws_Online.cfm.

The capital replacement reserve fund is an amount of money "used to provide sufficient funds that can reasonably be expected to provide for major repairs and replacement of any real and personal property owned by the Corporation, and the common property, where the repair and replacement is of a nature that does not normally occur annually" (Section 38.1). Items of routine or annual maintenance are not included, and must be considered separately by the Board, with budgets allocated accordingly.

This reserve fund study is intended to be a dynamic document, which should be reviewed and updated annually by the Board. In addition, the reserve fund study should be re-evaluated periodically by a technical audit on a maximum of every five years, in order to reflect the current condition of the common property components, the requirements of the Corporation, inflation and the cost of money.

For the purposes of this reserve fund study, we have shown only those repair and replacement expenditures that are expected to be required within the next 25 years.

1.2 Replacement versus Maintenance

Typically, reserve fund calculations are based on estimated repair and replacement costs and the Expected Normal Life of the component. Replacement costs for the various components noted in the reserve fund can be significant. In some cases, the Board will be faced with the decision to maintain a component beyond its expected service life or to replace it. Maintenance is required to help the component reach its Expected Normal Life. As the component reaches the end of its expected life, maintenance of the component might not be economically feasible or practical. In these instances, maintaining the component beyond its expected service life could result in higher maintenance costs and there could be increased risks associated with failure of the component.

For the reserve fund calculations, we are providing costs for replacement or major repairs (depending on the particular component). The decision to maintain or replace an item is one that the Board needs to consider as the component approaches the end of its useful life. This requires inspection of the particular component by qualified individuals and assessment of the costs, risks, and benefits of performing this work. This type of decision-making process is not part of a reserve fund study.

1.3 Methodology For Calculations

The Condominium Act requires that a financial plan be in place to deal with the capital replacement of items on a project. This plan must allow for sufficient funds for replacement of common property over the life of the complex. The function of the reserve fund study is intended to provide a quantitative expression for the corporation to use to develop a proposed plan of action. For the purpose of this study, a minimum fund balance approach has been used.

The minimum fund balance is intended to maintain the reserve fund closing balance at or above a predetermined minimum cash balance during the specified period of the study. The replacement schedule is intended to act as a guideline and can vary over the timeframes used in the study, depending on the actual condition of the component as it approaches the end of its life. This approach incorporates a rolling budget concept such that the reserve contribution requirements are anticipated to change in subsequent updates to account for the actual replacement of components.

Since the reserve fund balance is kept to a set minimum value, the annual contributions will need to be sustained or increased throughout the life of the complex. In using this method, the study will require ongoing management to reflect changing conditions.

The minimum fund for this complex has been set at \$100,000 plus an annual increase for inflation. This value was selected, as this amount should be sufficient to pay for one or two large unexpected expenditures that might occur sooner than anticipated.

1.4 Common Property

The Condominium Property Act defines that "Common Property means so much of the parcel as is not comprised in any unit shown on the Condominium Plan, but does not include land shown on the condominium plan that has been provided for the purposes of roads, public utilities and reserve land" (Section 1(1) f).

Review of the Condominium Plan indicates the boundary between common property and unit is defined by section 9(1) of the Condominium Property Act, which is as follows:

- "3. All distances are measured to the outside face of concrete basement walls and are at right angles or parallel to east boundary line of property - 176 Street unless otherwise indicated*
- 4. All basement and party walls are 8" thick.*
- 6. The common boundary of any unit with another unit or with common property is the centerline of the party walls."*

For the purposes of this Capital Reserve Fund Study, we have defined common property to include the following:

- Exterior walls,
- Exterior unit entry and storm doors,
- Windows,
- The roof and all roofing materials,
- All utility services within, on, under or through the common property,
- The building structure,
- All driveways, sidewalks and exterior parking areas,
- Landscaping works and any and all chattels owned or kept by the Corporation, and
- All other outside facilities and accouterments affecting the appearance, usability, value, or safety of the parcel or the units.

For the purpose of this study, we have not included fixtures or finishes contained wholly within a unit, such as paint, floor and wall coverings, lights, receptacles, or plumbing fixtures, which do not have an effect on other units or the Corporation. Also, components that may require repair or replacement beyond the 25-year projections (such as total replacement of underground services, etc.) are not included in the calculations; however, a brief discussion and cash allowances are provided separately in the condition survey (Appendix A).

1.5 Life Expectancy and Replacement Costs

It is attempted to accurately estimate the life expectancy, replacement cost, and present condition of reserve fund elements. However, this is not an exact science, especially with respect to underlying or buried elements hidden from view. Opinions of costs and present conditions rely on visual inspections, published data on expected normal lives of components, discussions with contractors, and on previous experience. In some cases, the actual conditions may differ significantly from the assumed conditions as some components are not visible nor were the components dismantled or tested in detail. For this reason, it is important to update technical assessments periodically in order to keep the fund current.

The projected timing of expenditures is estimated and should not necessarily be used to determine the actual timing of repairs or replacements. The actual timing of repairs or replacements would be determined as the component approaches the end of its expected normal life. Year to year adjustments to timing and/or phasing of repair programs have little effect on the Required Annual Contribution. The Board should develop their annual budgets based on actual conditions at that time. They should not rely upon the projection represented on the Reserve Fund Expenditure Schedule, which attempts to predict expenditures too far into the future to be reliable in the short term.

2.0 HISTORY AND DESCRIPTION OF COMPLEX

Callingwood Court Condominiums is located at 7700 - 177 Street in Edmonton, Alberta and was constructed circa 1977. The registered condominium plan drawing indicates the legal building block and suite locations. The municipal address are also provided on the condominium site drawing (Figures 1 and 2).

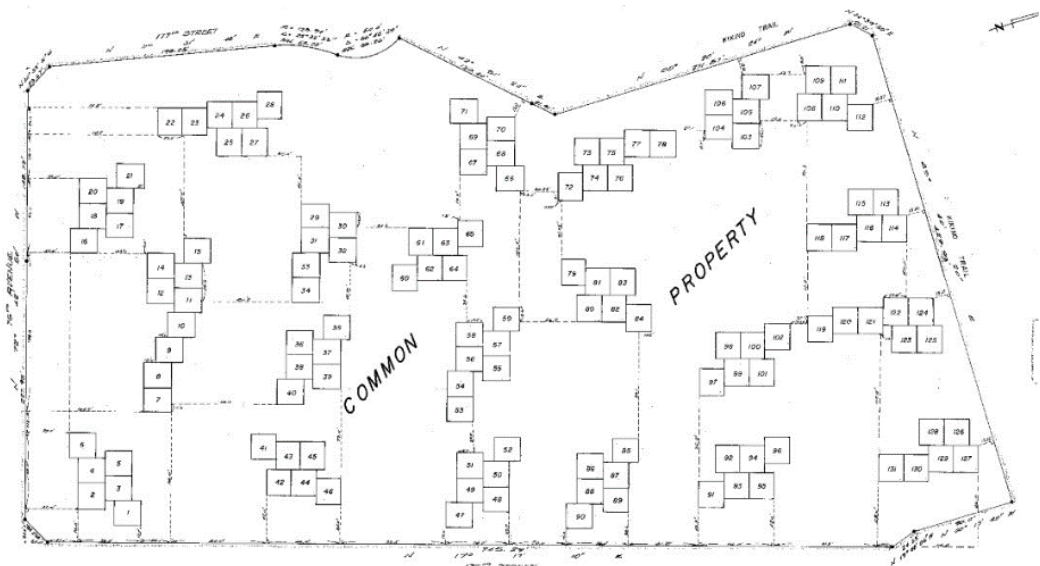


Figure 1: Condominium plan site drawing with registered unit numbers

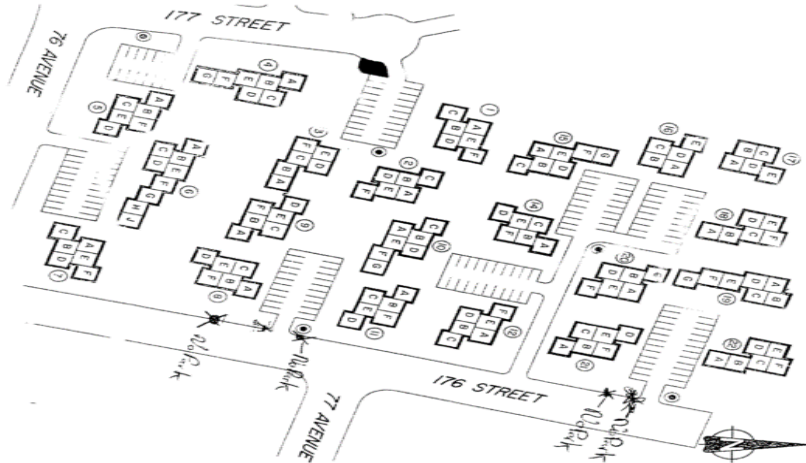


Figure 2: Site drawing with building block numbers and municipal addresses

The residential complex consists of 21 two-storey block-buildings with a total of 131 townhouse-style units (Photos 1 and 2).



Photos 1 and 2: Callingwood Court Condominium and front elevation of building block

Each of the buildings utilizes typical wood frame construction over concrete foundations walls. The exterior wall claddings include a variety of finishes including stucco, metal and vinyl siding, wood trim boards, and brick (Photos 3 to 6).



Photos 3 and 4: Wood trim boards and brick cladding at various wall surfaces



Photos 5 and 6: Stucco and metal siding installed to building block wall surfaces

The site is accessed from the west, south, and the east exposures from the adjacent roadways, with a total of seven paved parking lots located on the perimeter of the complex (Photos 7 and 8).



Photos 7 and 8: Parking lots on south and southwest corner of complex

3.0 DISCUSSION

A visual review of the complex was performed to go through the general condition of the common property elements and to assist in the preparation of the reserve fund study. Appendix A summarizes the findings of our observations and Appendix B includes spreadsheets which calculate reserve fund contributions based on the present fund balance indicated by the Board, our opinion of the cost of repairs/replacement, estimated life span, and estimated remaining life of each item. As directed by the Board, calculations have been adjusted to reflect an annual interest rate of 2.5% and average inflation rate of 2.0%. GST is not recoverable and so has been included in the costs.

Costs and life predictions are based on published book values, discussions with contractors and our experience with similar projects. These are not firm costs for repair and the actual cost and life predictions will vary.

There may also be unforeseen conditions that could affect the proposed expenditure schedule. This could require adjustment to the time frames for work and, in some cases, could result in special assessments should there be a large, unbudgeted expense in any particular year.

The *Items Schedule* lists all the proposed major capital items included in calculating the annual contributions. This schedule summarizes each of the items and includes the current costs of the work, expected life, present equivalent age and the estimated remaining life. Total costs for expenditures covered within the 25-year period of the charts are provided in the last column. If the expenditure does not occur in the 25-year period, this will show as \$0. However, the expenditures are included in the calculations for the period beyond the 25 years.

The *Expenditure Schedule* lists the proposed work to be completed in each year for the next 25 years, based on the data provided in the Items Schedule for each item in the complex. This can be used as a guideline to schedule work for the first 3 to 5 years. Changes to the work for future years would be adjusted during periodic updates of the reserve fund.

It should be understood that adjustments may be required to the reserve fund projections presented in this report where unforeseen conditions that require repair become evident or in the event repairs become necessary to correct an issue that develops as a result of known defects. Unexpected or unbudgeted expenditures paid for through the reserve fund could result in the fund becoming insufficient during the projected 25-year period. If an unexpected or unbudgeted expenditure arises, the Board will need to re-examine and possibly update cash flow projections to ensure sufficient funds are maintained throughout the projected period.

4.0 RECOMMENDATIONS - RESERVE FUND CONTRIBUTIONS

It is our understanding that the opening balance for the reserve fund study as of June 1, 2015 is approximately \$900,000. The reported annual contribution to the reserve fund in 2015 is \$320,000.

Several scenarios were presented for the Board's review. The Board requested that all the scenarios be included in the final report. These scenarios provide the closing balance and required contributions for the next 25 years of the buildings' life for various levels of contribution. We have maintained a minimum fund balance of \$100,000 (increased for inflation) throughout the 25-year period where possible. Tables and graphs of each scenario are provided in Appendix B. A discussion of each is provided below:

Scenario One: Initial Contribution of \$320,000 in 2015.
Adjusted Contribution to \$331,200 in 2016.
Annual Increase of 2.0% thereafter.
This scenario is not recommended.

Scenario Two: Initial Contribution of \$320,000 in 2015.
Adjusted Contribution to \$331,200 in 2016.
Annual Increase of 2.0% thereafter.
Special Assessment of \$1,854,550 in 2027.
This scenario provides sufficient funding over the 25-year projection.

- Scenario Three:** Initial Contribution of \$320,000 in 2015.
Adjusted Contribution to \$331,200 in 2016.
Annual Increase of 3.0% thereafter.
Special Assessment of \$1,500,000 in 2028.
This scenario provides sufficient funding over the 25-year projection.
- Scenario Four:** Initial Contribution of \$320,000 in 2015.
Adjusted Contribution to \$331,200 in 2016.
Annual Increase of 6.5% thereafter.
Fixed Contribution of \$705,157 in 2028 and beyond
This scenario provides sufficient funding over the 25-year projection.
- Scenario Five:** Initial Contribution of \$320,000 in 2015.
Adjusted Contribution to \$331,200 in 2016.
Adjusted Contribution to \$452,600 in 2017.
Annual Increase of 2.0% thereafter.
This scenario provides sufficient funding over the 25-year projection.
- Scenario Six:** Initial Contribution of \$320,000 in 2015.
Adjusted Contribution to \$185,000 in 2016.
Annual Increase of 15.6% up to 2028.
Adjusted Contribution to \$352,000 in 2030.
Annual Increase of 5.0% thereafter.
This scenario provides sufficient funding over the 25-year projection.

Although Scenario One does not provide sufficient funding, it has been included in this report to show the need for adjustments to funding. Scenarios Two through Six will reduce the risk of totally depleting the reserve fund during the 25-year period. In order to comply with the Condominium Property Act, the Board must develop a reserve fund plan for adequately funding and maintaining the reserve fund. These amounts are designated for capital expenditures, and are in addition to other condominium fees, which the Board may normally assess for maintenance and operations.

Budgets do not include for services such as preparation of drawings and specifications, issuing bids to qualified contractors, preparation of contracts, contract administration, and site investigations. The costs of these services will vary depending on the extent of the work, value of the contracts, and whether phasing of the work is required. For budget purposes, we suggest the Board consider a 10% allowance for implementing and administering the work noted. This should be reviewed with each specific project.

There are numerous factors that can affect the longevity and performance of a component; therefore, it is difficult to accurately predict the anticipated expenditures over the 25-year period. In some cases, components could require replacement earlier or later than what is noted in this document. It is therefore essential that the Owners and the Board understand that the legislation requires that the plan be updated at a period not to exceed five years. Annual contributions could then be adjusted as required.

5.0 ADDITIONAL INVESTIGATIONS

Further investigation is recommended for some of the work noted in our Condition Survey. The reserve fund condition survey was limited to primarily visual review and does not incorporate dismantling of finishes or materials testing. The investigations presented will help to better establish the condition of the components, detailed costs, and scheduling for the work. We suggest that these investigations be performed as follows:

Roofs

- Periodic inspection of the roof is recommended to determine areas where maintenance may be required and to allow for prompt repair.
- Consideration may be given to performing infrared scans of the attic spaces to help identify areas where maintenance may be required and to allow for prompt repair.

Building Exterior

- The exterior finishes should be examined periodically to determine where repairs might be required.

Site Work

- Annual review of grades and drainage characteristics of the surrounding landscaping to determine what repairs may be necessary.
- Geotechnical inspection and testing of the soils performed in advance to doing any slab on grade, asphalt pavement, or retaining wall work. Findings from this type of geotechnical review would help establish recommendations for constructing a suitable sub base and drainage plane.

Mechanical Systems

- Periodic review of the mechanical elements throughout the site should be performed to help identify areas where maintenance may be required to allow for prompt repairs.
- Periodic video inspection of the storm and sewer lines is necessary to determine pipe system conditions.
- Inspection and testing of water shut off valves on an annual basis.
- Annual inspection of flues and fireplaces throughout the complex in accordance with the Alberta Fire Code.
- Review, as required, replacement of unit owners' furnaces and hot water tanks to ensure the integrity of the common property is not affected in any way and that the terms of installation are acceptable to the corporation.

Electrical Systems

- Periodic review of the electrical elements including an infrared scan of distribution systems and connects to help identify areas where maintenance may be required and to allow for prompt repair.

Based on the findings from the above noted investigations, the Board would have a better understanding of the condition of the components and the priorities for repair. Additionally, this information can be helpful in preparing the appropriate details and specifications for the work. This type of preparation could reduce the potential risk of unexpected repairs and minimize costly changes that could arise from an unclear scope of work. We also recommend establishing a replacement log to record when and what work has been done at any given unit or throughout the complex. This type of record keeping is not currently being done.

RJC would be pleased to provide you with consulting services to assist you with implementation of the work required for this building. Services include preparation of drawings and specifications, issuing bids to qualified contractors, preparation of contracts, contract administration, and site investigations.

Thank you for selecting RJC to assist you with this study. Should you have any questions or comments, or if we may be of further assistance, please do not hesitate to contact this office.

Yours truly,

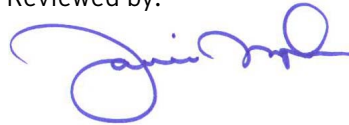
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APPENDIX A CONDITION SURVEY

CONDITION SURVEY

Read Jones Christoffersen Ltd. performed a condition survey consisting of a review of the visibly accessible elements of the Common Property. Following is a brief description and our comments regarding some of the more significant items included in the reserve fund projection.

We have included our assumptions for the "Expected Normal Life" of the component under normal use, the "Present Equivalent Age" (our estimate of its age based on our visual review or based on the present age of the component) and the "Estimated Remaining Life" which is the difference of the expected life and the present equivalent age. These are used in the reserve fund calculations for the various components and areas and are based on published data, discussion with contractors, and our previous experience. In some cases, we have used an average age for calculating components, which may have experienced previous replacement or partial replacement.

The actual life of many of these components will vary depending upon factors such as maintenance and quality of the original products. However, design decisions made at the start of construction may have the biggest impact on both the functionality and aesthetics. Items such as the building's orientation, the number and style of windows, the type of roof construction, and insulation values are some of the major components that are dependent on each other's performance.

This report has been prepared based on site tours and a review of any existing drawings and specifications and maintenance records made available to us. Our review does not include identifying mistakes or insufficiencies in, or verifying the accuracy of, the information in the documents provided to us by the building owners, property managers or other representatives. We have not completed a legal review of service contracts to evaluate the conditions and limitations associated with replacement under those contract(s).

This report reflects the best judgments in the light of the information available at the time of preparation. No calculations or testing of the building, systems, or equipment has been undertaken. Our work did not involve review of building design requirements, building codes or of elements hidden from view. RJC did not review any environmental or health issues associated with air quality, mould growth, asbestos or other hazardous materials.

We have provided web links for further information throughout this report. RJC has no control over these links or the contents referenced by the link. It is important to understand that these links are intended to provide insight into a given area and are not substitutions for professional advice or consultation.

Any use which a third party makes of this report, or any reliance on or decisions to be made based on it are the responsibility of such third parties. RJC and our consultants accepts no responsibility for damage, if any, suffered by any third party because of decisions made or actions based on this report.

A1.0 ROOF SYSTEMS

The following section provides information regarding the building roof components used in the building construction that will eventually require replacement. Failure of some of these components can cause water penetration to occur and could quickly reduce the life of the overall building. We have not included replacement budgets for the underlying structural framing components since it is anticipated that replacement of these components will not be required for the life of the structure, assuming structural upgrades do not become a code requirement in the future and that the roofs are maintained in good condition.

The roof coverings for the complex consists of asphalt shingles installed over 4:12 and 8:12 pitched gable style roofs (Photos 9 and 10). Shed styled roofs located above the unit entries also covered with asphalt shingles (Photos 11 and 12).



Photos 9 and 10: Asphalt shingles applied to upper and intermediate roof levels of complex



Photos 11 and 12: Asphalt shingles applied to shed style roofs above unit entries

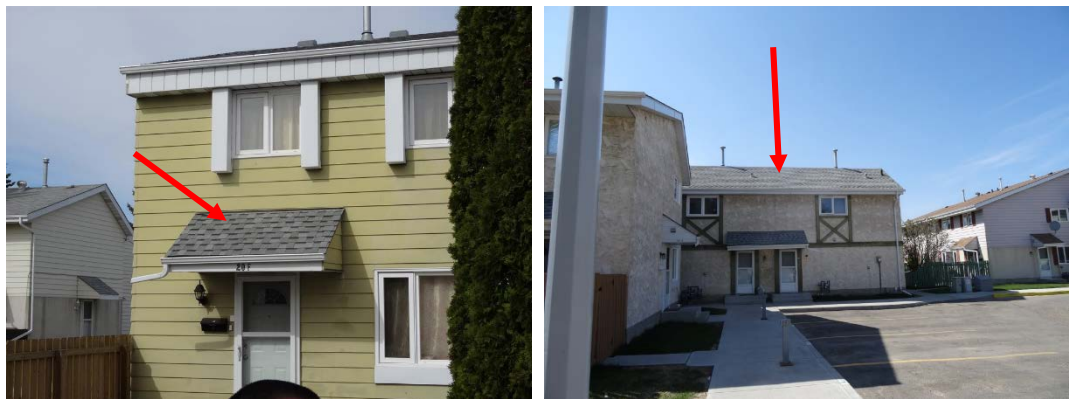
The original construction drawings of the roof assemblies were not available for our review. The roof and upper attic space assemblies appear to consist of the following materials:

- Asphalt shingles;
- Wooden trusses;
- Polyethylene sheet, and;
- Exterior sheathing;
- Blown-in-place cellulose or fibreglass insulation over existing wood chips,
- Interior gypsum board finishes

This is not confirmed and selective removal of finishes would be required to confirm the construction details. Destructive testing of the assembly was not performed to determine if moisture related deterioration was occurring within the roof or attic assemblies.

A review of the roofs was conducted from grade level. The exposed roofed areas are generally in good condition at this time, with no reports of active leakage. We offer the following commentary and observations:

- We were informed that the original roof shingles were replaced with laminate shingles between 2009 and 2015. The re-roofed buildings include Building Blocks 2, 5, 8, 11, 15, 17, and 20 (Photos 13 to 15). Specific details regarding the re-roofing work were not available during preparation of the draft.



Photos 13 and 14: Asphalt laminate shingles applied to Building Blocks 20 and 15



Photo 15: Asphalt laminate shingles applied to Building Block 11

- Relief of rooftop moisture is provided by the eavestrough gutters and downspouts. Refer to Items A1.01 and A1.02 for budgets related to the shingle replacement programs and A1.04 for the eavestroughs and downspouts at the condominium.

- A review of the selected attic spaces was performed during our site visits. We understand the insulation level within the attic space of most units has been increased. The thermal insulation consists of a combination of blown-in cellulose or fibreglass batt insulation, and the originally installed wood shavings (Photos 16 to 19).



Photos 16 and 17: A combination of blown in insulation and wood shaving in attic spaces



Photos 18 and 19: Blown-in cellulose over wood shavings within attic space

- We were previously informed that additional insulation was added to reduce heat loss into the attic space and the subsequent ice damming that resulted. Ice damming on a roof will typically occur when the underside of the snow cover melts as a result of exposure to a heat source. This heat source can occur for one or more reasons including due to warm air leakage from the interior conditioned spaces into the attic space, or heat loss through the insulation into the attic space coupled with the effects of the radiant energy from the sun. Insufficient ventilation through the attic space will compound the effects of these heat sources. Subsequently the melt water flows down to the eave edges, which are normally colder than the roof area over the attic. The melt water then re-freezes (typically in the first instance in the cold metal gutters). Continued cycles of melting and freezing will cause ice to build up on the eave edges (ice dam) blocking the flow of the melt water. Once the ice dam is of sufficient height, the water flows underneath the shingles and interior water leakage can occur.
- No information was available regarding which suites have replaced insulation over the original wood shavings to date. We have not included funding for these types of upgrades in the study.

- It should be noted that adding insulation would not prevent air leakage from the unit into the attic space. If warm moist air leakage occurs in the attic space condensation is anticipated to develop in the colder months. Further review would be required to assess the extent of air leakage occurring at this time.
- Moisture stains on the various framing members and sheathing were evident in the attic spaces (Photos 20 and 21). Moisture stains may be the result of condensation or possibly water leakage through the roof. Further review would be required to determine if there are roof leaks or condensation developing at these units.



Photos 20 and 21: Moisture stains on gypsum board and framing members

- A variety of mechanical ducts penetrate through the attic regions. In some units, the original roof framing members have been removed or modified where the ducts extend through the roof deck sheathing (Photos 22 and 23). Further review is recommended to assess the extent of damaged members. Repairs are recommended where framing members have been cut.



Photos 22 and 23: Roof framing cut or modified at Units 4A and 5D

- Corrosion was observed at the seams of a number of the flues (Photo 24). Details regarding the frequency in which these flues are inspected is not known; however, further review is recommended at this time to assess the condition of all flues.
- Ductwork has become detached from the exhaust vent and is directing warm moist air into the attic space. This condition has resulted in a buildup of humidified air within the affected attic spaces and stains to the wood-framing members. Stain marked wood shaving opposite a bathroom exhaust vent were also observed during our initial site review (Photos 25 to 29).



Photo 24: Corrosion at flue seam Photo 25: Unsecure electrical box and exposed wires



Photos 26 and 27: Bathroom exhaust vent and plumbing stack in attic space



Photos 28 and 29: Moisture stained roof deck and daylight viewed at roof edge

- These conditions can pose potential health, safety, and building code issues that will affect the attic and suite interiors. Steps will need to be taken to address and repair the deficiencies identified within these attic regions.
- A number of Unit Owners are storing materials in the attic space. Consideration should be given to storing the materials in an alternative location as these attic spaces are not intended to be used as storage areas.

- Further review of all attic spaces to establish the extent of any possible repairs that may be required is suggested. No funding for these types of investigations have been included as part of our report.
- Vents are provided along the roof and perforated soffit panels on the building perimeter to create airflow through the attic spaces. It will be necessary to inspect roof ventilation penetrations on a regular basis in order to ensure the vents are unobstructed. Budgets for eventual replacement of the soffit panels are included under Item A1.04 - Soffits and Fascia.
- There is currently no provision for fall arrest or travel restraint at the main or intermediate levels. Changes to the Occupational Health and Safety (OHS) Code impose safety requirements for buildings and employers. A fall protection system must be provided for workers where it is possible that they may fall more than 3.0 meters or more and where there is an unusual possibility of injury if a worker falls less than 3 meters. Specific details regarding the changes to the Occupational Health and Safety Code can be obtained from the Alberta Queens printers or online at <http://employment.alberta.ca/SFW/307.html>.

Roofs should be inspected yearly to identify all visual and suspected defects. These defects would then be repaired under the maintenance budget. Typical items that should be identified while inspecting the roof areas are loose, deteriorated or missing shingles, aged caulking, and blocked or damaged exhaust vents.

1.01 Asphalt Shingles (3-Tab)

Asphalt shingles are installed at the main, intermediate, and unit entry roofs. The rooftop components include turbine and gooseneck exhaust vents, and plumbing and furnace stacks. Where visible from grade level the majority of the shingled areas appear to be in relatively good condition. We noted the following:

- The shingles above Building Block 1 have begun to exhibit curling conditions and a piece of rake flashing was missing at an upper roof level (Photos 30 and 31). Repairs are suggested to prevent moisture for migrating into the exposed roof edge.



Photos 30 and 31: Curling of shingles and missing rake edge flashing above Unit 1F

- The 3-tab shingles for the main, intermediate, and lower shed roof levels were replaced in a phased program between 2007 and 2008. We are not aware of the precise methods used during the roof replacements.

The timing for replacement may vary depending on increasing maintenance costs, required improvements to moisture performance of the roof assembly or a desire for changing the aesthetics of the complex.

We have allowed for replacement of the 3-tab asphalt shingles with laminate shingles. Replacement of the underlay, base flashings, felt paper, and membranes would also form a portion of the re-roofing. **Included in the replacement budget is an allowance for potential roof repairs that might become apparent once the shingles have been removed.** This is an allowance only and the actual quantity of repair would be determined once the roof assembly has been exposed and of scope of the repairs have been quantified.

Expected Normal Life:	25	Years
Present Equivalent Age:	8	Years
Estimated Remaining Life:	17	Years
Approximate Roof Area:	62,600 sq. ft.	

Replacement Budget: \$290,000.
Repair Allowance: \$30,000.

1.02 Asphalt Laminate Shingles (2010)

The roof regions identified under this category include Building Blocks 2, 5, 8, 11, 15, 17, and 20. We understand that these building block roofs were replaced with asphalt laminate shingles in 2010. We are not aware of the precise methods used during the roof replacements.

We have allowed for replacement of the laminate shingles. Replacement of underlay, base flashings, felt paper, and membranes would also form a portion of the re-roofing. **Included in the replacement budget is an allowance for potential roof repairs that might become apparent once the shingles have been removed.** This is an allowance only and the actual quantity of repair would be determined once the roof assembly has been exposed and the scope of repairs have been quantified.

Expected Normal Life:	25	Years
Present Equivalent Age:	5	Years
Estimated Remaining Life:	20	Years
Approximate Roof Area:	27,000 sq. ft.	

Replacement Budget: \$125,000.
Repair Allowance: \$10,000.

1.03 Soffit and Fascia

A combination of solid and perforated metal soffit panels are installed to the underside of the all roof regions. Pre-finished metal fascia or vinyl siding is also provided on the perimeter of the roof regions (Photos 32 and 33).



Photos 32 and 33: Soffit panels and vinyl siding used as a fascia trim at upper roof level

- The soffits and fascia are generally in good condition. We do note that some soffit panels were discoloured at the intermediate roof overhangs (Photo 34).



Photo 34: Stain marked soffit panels at intermediate roof level

- The soffit panels provide ventilation into the attic spaces; therefore, it is important to ensure air movement is not restricted or possibly blocked with insulation. As noted, all soffit areas are not continuously perforated. A code review of the attic space ventilation was not conducted as part of this review. We suggest additional attic review to determine if moisture is developing along these areas.

We have allowed for full replacement of soffit and fascia in the reserve fund calculations. No budgets have been included for repairs to the underlying structure at this time. Further review is recommended to ensure the new soffits provide for sufficient air flow.

Expected Normal Life:	45	Years
Present Equivalent Age:	37	Years
Estimated Remaining Life:	8	Years
Approximate Area of Soffit:	10,300 sq. ft.	
Approximate Length of Fascia:	10,200 lin. ft.	

Replacement Budget: \$160,000.

1.04 Eavestroughs and Downspouts

The eavestrough is a typical formed metal gutter, fastened to the fascia with spikes. Corrugated metal downspouts are fastened to the gutter and exterior wall cladding at various roof regions. The eavestrough and downspouts are in good condition at this time.

- The majority of eavestroughs and downspouts direct moisture from the upper main, intermediate, and entry roof areas to grade level (Photos 35 and 36).



Photos 35 and 36: Eavestroughs and downspouts at upper and entry roof levels

- Rooftop moisture is also directed internally via downspout extensions or plastic piping routed into lower levels of select units and at Building Blocks 3, 6, and 9 (Photos 37 to 39).

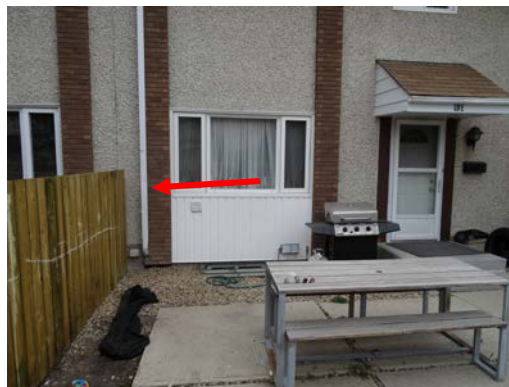


Photo 37: Downspout extension into lower level of suite



Photos 38 and 39: Downspout extensions routed internally at Building Block 9

- The majority of the shed roofs above the unit entries are not provided with downspouts. Past attempts to drain the gutter sections include use of a metal grommet sleeve (Photo 40).



Photo 40: Grommet sleeve used to drain entry roof

- Bulk rainwater from the upper, intermediate and entry roofs is discharged onto sidewalks or near the building foundation wall at a number of locations. We further understand that the Board is currently reviewing possible re-grading repairs to limit moisture from causing erosion of the surrounding grading or ice buildup along the sidewalks. Refer to A3.0 - Site Work for additional discussion regarding this subject.

Periodic inspections of the eavestroughs and downspouts are recommended to ensure water drainage from the roof areas is not restricted by damaged or blocked downspouts. Re-securing eavestrough and downspouts as well as sealing seams and connections as required, is also suggested in a timely matter.

We have included an allowance for total replacement of the eaves troughs and downspouts.

Expected Normal Life:	25	Years
Present Equivalent Age:	17	Years
Estimated Remaining Life:	8	Years
Approximate Length of Eavestrough:	7,200 lin. ft.	
Approximate Length of Downspouts:	5,000 lin. ft.	

Replacement Budget: \$110,000.

1.05 Roof - Repairs

We recognize that some work (such as repairs to shingles, vents, eavestrough, and downspouts) may be required prior to the replacement time frames noted above. These repairs might arise out of the necessity to correct localized damage resulting from the elements.

We have allowed for repairs of the roof assembly, including the asphalt shingles, membranes, building felts, flashings, eavestroughs and downspouts, etc. Consideration should be given to inspecting all roof regions as part of an annual maintenance program. A knowledgeable roofing contractor could perform the inspection since it is only intended to identify visual and suspected defects. These defects could then be repaired extending the life of the roof.

Expected Normal Life:	5	Years
Present Equivalent Age:	4	Years
Estimated Remaining Life:	1	Year

Repair Budget: \$10,000.

A2.0 BUILDING EXTERIOR COMMON PROPERTY

In this section, budgets have been made for repairs or replacement of components or finishes on the exterior areas of the building. These areas consist of the exterior walls, windows, exterior doors, and caulking.

The majority of the originally installed exterior claddings include a combination of stucco, metal siding, and brick veneer (Photos 41 and 42).



Photos 41 and 42: Stucco, metal siding, and brick veneer wall claddings at complex

The remainder of the main and upper exterior wall areas feature wood and metal trims. A parging coat is also applied to the building block foundation walls (Photos 43 and 44).



Photos 43 and 44: Wood trim boards and metal cladding applied to exterior walls

A visual review of the walls was performed to identify signs of premature deterioration. The actual construction of the walls was not determined as part of this report and no drawings for the complex were made available. We anticipate the exterior walls to be comprised of the following materials:

Exterior Wall Assembly

- Stucco, Metal/Vinyl Siding, Brick Veneer;
- Concealed barrier (e.g. building paper);
- Exterior wall sheathing;
- Wood studs (i.e. wall framing members);
- Fibreglass insulation;
- Polyethylene sheet, and
- Interior gypsum board.

This is not confirmed as selective removal of finishes would be required to confirm the construction details and if there is any moisture related deterioration present. In addition, depending on the building block profiles and elevations the amount of claddings used may differ from one to another.

The cladding assembly noted above functions as a “concealed barrier” wall system. In a concealed barrier system, the exterior cladding components act to shed water away; however, should water penetrate behind the exterior face, the underlying barrier (e.g. building paper) acts to protect the underlying framing members.

Where viewed the majority of the exterior wall claddings are in good to fair condition. We offer the following comments and observations:

- Stain marking of the stucco and metal siding was observed at various wall locations including the main, 2nd floor, and below selected suite windows. Delamination of the stucco coating was also observed where a downspout extension penetrates the south exposure of Unit 9A (Photos 45 to 50).



Photos 45 and 46: Stain marking of stucco finish surfaces at Building Block 7



Photos 47 and 48: Stain marking of stucco at Building Blocks 6 and 21



Photos 49 and 50: Stain marking below window and delamination near downspout at 9A

- Typical stucco cladding includes a weather barrier (e.g. building paper). Wire mesh and lath is also relied on to provide support for the stucco application. The stucco and metal siding has faded since original construction and uncontrolled moisture from the wall penetrations (i.e. windows, downspouts, etc.) have marked the wall claddings. Providing the underlying building paper has been installed continuously with no gaps or voids where moisture can migrate to the backup wall the staining may not be a concern.
- Following issuing of the draft report we understand from the Board that a number of complaints have been reported by Unit Owners regarding frost forming on select areas of the interior wall surfaces. Consideration may be given to non-destructive testing such as thermography to identify areas of potential heat loss through the building envelope. No funding for this investigation has been included in the study at this time.
- We understand that select replacement of stucco and metal siding have been conducted in the past. The cladding replacements were reportedly required at that time to address moisture related ingress at the suites (Photos 51 to 53).



Photos 51 and 52: Vinyl siding at Units 2B, 2D, and Unit 4A where stucco replaced



Photo 53: Original stucco and newer vinyl siding above at Unit 21D

- Although the extent or costs associated with the replacements are unknown, we understand that wood rot conditions are typically uncovered during the re-cladding repairs.
- Future review of the stucco and metal siding clad walls to determine if the stain markings are related to possible rainwater intrusion is suggested. Additional discussion regarding the stain marking beneath the suite windows is included under A2.07.
- The original stucco cladding has now been replaced with vinyl siding. Specific details regarding the selective replacement work were not available during our review and it is not known if the work entailed a code review to ensure the appropriate non-combustible and fire ratings were maintained. Further review would be required to confirm the construction of these areas.
- The wood trim boards have are in fair condition, with evidence of wood rot conditions viewed at several wall regions (Photos 54 and 55).



Photos 54 and 55: Deterioration of wood trim boards at various wall regions

- Selected trim board repairs are anticipated under operating budgets until replacement is considered. Budgets related to eventual replacement of the wood trim boards are included in A2.06.
- The storage garage located on the west side of the complex was being demolished during a site visit (Photo 56). Specific details regarding the work were not available during our review. We were informed that the structure will not be rebuilt and that no budgets are to be included for replacement of the garage at this time.



Photo 56: Partially demolished storage garage on west side of complex

- We understand that the original suite windows, exterior passage, and storm doors were replaced as part of phased programs between 2003 and 2006. Budgetary allowances for future removal and replacement of the exterior windows and doors are included in Items A2.07 to A2.09.
- A list provided by the Board indicated that since 2003 leakage has occurred at foundation wall regions of several units. Refer to Item A2.12 for additional information regarding this subject.
- Exterior lighting, unit numbers, mailboxes, and other wall-mounted components will need to be removed to facilitate replacement of the various exterior wall claddings. Replacement budgets for the exterior wall mounted lights are included under Item A5.02.

- As with any wood frame structure, wood decay may develop at the exterior wall due to potential water penetration through the wall assembly. Destructive testing of the assembly was not performed as part of this report to determine if moisture related deterioration was present within the exterior wall assemblies. It should be understood that ongoing monitoring and maintenance of the building envelope would help to ease any related concerns and limit the need for such allowances.
- It is possible that at some point in the future, the Board may wish to upgrade a part or all of the exterior walls. This may be to address future rising maintenance costs, improve thermal and moisture performance of the wall or to change the appearance of the building. Budgets for upgrades of this nature would be funded under a capital improvements budget or possibly through the reserve fund.
- Changes to the Alberta Fire and Building codes since original construction may have an impact on future replacement of exterior building elements. A code review of the existing products was not performed as part of our review. To ensure the appropriate materials and fire ratings are maintained for the building blocks during any future replacement work additional review would be necessary.

We have assumed the exterior claddings will require repairs at some point in the future. We have allowed for periodic repair of the claddings every 5 years as part of the reserve fund calculations below.

2.01 Building Exterior - Repairs

The building exterior will require ongoing maintenance to repair the various finishes damaged due to the effects of freeze-thaw cycles, shrinkage of the underlying wood members, exposure to the elements, etc.

Until such time that a replacement program is initiated repair to the original exterior claddings will need to be considered. These repairs could include patching of damaged stucco, re-attaching loose or detached pieces of siding or wood trims, selective brick re-pointing, etc. Incidental patching repairs to the foundation wall parging would also form a portion of this work.

An allowance has been included for selective repairs on an "as required" basis. This is an allowance only and the actual costs may vary depending on the extent of repairs required at the time. Further review would be required to establish specific details for this work.

Expected Normal Life:	5	Years
Present Equivalent Age:	4	Years
Estimated Remaining Life:	1	Year

Repair Budget: \$10,000.

2.02 Stucco and Parging

Periodic cleaning and recoating of the stucco are a few ways to rejuvenate the aesthetics of stucco cladding. Further review would be required to ensure suitable products are used in these approaches. No budgets have been included for cleaning stucco at this time.

We have allowed for replacement of the stucco and parging including the underlying building papers, flashings, membranes, seals, etc. **Included in the replacement budget is an allowance for potential wall repairs that might become apparent once the stucco has been removed (Approximately 10%).** This is an allowance only and the actual quantity of repair would be determined once a specific scope of work has been established and repairs have been quantified.

Expected Normal Life: 45 Years
Present Equivalent Age: 32 Years
Estimated Remaining Life: 13 Years
Approximate Area of Stucco: 58,500 sq. ft.

Replacement Budget: \$2,050,000.
Repair Allowance: \$200,000.

2.03 Metal and Vinyl Siding

Preformed aluminium and vinyl siding are part of the exterior wall cladding at the complex. We offer the following commentary:

- We understand portions of the aluminium siding located above the shed style roofs were replaced with vinyl siding during past window replacement programs. Vinyl siding has also been substituted for the original stucco claddings. Details regarding the replacement work are not known.
- Aluminum siding is a low maintenance cladding that usually require a minimal amount of repair. As these claddings increase in age, their surfaces will start to show signs of deterioration such as fading, and chalking. Difficulty in matching the original aluminium siding to what is currently available from manufacturers may pose some issues and a different profile and style may be required.
- Factory applied paint finishes are expected to perform for approximately 20-25 years. The metal siding is approximately 38 years of age and is now exhibiting signs of oxidation or "chalking".
- A fibreboard sheet product is used to help support the metal siding. Once moisture comes in contact with fibreboard materials, deterioration of the fibreboard product is expected. Further review is recommended to establish the extent of moisture related damages to the wall assembly materials.
- Penetrations and various junctions require caulking. Depending on the size of the gap, water may migrate through these weak points and may begin contributing to various moisture-related problems along the framing members. Further discussion regarding building joints is provided under Item A2.10 Caulking - Building.

For purposes of the reserve fund, we have allowed for combined replacement of the metal and vinyl siding at the end of their normal life. **We have included an allowance for potential repairs to the backup wall that may be required at the time of siding replacement.** This is an estimate only and the actual quantity of repair would be determined once the sidings are removed.

As previously stated a metal siding product to match the existing wall cladding may be an issue and further review of the choices of exterior wall claddings will need to be confirmed. This will have an impact on the budgets included in the study.

Expected Normal Life: 45 Years
Present Equivalent Age: 32 Years
Estimated Remaining Life: 13 Years
Approximate Siding Area (Metal and Vinyl): 111,100 sq. ft.

Replacement Budget: \$1,250,000.

Repair Allowance: \$250,000.

2.04 Brick Veneer

Brick veneer cladding is located between the main and 2nd floor levels of select buildings at the complex (Photos 57 and 58). Where viewed, the brick appears to be in good condition.



Photos 57 and 58: Brick veneer wall cladding at various block buildings

We offer the following comments:

- A cementitious mortar bed is placed between each course of brick to provide continuity of the cladding and limit moisture intrusion. Periodic review of the joints should be undertaken to identify potential repairs.
- Metal ties are typically used to secure the brick veneer to the exterior wall framing. Weep holes also serve to ventilate the cavity behind the brick. We recommend weep holes be reviewed and cleaned periodically to ensure proper drainage.
- A bead of caulking is used to seal the brick to the adjacent wall finishes. Refer to Items A2.10 and A2.11 for maintenance allowances budgets related to re-caulking of building and window/door locations at the site.

It is recommended that periodic inspection of the brickwork be undertaken, preferably on a one or two year basis. This inspection will help to identify problems that can easily be corrected as part of a maintenance program (i.e. re-pointing) and help to establish possible causes of any exterior leakage.

We have included a replacement budget for removal of the brick assembly to allow for replacement of the concealed barrier in conjunction with replacement of adjacent exterior finishes. The restoration budget includes replacing any membranes, building papers, flashings, brick ties, and re-installing the brick veneer. **Included in the replacement budget is an allowance of for repairs that might become apparent once the brick has been removed.** This is an estimate only and the actual quantity of repair would be determined once the brick is removed.

Expected Normal Life:	45	Years
Present Equivalent Age:	32	Years
Estimated Remaining Life:	13	Years
Estimated Area of Brick Veneer:	1,200	sq. ft.

Restoration Budget: \$110,000.
Repair Allowance: \$20,000.

2.05 Metal Trim & Shutters

Pre-finished metal trim borders select upper floor exterior windows. Wall mounted metal shutters also border selected unit window and entry door regions (Photos 59 and 60).



Photos 59 and 60: Metal rim at 2nd floor regions and shutters at main floor window

The metal trims are generally in good condition:

- The majority of the metal trim at the complex is from original construction and the underlying construction materials are unknown.
- Metal products are typically provided with a factory-applied paint finish. Refer to Item A3.12 Metal Trims and Rails - Re-Finishing for funding associated with re-painting of the metal trims and shutters at the site.

An allowance for future replacement of the metal trims and shutters has been included in the report. Upon removal of the metal trims and shutters, inspection of the underlying wall conditions and replacement of any water-damaged materials would be required. The actual extent of any damages would need to be confirmed and budgeted for at that time.

Expected Normal Life:	45	Years
Present Equivalent Age:	32	Years

Estimated Remaining Life: 13 Years
Estimated Area of Metal Trim: 1,800 sq. ft.
Estimated Number of Shutters: 248 pieces

Replacement Budget: \$60,000.

2.06 Wood Trim Boards

Rough sawn wood trim boards are installed along the main and 2nd floor band, and exterior window and door perimeters. The trim boards are currently in fair condition.

- Metal wall flashings placed along the main and second floor levels are intended to redirect water from behind the siding to the exterior. If there are any shortcomings in the details, it is possible that water could access the wall cavity and contribute to deterioration of the wall assembly materials. We are not aware of reports of leakage internally at this time.
- Flashing repairs will need to be accounted for to ensure drainage is directed away from the exterior walls. Providing for a proper flashing termination detail at extends sufficiently over any board gaps should be considered in future restoration programs.

Budgets for re-staining and selective board repairs have been included under Item A3.11 Wood Fencing and Trim Boards - Re-finishing.

A budget for replacement of the wood trim boards has been included in the study. The actual timing has been adjusted to allow replacement to occur in conjunction with the replacement of the other exterior claddings. Dependent on future restoration programs at the condominium adjustments to the timeframes carried may be required.

Expected Normal Life: 25 Years
Present Equivalent Age: 12 Years
Estimated Remaining Life: 13 Years
Estimated Length of Wood Trim Boards: 2,400 lin. ft.

Replacement Budget: \$40,000.

2.07 Windows

Various sizes and styles of windows exist throughout the building including casement and fixed windows (Photos 61 and 62).



Photos 61 and 62: Various PVC window profiles at main and 2nd floor levels

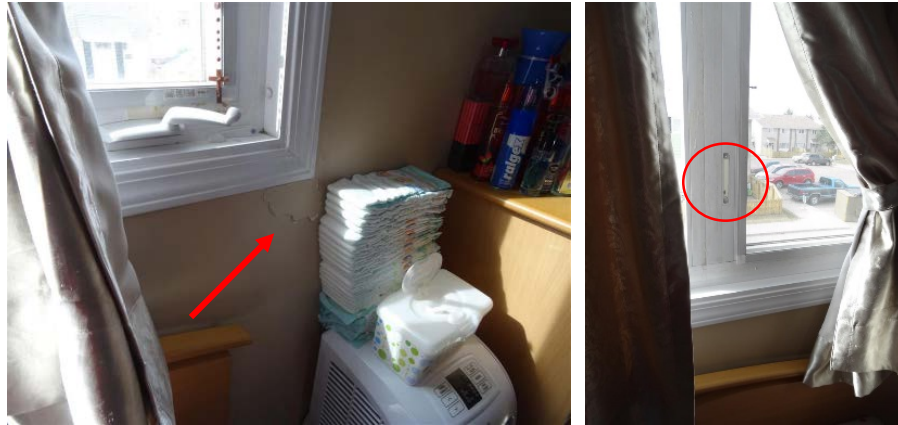
The windows are comprised of PVC frames with metal flashing inserted above the windows. Weep holes in the lower sill frame provide drainage of any rainwater that may migrate between the glazing units and framework.

The majority of the windows appear to be in relatively good condition. A review of the windows within selected suites was included as part of our site visits. We note the following:

- Commentary provided by some of the Unit Owners indicated that coolness is typically felt on the perimeter of the windows during winter months. Further review to help determine any possible shortcoming with the air sealing of the affected suite windows is suggested.
- We note a number of items that will require future review and maintenance repairs to the suite windows including the operable units, interior gypsum board, and locking hardware (Photos 63 to 66).



Photos 63 and 64: Stains at operable casement units on west and south sides of Unit 21C



Photos 65 and 66: Gypsum board and missing locking latch at 2nd floor window (Unit 21C)

- Past instances of moisture-intrusion at select 2nd floor windows were also reported during our interior review. We observed stain marking of the interior frames and partially detached metal siding at these locations (Photos 67 and 68).



Photos 67 and 68: Stain at 2nd floor window (Unit 4A) and loose siding (Unit 14C)

- The suite window at Unit 4A is protected by the upper roof overhang. The gap in the metal siding may allow rainwater to penetrate to the backup wall. Future review and selected removal-of the interior and exterior wall finishes to help determine the source of moisture ingress is suggested at both suites.
- Select windows include metal flashing inserted above and below the window units. This type of installation is likely attributed the method used by a particular window contractor retained in that given year of the program. We note the head flashings have been caulked at various suite windows (Photos 69 and 70).



Photos 69 and 70: Caulking bead applied to head flashing joint above suite windows

- We are uncertain if the caulking was included as part of the replacement programs or from past repair attempts. As a pathway for moisture to be directed to the outer wall cladding surfaces is required further removal of the applied caulking along the head flashing joints along with review of the windows at these locations is suggested.
- The fixed window units are comprised of double pane sealed glass units. These sealed units typically have a life expectancy of around 20 to 30 years, depending on factors such as the quality of the installation, the quality of the window construction and the type of sealed unit used. The sealed units are typically replaced once they have failed.
- No budgets have been included for selective replacement of the sealed glass units throughout the complex as this is typically performed under maintenance or possible manufacturer warranties. We suggest obtaining any warranties (if available) to deal with possible premature failure of the sealed units.
- The majority of the windows have been caulked between the building exterior cladding and window frame. See Item A2.11 Caulking - Windows and Doors for further comments regarding caulking at these joint locations.
- The basement level windows and corrugated steel wells are from original construction. Budgets related to possible replacement of the window units and wells are included in A2.08 and A3.04.

It is anticipated that both regular maintenance and cleaning will be required for the exterior windows. Maintenance may include caulking repairs, replacement of weather-stripping and gaskets, or possibly replacement of sealed glass units. As noted above, these costs would be considered part of ongoing maintenance and are not included in the reserve fund calculations. An allowance has been made for the complete replacement of the exterior windows noted above. Included with the replacement budget is an allowance for repairs to the back-up wall that might be required at the time.

Expected Normal Life:	25	Years
Present Equivalent Age:	12	Years
Estimated Remaining Life:	13	Years
Estimated Number of Windows (Various Sizes):	576 units	

Replacement Budget: \$835,000.

Repair Allowance: \$60,000.

2.08 Basement Windows

The basement windows throughout the complex are comprised of the originally installed wood framed aluminium sliders (Photo 71).



Photo 71: Typical basement level window at complex

The following comments are provided:

- Some basements may have been partially developed. This is not a concern provided bedrooms have not been developed in the basement and original basement windows are not being relied on as a means of egress. Owners should be reminded that where bedrooms have been formed within the basement, unobstructed, appropriately sized, and easily accessible windows would be required to serve as a means of egress. Further review would be required where considered is given to enlarging the window openings.
- In some instances, the basement windows have been partially covered by rear yard decks or unit owner landscape upgrades which may impact egress. Further review of the basement windows would be required to determine what modifications would be required for these windows to serve as a suitable means of egress.

The basement windows have exceeded the expected normal life; however, we have adjusted the calculations to allow the Board some time to plan for the replacement of these windows. This approach will require ongoing monitoring and inspections to ensure moisture related deterioration does not occur.

An estimated budget for complete replacement of basement windows is provided for the reserve fund calculations. Further review is recommended in advance to replacing the windows.

Expected Normal Life:	25	Years
Present Equivalent Age:	12	Years
Estimated Remaining Life:	13	Years
Estimated Number of Basement Windows: 107 Units		

Replacement Budget: \$85,000.

2.09 Exterior Entry and Storm Doors

Metal clad insulated metal passage doors are located at the front and rear entrances. Metal storm doors are also provided of each doorway (Photos 72 and 73).



Photos 72 and 73: Typical unit exterior entry and storm doors

The majority of the exterior passage and storm doors appear to be in good condition.

- Regular maintenance of doors and hardware will be required throughout the life of the complex and would be likely performed on an “as-needed” basis. These maintenance costs, which would include replacement of the hardware, are considered operating expenses and not part of the reserve fund.

It is recommended that periodic inspection of the doors be performed on an annual basis. These inspections will help identify problems that can be corrected as part of a maintenance program (e.g. worn weather stripping, deteriorated sealants, broken hardware, etc.).

A budget has been included for future replacement of each storm and entrance door. Measures will need to be taken to ensure suitable flashings and membranes are installed prior to replacing the doors.

Expected Normal Life:	35	Years
Present Equivalent Age:	12	Years
Estimated Remaining Life:	23	Years
Estimated Number of Exterior Entry Doors:	262	
Estimated Number of Exterior Storm Doors:	262	

Replacement Budget: \$660,000.

2.10 Caulking - Building

As previously noted the exterior cladding system is intended to shed water away from the buildings. However, air/water penetration past the various claddings can occur at various building joints and penetrations.

The concealed barrier, which typically includes building paper, membranes, and flashings, reduces airflow and prevents minor amounts of water from penetrating into the back-up wall.

However, exposure to excessive amounts of water, prolonged wetting, or any discontinuities in the concealed barrier can give way to water penetration into the back-up wall.

Typical locations where caulking might be used include the following:

- Building junctions where dissimilar finishes abut each other.
- Penetrations and openings through exterior walls (i.e. windows and doors, exhaust vents, hose bibs, etc.).
- Roof penetrations.
- Eavestrough and downspout seams and joints.

Given the susceptibility of these areas to water entry at building joints and penetrations, measures should be taken to seal these discontinuities in the cladding system.

The building caulking (where viewed) is generally in good condition.

- During the review, we noted that the transitions between adjacent claddings, brick veneer, and wood trim boards were not provided with a bead of sealant. To limit moisture from gaining access to the backup wall regions installation of a bead of caulking could be considered. Costs associated with initial placement of caulking at brick veneer and wood trim boards are in the order of \$40,000 (approximately 1,600 lineal ft. for brick veneer and 2,500 lineal ft. for wood trim boards).
- The caulked joints at the stucco and trim boards have weathered over time. The bulk of the caulking appears to be from original building construction and selected replacement on an "as required" basis is anticipated. Further review would be required in the event moisture related issues arise at these locations.
- A lack of caulking observed at the various building joints and junctions may not be a concern provided the underlying barrier and wall flashings are continuous and water is directed outwards from behind the cladding, with no penetration into the wall cavity. Further review would be required in the event moisture related issues arise at these locations.

The longevity of these sealant materials will vary with the quality of the material and installation. Use of a high-grade material is recommended.

We have included an allowance for replacement of caulking at the complex to coincide with future exterior wall cladding replacement. This is an allowance only and the actual extent and locations would need to be reviewed in advance.

Expected Normal Life:	15	Years
Present Equivalent Age:	2	Years
Estimated Remaining Life:	13	Years

Replacement Allowance: \$40,000.

2.11 Caulking - Windows and Doors

Caulking is typically relied on to provide a weatherproof seal between the window/door frames and adjacent exterior wall claddings. The majority of the caulking at the window and door perimeters is generally in good condition. We offer the following comments:

- It appears that attempts to seal the head flashings above selected windows have been done in the past. The extent of possible leakage or reports of active leakage were not relayed by the site contacts; however, sealing the head flashings will block any moisture that penetrates the exterior wall claddings. Additional review and, if necessary, removal of the caulking above the head flashings could be considered.
- When caulking replacement is considered, a number of procedures should be included in the project. These steps would include removal of the existing caulking, surface preparation of the substrate, and installation of a high quality caulking material. Consideration for the type of caulking and the substrate that the caulking is to bond to should be confirmed prior to undertaking the work.

The actual replacement time frames carried for the windows and doors may vary. To allow for future replacement of the sealant at these locations, a budget has been included in the calculations. Depending on future replacement of the exterior wall claddings, some revisions to the time frames indicated below may require some adjustment.

Expected Normal Life:	15	Years
Present Equivalent Age:	2	Years
Estimated Remaining Life:	13	Years
Approximate Length of Window Caulking:	7,100 lin. ft.	
Approximate Length of Door Caulking:	3,670 lin. ft.	

Replacement Allowance: \$110,000.

2.12 Foundation - Repairs

Foundation walls consist of cast in place concrete walls supported on strip footings. These foundation walls form the basement level of each unit. The original construction of the foundation walls does not appear to include waterproofing of the exterior surfaces. We offer the following comments and observations at this time:

- We understand horizontal cracks have developed in the foundation walls of select units. The full extent and locations of cracking are not known. We did view past repair attempts at one basement location. The attempts at this location included securing of a steel framing member over cracks in a foundation wall near the basement stairs (Photos 74 and 75). We understand a structural engineer was not involved with the repairs at this unit.



Photos 74 and 75: Steel framing members secured to basement foundation wall

- We recommend retaining a structural engineer to review the affected foundation walls throughout the complex and determine the cause of cracking and establish suitable structural repairs.
- Water leakage through the foundation walls has occurred in the past. A list provided by the Board indicated that since 2003 leakage has occurred at the foundation wall regions of Building Blocks including 5, 7, 14, 15, 12, 17, 18, and 19. A local waterproofing contractor was retained by the Board to repair the foundation walls. Specific details regarding the repairs or value of the repairs are unknown.
- To date, attempts to address water leakage have typically been dealt with on an “as required” basis by contractors retained by the Board. We understand repairs have included installation of new sump pumps, crack sealing repairs, and installation of weeping tile along the base of the foundations.
- Information regarding any weeping tile placed along the exterior perimeter of the foundation walls is not known. Weeping tile typically consists of a perforated pipe installed at the base of the foundation walls to reduce hydro static pressure on the foundations from ground water. Additional weeping tile is generally located within the window wells to facilitate drainage at these locations. Further review of these areas may be required in the event water leakage into a given basement occurs.
- A number of factors can aggravate basement leaks. While sealing the leaks is required, it is important to identify the cause or water source, which contributed to the leakage. Some of the more common reasons for water penetration through the structure include, poor lot grading, high ground water table, damaged or blocked foundation drainage pipe (i.e. weeping tile), damaged or blocked storm, sewer, or water lines, and excessive watering at areas around the site. Further review would be required to assess the water sources aggravating any leakage into any given unit. Refer to Sections A3.0 and A4.0 for further discussions regarding potential water sources.

An allowance has been provided for addressing potential foundation related issues that may arise. The actual repairs will need to be determined for any given location. The frequency of repairs may need to be adjusted in future updates.

Expected Normal Life:	5	Years
Present Equivalent Age:	3	Years
Estimated Remaining Life:	2	Years

Selective Repair Budget: \$50,000.

A3.0 SITE WORK

In this section, allowances have been made for repairs and replacement of the site components throughout common areas. Site components include sidewalks and curbs, concrete retaining wall, asphalt pavement, wood and metal fencing, and a wood bridge. We noted the following:

- Grading varied throughout the complex. Generally, the grading promotes drainage away from the building blocks. Nonetheless, future re-grading could include distribution of engineered fill and re-sloping grades to help promote drainage away from buildings. Sidewalks, entry steps, any Unit Owner improvements at the rear yards, and fencing sections will limit this work and consideration for these common elements should be given advance thought before proceeding with re-grading programs.
- A number of sidewalks sections have been replaced since original construction (Photos 76 and 77). Although details regarding the work were not available during our review, we noted the surrounding grades were not addressed as part for this work. Refer to budgets related to selected repair of the concrete elements under A3.01.



Photos 76 and 77: Newly installed concrete sidewalk pads at site

- Several downspouts are routed into the basement of individual units where they are connected to a plastic pipe that extends into the floor. We anticipate these pipes are routed out from the unit to the storm system. As the condition of the system is concealed, consideration should be given to cleaning and inspecting of these pipes on a regular basis.
- Consideration should be given to re-grading once fences and patio slab on grades are removed. Additionally, precast steps should be temporarily relocated to allow for proper grading and compaction below those areas. Discussions may need to occur with unit owners regarding the relocation of any landscaping improvements that may have been completed to ensure proper grades are re-established. Further review would be required.

- Annual lot grading maintenance is recommended to help reduce the number of undesirable site conditions that can result. Such conditions include depressions in the ground surface, damaged sidewalks and curbs, service pipes protruding above grade, leaning transformer pads, leaning light standards, basement wall leakage, etc.
- Corrugated metal wells are provided for the windows located at the basement level of the units. Window well construction, sizes, and elevations should be reviewed in advance to ensure proper drainage and grades are addressed at these locations. Refer to budgets related to the window wells under A3.04.
- The Drainage Services Flood Prevention Program is being offered by the City of Edmonton. The program is currently free and involves an inspection by an official from the City of Edmonton Drainage Services/Operation. Information from their inspection is intended to identify site drainage related problems and offer preliminary recommendations for correcting these problems. Additional details may be obtained online at http://www.edmonton.ca/for_residents/flooding_sewers/flood-prevention-program.aspx. Consideration should be given to contacting the drainage department to have a program completed for the project.

- We understand wood decks, concrete pads, or pavers within the yard areas are not part of the common property and have been installed by individual owners since original construction. Many of the concrete slab on grades were cracked and displaced.

No budgets have been included for replacement of these elements. As noted removal of these elements may be required to facilitate re-grading work.

- A carved wooden sign identifies the complex and parking signs are provided at the various lots at the site. No budgets have been included in the reserve fund study for signage.
- A number of mature trees are located throughout the complex. We note that selected mature trees have been removed. We are unaware of any plans for replacing those trees that have been removed.
- A water shut off valve is exposed and is exposed to damage from landscaping equipment and may pose a tripping hazard. Consideration should be given to installation of coloured markers to help identify (Photo 78). Refer to A4.02 - Water Works System for additional discussion regarding this subject.



Photo 78: Tree stump and exposed shut-off valve

- Trees, shrubs, and lawns are all items that add to the surrounding building aesthetics. These items will require frequent maintenance to uphold the beautification of the complex.

No budgets have been included in the reserve fund calculations for landscaping and re-grading as these types of ongoing maintenance items are anticipated annually. Lot grading problems generally develop over many years and changes that occur due to erosion and/or settlement of the surrounding landscaped areas often go unnoticed. At this time, we recommend continued maintenance of the landscaping developing a lot grading plan to address the current conditions. This may require the services of a landscaping architect and surveyor. Attempts could be made to obtain the original grading plans from the local building authorities. Grading plans could serve as a starting point for future site works.

3.01 Miscellaneous Concrete Works - Repair

Repairs to the concrete sidewalks, curbs, and other miscellaneous concrete work are anticipated throughout the life of the complex. Typically, de-icing salts and freezing and thawing conditions will significantly affect the surfaces of these concrete elements.

- Sidewalk pads lead from the parking areas to the front entrances and provide access between the north and south sides of the complex. The majority of these sidewalks are in good condition (Photos 79 and 80).



Photos 79 and 80: Sidewalks at parking area and pathway to north side of complex

- Surface cracking of the common area sidewalks was observed (Photo 81). Further review of these slabs may be required where differences in elevation pose a tripping hazard.



Photo 81: Sidewalks at parking area and pathway to north side of complex

- Several sidewalk pads have been replaced. The date of installation and quantity varies around the site.
- Concrete pads are provided for refuse bins at various parking areas (Photos 82 and 83). Details regarding placement of reinforcement to accommodate the heavier load of a garbage truck are not known.



Photos 82 and 83: Concrete slabs for refuse bins on southwest and northwest side of site

Based on our initial review, we recommend retaining a geotechnical consultant investigate soil conditions on site. Inspection and testing of the soils would help establish recommendations for frost resistant construction of the concrete flat works (i.e. concrete sidewalks and patio slab on grades). This type of investigation should be reviewed in conjunction with grading.

Depending on the extent of deterioration, repairs could be required seasonally; however, for the purpose of the reserve fund we have included a contingency for the selective replacement of damaged curbs, sidewalks, and patio pads every 5 years. This budget may require some adjustment depending on the level of repairs required and amount of work that may be needed.

Expected Normal Life:	5	Years
Present Equivalent Age:	2	Years
Estimated Remaining Life:	3	Years

Selective Repair Budget: \$40,000.

3.02 Concrete Stoops and Entry Steps

Cast-in-place or pre-cast concrete stoops and steps are situated at the entrance of each unit. The step styles vary depending on the elevation of the unit entry, with either a concrete stoop or 2, 3, or 4 risers supplied.

With the exception where some steps that have settled since original installation the precast steps are generally in good condition. We note the following observations:

- Several of the originally installed pre-cast steps have been replaced. The actual amount replaced, or the measures taken during re-installation, was not confirmed.
- Select unit entry steps and a retaining wall structure are supplied with wrought iron rails. Commentary and budgetary funding for re-coating operations and eventual replacement are included under Items A3.12 and A3.13.



Photos 84 and 85: Concrete stoop and 3-riser steps at unit entries

For the purpose of the reserve fund, we have included a budget for replacement of the concrete steps. In some cases precast steps may need to be pulled away from the building temporarily during re-grading work, concrete work, or the exterior restoration program to facilitate installation of new building papers, membranes, flashings, claddings, etc. This work would need to be reviewed in advance.

Expected Normal Life:	10	Years
Present Equivalent Age:	5	Years
Estimated Remaining Life:	5	Years
Estimated Number of Cast-in-Place Steps:	36	Steps
Estimated Number of Pre-cast Steps (Various Sizes):	95	Steps

Selective Replacement Budget: \$50,000.

3.03 Concrete Retaining Wall

A concrete retaining wall is situated at the southeast corner of Building Block 6. The wall consists of curved and vertical wall sections, with wood fencing and wrought iron railing mounted along the top of the wall (Photos 86 and 87).



Photos 86 and 87: Concrete retaining wall and fencing sections

- With the exception of hairline surface cracks and peeling of the applied paint coating, the retaining wall is generally in good condition.
- The retaining wall is being relied on to accommodate grade differences at this location. Details regarding any drainage provisions along the wall are not known.

Refer to budgets related to re-finishing and replacement of the wrought iron rails under Items A3.12 and A3.13. Replacement and re-finishing values associated with the wood fence section are provided in Items A3.08 to A3.11.

At the time of replacement, consideration should be given to increasing the drainage aspects of the grading adjacent to this wall area. Budgets include for replacement of the retaining wall. Structural review of these retaining walls is recommended to determine suitable construction details are included in the work at the time of replacement. Further investigation by a geotechnical consultant may be required to establish additional information about the soil conditions at this location.

Expected Normal Life: 50 Years
Present Equivalent Age: 36 Years
Estimated Remaining Life: 14 Years
Approximate Length of Concrete Retaining Wall: 80 lin. ft.

Replacement Allowance: \$75,000.

3.04 Window Wells

Window wells constructed of corrugated steel materials are located at basement level windows. The wells are installed to ensure sufficient space is provided between the grade and bottom of the windows. The wells are typically filled with a layer of crushed rock to promote drainage of moisture to the base of the building foundations. In some cases, weeping tile or piping may also be installed in the wells to improve drainage. We did not determine how the window wells are constructed or if weeping tile was installed at the foundations. Further review would be required in the event any repairs are required at these locations.

When replacement of the basement windows are undertaken removal and possible replacement of damaged wells may be required. Replacement of window wells will also need to be reviewed prior to any lot grading as adjustments may be required to accommodate new grades. A budget has been included for replacement of the window wells to coincide with future replacement of the basement windows in 2027.

Expected Normal Life: 45 Years
Present Equivalent Age: 32 Years
Estimated Remaining Life: 13 Years
Estimated Number of Window Wells: 107

Replacement Allowance: \$60,000.

3.05 Chain Link Fencing

Chain link fencing consisting of metal posts, rails, and diamond metal wire is located next to the bridge structure. The fencing is in generally good to fair condition. Costs for incidental fence repairs and re-finishing are anticipated under the annual maintenance budgets.

We have included for total replacement of the chain link fencing.

Expected Normal Life:	35	Years
Present Equivalent Age:	21	Years
Estimated Remaining Life:	14	Years
Approximate Length of Chain Link Fencing:	30 lin. ft.	

Replacement Budget: \$5,000.

Asphalt Pavement

The site is accessed from a total of 6 entrances located on the west, south, and east sides of the complex. Drive aisles then extend into the various parking lots (Photos 88 to 90).



Photo 88: Asphalt pavement at southwest parking lot



Photos 89 and 90: Asphalt pavement at southeast parking lot and drive aisle

We offer the following commentary:

- The majority of the asphalt pavement is in fair to poor condition, with cracking patterns and general degradation of the paved surface at various locations (Photos 91 to 94).



Photos 91 and 92: Pavement condition at south and southwest parking lot catch basin



Photos 93 and 94: Transverse crack and deteriorated pavement at northwest parking lot

- Review of our prior study indicated that a phased replacement program of the originally installed asphalt pavement was to commence in 2007; however, the replacement program was postponed at that time due to other financial considerations at the site. No replacement work has been done since that time.
- We did note some patch repairs have been conducted in the past. The repair amount and location of these repairs varied from one parking lot to another (Photos 95 and 96).



Photos 95 and 96: Patch repairs to pavement at southeast and northeast parking lots

- Asphalt degradation and cracks are likely to continue over time from typical weathering and exposure of the asphalt pavement to vehicle traffic. We recommend fixing the cracks to minimize erosion of the soil based materials beneath the pavement and extend the expected life of the component until replacement is considered.

- Line painting at the exterior visitor parking areas will typically require repainting every 5 to 8 years depending on the level of traffic the area experiences. This type of work would be performed under the annual maintenance budgets.

For the purposes of the reserve fund calculations, Item A3.06 accounts for general ongoing repairs such as crack filling, and selective replacement of damaged pavement. Item A3.07 accounts for replacement of the pavement structure within the next 10 years.

The underground services conditions should be determined prior to undertaking any future pavement work. Additional information regarding the underground services is provided under A4.01 - Storm and Sewer System and A4.02 - Water Works.

3.06 Asphalt Pavement - Repair

Periodic repairs and maintenance to the paved area will be anticipated over the remaining life of the pavement system, at which time replacement would be anticipated. An allowance has been included into the reserve fund for periodic pavement repairs.

Expected Normal Life:	5	Years
Present Equivalent Age:	4	Years
Estimated Remaining Life:	1	Year

Repair Allowance: \$20,000.

3.07 Asphalt Pavement - Replace

For purposes of this reserve fund study, we have included costs for complete pavement structure replacement, including select rebuilding of the sub base and replacement of the concrete curbing that abuts the paved areas.

Modifications to slopes and site services, including manhole and catch basin height adjustments, would need to be performed during a full pavement replacement. Further investigations is recommended as part of the replacement planning to ensure the new pavement structure is designed to accommodate heavy wheel loads from dump trucks and soils conditions. Budgets may require some adjustments once a final design has been completed.

Expected Normal Life:	45	Years
Present Equivalent Age:	29	Years
Estimated Remaining Life:	16	Years
Approximate Asphalt Area:	57,000 sq. ft.	
Approximate Curb Length:	2,850 lin. ft.	

Replacement Budget: \$750,000.

Wood Fencing

Privacy wood fencing is provided at the front or rear yards of the building blocks. The fencing consists of both paint finished and pressure treated wood attached to horizontal 2" x 4" boards spanning between 4" x 4" posts. The fence height and profiles vary between each unit.

The majority of the fencing is in good condition. We offer the following comments:

- In 2007, a fence replacement program was initiated at the complex. Since that time, additional wood fencing sections have been replaced. We further understand from correspondence received that the fencing project had been completed earlier this summer (Photos 97 to 100).



Photos 97 and 98: New wood fencing at front yard of building



Photos 99 and 100: Privacy wood fencing at front yards

- The fencing program typically included installation in the first year, with the fence sections provided with a coat of exterior stain finish in the following year. Depending of the actual block building locations, the stain colour varies (Photo 101).



Photo 101: Green and cedar coloured stain finish applied to newer wood fencing

- Temporary removal of the various fencing sections will be required when the original exterior cladding is removed from the buildings. At that time, select wall repairs may be required. We have not carried any values for the repairs in the report.

We have included separate budgets for the wood fencing replacements from 2007, 2008 to 2014, and the remaining wood fencing completed earlier this year at the site.

The actual year and quantity of wood fencing replaced between 2008 and 2014 was not provided during preparation of the draft report. We have included used a representative age of 3 years for this fencing.

Costs for repairs and re-staining have been addressed in the following category. Since replacement is highly dependent on the level of staining performed, any variation in the staining program will require adjustment to our anticipated time of replacement.

3.08 Wood Fencing (2007)

Expected Normal Life:	25	Years
Present Equivalent Age:	8	Years
Estimated Remaining Life:	17	Years
Approximate Length of Fencing: 1,200 lin. ft.		

Replacement Budget: \$70,000.

3.09 Wood Fencing (2008-2014)

Expected Normal Life:	25	Years
Present Equivalent Age:	3	Years
Estimated Remaining Life:	22	Years
Approximate Length of Fencing: 2,695 lin. ft.		

Replacement Budget: \$160,000.

3.10 Wood Fencing (2015)

Expected Normal Life:	25	Years
Present Equivalent Age:	0	Years
Estimated Remaining Life:	25	Years
Approximate Length of Fencing: 2,305 lin. ft.		

Replacement Budget: \$135,000.

3.11 Wood Fencing and Trim Boards

The wood privacy fencing includes a variety of stain finish colours. The newer wood fence sections include either a cedar or green coloured stain coating.

The applied stain finish is in generally good to fair condition. We offer the following comments:

- Since the replacement program was initiated in 2007, the newer sections have received either a cedar or green coloured stain coating. Where viewed, the stain is in good condition.

- We understand that Block Buildings 3, 6, 8, and 9 were provided with new wood fences this year. In addition, half of the remaining wood fencing to be replaced at Block Buildings 4, 5, 11, 18, and 19 were reportedly completed this year. These fence sections are slated for a stain coating in 2016.
- We were not informed if any plans are for re-staining the wood trim boards.

It is anticipated that re-staining of the wood fencing and wood trim cladding surfaces would include application of a high quality solid colour stain. Replacement of specific components should be delayed only if re-coating of the surfaces is continued frequently. However, should the frequency in which staining is performed change, or should a lower grade material be used, re-staining programs would be required more often.

Budgets have been included for surface preparation and re-staining. A selective repair allowance has been included for miscellaneous repairs prior to re-staining. This could include refastening boards, selective replacement of boards, posts, parking pedestals, etc. This is an estimate only, and the actual quantity of repair would be determined once a scope of work has been defined.

Expected Normal Life: 5 Years
Present Equivalent Age: 1 Year
Estimated Remaining Life: 4 Years
Approximate Wood Fencing Area: 43,000 sq. ft.
Approximate Wood Trim Area: 2,100 sq. ft.

Re-Staining Budget: \$50,000.

3.12 Metal Trims and Rails

Items included under this category include the upper floor level metal trims, shutters, and metal railings located at select entry steps and retaining wall.

As protective coatings fail, metal surfaces will experience atmospheric corrosion. Initial evidence of coating failure can be seen through minor corrosion such as localized pinpoint rusting.

For budget purposes, we have allowed for cleaning and re-painting of the metal trims and rails with a good quality coating. Depending on future timing for the exterior wall cladding replacement programs, some revisions to the years this work is projected may be required.

Expected Normal Life: 10 Years
Present Equivalent Age: 9 Years
Estimated Remaining Life: 1 Year
Estimated Length of Metal Trim: 1,785 sq. ft.
Estimated Number of Shutters: 248 pieces
Estimated Length of Wrought Iron Rails: 160 lin. ft.

Re-Painting Budget: \$60,000.

3.13 Wrought Iron Handrails

Wrought iron handrails are installed at selected front entry pre-cast steps and retaining wall. The handrails are generally in good condition at this time.

A future allowance for replacement of these handrails has been included in the report.

Expected Normal Life:	40	Years
Present Equivalent Age:	35	Years
Estimated Remaining Life:	5	Years
Approximate Length of Handrails:	160 lin. ft.	

Replacement Allowance: \$10,000.

3.14 Bridge Structure

A bridge structure is located between Block Buildings 6 and 9 on the south end of the complex (Photo 102).



Photo 102: Bridge structure

The pedestrian traffic bridge provides a path across the landscaped swale at this location. The construction materials include steel I-beams, metal posts pressure treated wood decking, 4x4 posts, and 2x4 diagonal bracing and guardrails. Details regarding the style or use of concrete foundation piles for the metal post supports are not known.

- Review of 2009 reserve fund study indicated that the original bridge structure was restored in approximately 1999. Although bridge replacement was suggested in 2010, we note that this project was not completed.
- We understand from the Board that the guardrails were repaired in 2015 and that there are no plans for replacing the bridge structure at this time.

An allowance for future restoration of the bridge structure has been included in the report. Dependent on the actual construction materials used for the restoration revisions to the values carried may be required.

Expected Normal Life:	50	Years
Present Equivalent Age:	38	Years
Estimated Remaining Life:	12	Years

Repair Allowance: \$70,000.

A4.0 MECHANICAL SYSTEMS

In this section, budgets have been made for repairs or replacement of common property items related to the site water and sewage systems. The mechanical systems within the units are not common property and are not included in the reserve fund. We offer the following comments:

- It is our understanding that any deterioration of the underground gas service piping would be maintained by the utility under normal circumstances. Similarly, underground cable lines and associated junction boxes would be serviced and replaced as needed by the cable company. Therefore, no allowance for replacement or repair has been included in the fund for these items. The Board would need to confirm if repairs would result in an increase in utility fees.
- A number of incentives are available from the federal government to encourage owners to reduce energy consumption. The Board may want to consider contacting the government to determine how these incentives may apply to the corporation.
- Fireplace and furnace flues extend through the common property and are routed to the upper main roof. The condition of the flues were not determined as part of this report. We did observe corrosion at flues during our review of select attic spaces. Further review is recommended to determine the extent of repairs.
- Original hot water tanks and furnaces located within the individual units are anticipated be replaced with high efficiency. New high efficiency furnaces typically rely on purpose-made pipes for venting and supplying combustion air. Details regarding how the installation of new pipes will need to be reviewed in advance to ensure appropriate measures are taken to address building envelop and safety aspects of the work. No allowances have been made for this type of work.
- Located within the basement regions of select building blocks are a total of 4 sump pumps for the removal of accumulated water during seasonal weather or emergency situations. It is recommended that periodic testing of these pumps be conducted under maintenance budgets. No values have been included for these devices.

4.01 Storm and Sewer System

The storm and sanitary services consist of the underground lines as well as the manholes and catch basins located on the common property. Sanitary lines are located below the footprint of each of the buildings and extend out to the main city lines. We offer the following comments:

- The life of these systems depends on several factors including the quality of the materials used, the initial installation, and the soil conditions. The life of these systems can vary from 20 to 50+ years. Often localized problems will occur with the system before major replacement is required. Typically, repairs to the underground storm and sewer lines may become necessary due to breaks caused by roots, rocks, ice, etc.

- A catch basin located on the east side of the landscaping swale is used to collect moisture (Photo 103). The condition of the piping sections are unknown at this time.



Photo 103: Catch basin situated on east side of landscaping swale

- We understand that the Board is considering a separate review of the grading and drainage aspects of the complex in 2015. This review is in response to past reports of leakage at selected basement level units. No costs for this review have been included in the study.
- As part of regular maintenance, it is recommended that the Board periodically examine the catch basins, manholes and associated piping to ensure leakage into the surrounding soils is not taking place. This could be performed using special camera equipment and contractors to complete this work. Continued visual inspections of the entire storm and sewer system will help prepare for future repairs or replacement that may be required. This type of inspection will help to establish conditions of the piping including deteriorated lines and/or sags in the systems. Findings could be used to prioritize any work that might be needed. Also regularly scheduled cleaning of the system is recommended as part of the maintenance program. We have not included these maintenance items in our budgets.

Information regarding the condition of the pipes is not known. We recommend regular inspections of the pipes to determine if repairs are required. Should repairs become significant or too frequent, replacement of the system might be required. This would need to be reviewed with each future update to the study.

We have not allowed for full replacement of the piping or liners at this time; however, we have provided an allowance for selected repair/replacement that could be required within the next 5 years.

Expected Normal Life:	15	Years
Present Equivalent Age:	10	Years
Estimated Remaining Life:	5	Years

Selective Repair Budget: \$75,000

4.02 Water Works System

Water works within the complex consists of service lines including underground pipes, fittings, valves, and accessories. It is our understanding the Corporation is responsible for the system from the property line up to the individual suites. The main meters are the responsibility of the water company. We note the following:

- It is our understanding that a water main break had occurred in December 2008. Repairs were conducted at that time and no problems have since been reported at the site.

At this time, we are not aware of any potential repairs that may be necessary. As the piping approaches the expected normal life, leakage will be anticipated. Direct and indirect testing can be used to determine the condition of the distribution system. Direct testing (i.e. non-destructive testing) generally requires direct inspection and monitoring of the piping. Indirect testing will generally provide information relating to the pipes exposure and performance (e.g. Water audits, soil corrosivity measurements (only applicable to metal connections and lines), and frequency of pipe breakages.

We have not allowed for full replacement of the distribution network at this time. An allowance has been provided for periodic repairs and selective replacement to the underground elements comprising the water works. We have included a separate item for replacement of the water distribution line saddles under Item A4.03.

Expected Normal Life:	10	Years
Present Equivalent Age:	2	Years
Estimated Remaining Life:	8	Years

Repair Allowance: \$50,000.

4.03 Water Works - Saddle Connections

The water main service saddles are located at underground pipe intersections (i.e. where water lines servicing the individual blocks branches off the main water line), and connect the smaller distribution line to the main water line.

- Information regarding the actual number and location of these saddles was not known during the preparation of the report; however, for the purposes of budgeting, we have assumed individual block buildings are serviced by a secondary water line branching off the main water line. This is not confirmed at this time and further review would be required.

Each of these secondary lines would require a saddle fitting at the water main and, as such, we have allowed for 1 saddle connection per building. During this work, we would recommend taking the opportunity to record the condition of the piping. Findings from this inspection would be useful in preparing budgets and time frames for the replacement of the distribution lines.

Failure of any given saddle can restrict the flow of water to a given building block. Budgets have been included for phased replacement of the service saddles.

Expected Normal Life:	45	Years
Present Equivalent Age:	35	Years
Estimated Remaining Life:	10	Years
Estimated Number of Saddles:	21	

Replacement Budget: \$210,000.

4.04 Hose Bibs and Exhaust Vents

A total of 13 hose bibs are located at various building blocks throughout the site. Exhaust vents are also located at the selected entry canopies as well as the main and 2nd floor exterior walls of the units. The majority of the hose bibs and dryer vents are generally in good condition. We note the following:

- A number of items including damaged, a buildup of lint, and objects set into the exhaust vents were observed at selected units (Photos 104 to 107).



Photos 104 and 105: Missing cover and buildup of lint at dryer exhaust vents at Block 6



Photos 106 and 107: Blocked exhaust vents at unit entry canopies

- To ensure that the exhaust vents operate effectively and do not pose a possible fire condition from the lint deposits Future review and repairs as required are suggested.

An allowance has been provided for repair and/or replacement of these components.

Expected Normal Life:	5	Years
Present Equivalent Age:	2	Years
Estimated Remaining Life:	3	Years

Repair Budget: \$5,000.

4.05 Fire Hydrants

A total of 2 hydrants are located at the complex for firefighting equipment in the event of a fire (Photo 108). We include the following comments:



Photo 108: Fire hydrant on north side of complex

- As the complex is supplied with two fire hydrants, both hydrants should be considered for inspection to ensure that a constant supply of water is available at all times in the event of a fire condition.
- A lane provides access to a hydrant (Photo 109). To ensure emergency vehicles are provided clear access the laneway must remain clear and unobstructed at all times.



Photo 109: Guard at fire access laneway

For the basis of the reserve fund study, we have included for a maintenance allowance for the fire hydrants.

Expected Normal Life:	10	Years
Present Equivalent Age:	3	Years
Estimated Remaining Life:	7	Years
Estimated Number of Hydrants:	2	units

Maintenance Allowance: \$10,000.

A5.0 ELECTRICAL SYSTEMS

In this section, budgets have been made for repairs or replacement of the common property electrical including the lighting and components servicing the site. The electrical systems within the units are not part of common property and are not included in the reserve fund calculations.

Although the electrical distribution boxes within the units are the owners responsibility consideration should be given to implementing a preventative maintenance program which would include scheduled infrared scanning of the electrical panels and cleaning of the electrical distribution systems to help reduce the risk of unexpected failures within the individual units. This type of maintenance might form part of the individual unit owners' responsibility.

5.01 Transformers and Main Services

It is our understanding that primary electrical services would be replaced as required by the local electrical distributor at no cost to the condominium corporation. Replacement would include primary cables and pad transformers. The electrical distributor will perform routine maintenance and inspection of the primary and secondary transformers to identify possible areas of concern. This will need to be confirmed with the utility provider. The transformers and pads appear to be in good condition.

We have not allowed for full replacement of the electrical distribution systems throughout the complex at this time. Should repairs become significant or too frequent, replacement of the system might be required. The condition of the electrical distribution systems and the need for repairs or replacement would be reviewed with each future update to the study.

We have provided an allowance of for periodic repairs that may be required.

Expected Normal Life:	20	Years
Present Equivalent Age:	10	Years
Estimated Remaining Life:	10	Years

Repair Budget: \$20,000.

5.02 Exterior Unit Lights

The exterior building lighting system consists of wall mounted light fixtures at the front and rear entries. The styles and conditions vary from each unit; however, the majority are generally in good condition.

Removal of the unit lights during future building restoration programs would be required to adequately seal these penetrations.

Budgets related to replacement of the light fixtures to coincide with future exterior wall cladding replacements have been included in the report.

Expected Normal Life:	20	Years
Present Equivalent Age:	7	Years
Estimated Remaining Life:	13	Years
Approximate Number of Unit Fixtures:	262 lights	

Replacement Budget: \$65,000.

5.03 Light Standards

Pole mounted lights are located along the parking areas at the complex (Photo 110). In general, the light standards on the property looked to be in good condition. Replacement of the lighting will be required as part of the ongoing maintenance.



Photo 110: Typical pole mounted light standard at complex

Budgets have been included for complete replacement of the light standards throughout the complex.

Expected Normal Life:	45	Years
Present Equivalent Age:	33	Years
Estimated Remaining Life:	12	Years
Number of Light Standards:	19 standards	

Replacement Budget: \$90,000.

5.04 Exterior Plug-ins

Wall outlets are located throughout the complex at the block buildings, and appear to be in reasonable condition for their age. An allowance has been provided for selective repair of these components.

Expected Normal Life: 5 Years
Present Equivalent Age: 3 Years
Estimated Remaining Life: 2 Years
Estimated Number of Receptacles: 262 plugs

Repair Budget: \$5,000.

5.05 Parking Receptacles

Pedestal mounted receptacles are provided along the parking stall areas around the complex. Electrical wiring from the adjacent building blocks is provided up to the weatherproofed, duplex plug-ins. In general, the vehicle plug-ins appeared to be in good condition.

- Originally installed and newer pedestals service the parking regions. Newer pedestals include a concrete pile for additional protection and to raise the signs to meet local bylaws (Photo 111).
- Past removal of a pedestal at a parking stall located at the northwest parking lot was also noted (Photo 112). The reason(s) for the replacement are unknown at this time.



Photo 111: Newer concrete pedestals at south parking area of complex



Photo 112: Newer concrete repair where pedestal located at northwest parking lot

Monitoring the parking receptacles combined with repairs as required should be anticipated. A budget for selective repairs of the receptacles has been included in the calculations.

Expected Normal Life: 5 Years
Present Equivalent Age: 0 Years
Estimated Remaining Life: 5 Years
Approximate Number of Receptacles: 64 plugs

Repair Budget: \$8,000.

APPENDIX B

RESERVE FUND CALCULATIONS

Callingwood Court Condominium Plan CDE 8476			25 YEAR PROJECTION		CAPITAL REPLACEMENT ITEMS SCHEDULE				
Financial Analysis for Year Ended: Date of Study: Present Fund Balance RJC Job No.: Interest Rate: Inflation Rate:			2014 August 2015 \$900,000 EDM.100641.0003 2.5% 2.0%						
			Budget Cost For Repair or Replacement (present \$'s)	Expenditure Spread (years)	Expenditure per year (present \$'s)	Expected Normal Life (Years)	Present Equivalent Age (years)	Estimated Life Remaining (years)	Total Budget Cost Over 25 (present \$'s)
Item	Description of work								
A1.0 ROOF SYSTEMS									
1.01	Asphalt Shingles (3-Tab)	replace	\$320,000	2	\$160,000	25	8	17	\$320,000
1.02	Asphalt Laminate Shingles (2010)	replace	\$135,000	1	\$135,000	25	5	20	\$135,000
1.03	Soffits and Fascia	replace	\$160,000	2	\$80,000	45	37	8	\$160,000
1.04	Eavestroughs and Downspouts	replace	\$110,000	2	\$55,000	25	17	8	\$110,000
1.05	Roof - Repairs	repair	\$10,000	1	\$10,000	5	4	1	\$50,000
A2.0 BUILDING EXTERIOR COMMON PROPERTY									
2.01	Building Exterior - Repairs	repair	\$10,000	1	\$10,000	5	4	1	\$50,000
2.02	Stucco and Parging	replace	\$2,250,000	2	\$1,125,000	45	32	13	\$2,250,000
2.03	Metal and Vinyl Siding	replace	\$1,500,000	2	\$750,000	45	32	13	\$1,500,000
2.04	Brick Veneer	replace	\$130,000	2	\$65,000	45	32	13	\$130,000
2.05	Metal Trims & Shutters	replace	\$60,000	2	\$30,000	45	32	13	\$60,000
2.06	Wood Trim Boards	replace	\$40,000	2	\$20,000	25	12	13	\$40,000
2.07	Windows	replace	\$895,000	2	\$447,500	25	12	13	\$895,000
2.08	Basement Windows	replace	\$85,000	2	\$42,500	25	12	13	\$85,000
2.09	Exterior Entry and Storm Doors	replace	\$660,000	5	\$132,000	35	12	23	\$660,000
2.10	Caulking - Building	allowance	\$40,000	2	\$20,000	15	2	13	\$40,000
2.11	Caulking - Windows and Doors	allowance	\$110,000	2	\$55,000	15	2	13	\$110,000
2.12	Foundation - Repairs	selective repair	\$50,000	2	\$25,000	5	3	2	\$250,000
A3.0 SITE WORK									
3.01	Miscellaneous Concrete Works - Repairs	selective repair	\$40,000	1	\$40,000	5	2	3	\$200,000
3.02	Concrete Entry Steps	replace	\$50,000	5	\$10,000	10	5	5	\$130,000
3.03	Concrete Retaining Wall	allowance	\$75,000	1	\$75,000	50	36	14	\$75,000
3.04	Window Wells	replace	\$60,000	4	\$15,000	45	32	13	\$60,000
3.05	Chain Link Fencing	replace	\$5,000	1	\$5,000	35	21	14	\$5,000
3.06	Asphalt Pavement - Repair	repair	\$20,000	1	\$20,000	5	4	1	\$80,000
3.07	Asphalt Pavement - Replace	replace	\$750,000	4	\$187,500	45	29	16	\$750,000
3.08	Wood Fencing (2007)	replace	\$70,000	1	\$70,000	25	8	17	\$70,000
3.09	Wood Fencing (2008-2014)	replace	\$160,000	1	\$160,000	25	3	22	\$160,000
3.10	Wood Fencing (2015)	replace	\$135,000	1	\$135,000	25	0	25	\$135,000
3.11	Wood Fencing and Trim Boards	restrain	\$50,000	1	\$50,000	5	1	4	\$250,000
3.12	Metal Trims and Rails	repaint	\$60,000	1	\$60,000	10	9	1	\$180,000
3.13	Wrought Iron Handrails	replace	\$10,000	1	\$10,000	40	35	5	\$10,000
3.14	Bridge Structure	allowance	\$70,000	1	\$70,000	50	38	12	\$70,000
A4.0 MECHANICAL SYSTEMS									
4.01	Storm and Sewer System	selective repair	\$75,000	1	\$75,000	15	10	5	\$150,000
4.02	Water Works System	repair	\$50,000	1	\$50,000	10	2	8	\$100,000
4.03	Water Works – Saddle Connections	replace	\$210,000	10	\$21,000	45	35	10	\$210,000
4.04	Hose Bibs and Exhaust Vents	repair	\$5,000	1	\$5,000	5	2	3	\$25,000
4.05	Fire Hydrants	allowance	\$10,000	1	\$10,000	10	3	7	\$20,000
A5.0 ELECTRICAL SYSTEMS									
5.01	Transformers and Main Services	repair	\$20,000	1	\$20,000	20	10	10	\$20,000
5.02	Exterior Unit Lights	replace	\$65,000	2	\$32,500	20	7	13	\$65,000
5.03	Light Standards	replace	\$90,000	3	\$30,000	45	33	12	\$90,000
5.04	Exterior Plug-ins	repair	\$5,000	1	\$5,000	5	3	2	\$25,000
5.05	Parking Receptacles	selective repair	\$8,000	1	\$8,000	5	0	5	\$40,000
Total Expenditures For 25 Year Period:									\$9,765,000

Callingwood Court Condominium Plan CDE 8476			EXPENDITURE SCHEDULE (page 1 of 2)												
Financial Analysis for Year Ended:		2014													
Date of Study:		August 2015													
Present Fund Balance		\$900,000													
RJC Job No.:		EDM.100641.0003													
Interest Rate:		2.5%													
Inflation Rate:		2.0%													
Item	Description	Year-->	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
A1.0 ROOF SYSTEMS															
1.01	Asphalt Shingles (3-Tab)	replace													
1.02	Asphalt Lamineate Shingles (2010)	replace													
1.03	Soffits and Fascia	replace								\$80,000	\$80,000				
1.04	Eavestroughs and Downspouts	replace								\$55,000	\$55,000				
1.05	Roof - Repairs	repair	\$10,000					\$10,000					\$10,000		
A2.0 BUILDING EXTERIOR COMMON PROPERTY															
2.01	Building Exterior - Repairs	repair	\$10,000					\$10,000					\$10,000		
2.02	Stucco and Parging	replace													\$1,125,000
2.03	Metal and Vinyl Siding	replace													\$750,000
2.04	Brick Veneer	replace													\$65,000
2.05	Metal Trims & Shutters	replace													\$30,000
2.06	Wood Trim Boards	replace													\$20,000
2.07	Windows	replace													\$447,500
2.08	Basement Windows	replace													\$42,500
2.09	Exterior Entry and Storm Doors	replace													
2.10	Caulking - Building	allowance													\$20,000
2.11	Caulking - Windows and Doors	allowance													\$55,000
2.12	Foundation - Repairs	selective repair		\$25,000	\$25,000				\$25,000	\$25,000				\$25,000	\$25,000
A3.0 SITE WORK															
3.01	Miscellaneous Concrete Works - Repairs	selective repair			\$40,000					\$40,000					\$40,000
3.02	Concrete Entry Steps	replace			\$10,000	\$10,000	\$10,000	\$10,000	\$10,000						\$10,000
3.03	Concrete Retaining Wall	allowance													
3.04	Window Wells	replace												\$15,000	\$15,000
3.05	Chain Link Fencing	replace													
3.06	Asphalt Pavement - Repair	repair	\$20,000					\$20,000					DELETED CELL		
3.07	Asphalt Pavement - Replace	replace													
3.08	Wood Fencing (2007)	replace													
3.09	Wood Fencing (2008-2014)	replace													
3.10	Wood Fencing (2015)	replace													
3.11	Wood Fencing and Trim Boards	restain				\$50,000					\$50,000				
3.12	Metal Trims and Rails	repaint	\$60,000										\$60,000		
3.13	Wrought Iron Handrails	replace					\$10,000								
3.14	Bridge Structure	allowance												\$70,000	
A4.0 MECHANICAL SYSTEMS															
4.01	Storm and Sewer System	selective repair					\$75,000								
4.02	Water Works System	repair								\$50,000					
4.03	Water Works – Saddle Connections	replace						\$21,000	\$21,000	\$21,000	\$21,000	\$21,000	\$21,000	\$21,000	\$21,000
4.04	Hose Bibs and Exhaust Vents	repair			\$5,000					\$5,000					\$5,000
4.05	Fire Hydrants	allowance							\$10,000						
A5.0 ELECTRICAL SYSTEMS															
5.01	Transformers and Main Services	repair										\$20,000			
5.02	Exterior Unit Lights	replace													\$32,500
5.03	Light Standards	replace											\$30,000	\$30,000	\$30,000
5.04	Exterior Plug-ins	repair		\$5,000					\$5,000					\$5,000	
5.05	Parking Receptacles	selective repair					\$8,000					\$8,000			
YEARLY TOTALS			\$100,000	\$30,000	\$80,000	\$60,000	\$103,000	\$71,000	\$71,000	\$276,000	\$206,000	\$49,000	\$131,000	\$166,000	\$2,733,500
FUTURE DOLLARS			\$100,000	\$30,600	\$83,232	\$63,672	\$111,491	\$78,390	\$79,958	\$317,037	\$241,362	\$58,560	\$159,688	\$206,400	\$3,466,739

Callingwood Court Condominium Plan CDE 8476			EXPENDITURE SCHEDULE (page 2 of 2)											
Financial Analysis for Year Ended:		2014												
Date of Study:		August 2015												
Present Fund Balance		\$900,000												
RJC Job No.:		EDM.100641.0003												
Interest Rate:		2.5%												
Inflation Rate:		2.0%												
Item	Description	Year-->	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
A1.0 ROOF SYSTEMS														
1.01	Asphalt Shingles (3-Tab)	replace				\$160,000	\$160,000							
1.02	Asphalt Laminate Shingles (2010)	replace							\$135,000					
1.03	Soffits and Fascia	replace												
1.04	Eavestroughs and Downspouts	replace												
1.05	Roof - Repairs	repair			\$10,000					\$10,000				
A2.0 BUILDING EXTERIOR COMMON PROPERTY														
2.01	Building Exterior - Repairs	repair			\$10,000					\$10,000				
2.02	Stucco and Parging	replace	\$1,125,000											
2.03	Metal and Vinyl Siding	replace	\$750,000											
2.04	Brick Veneer	replace	\$65,000											
2.05	Metal Trims & Shutters	replace	\$30,000											
2.06	Wood Trim Boards	replace	\$20,000											
2.07	Windows	replace	\$447,500											
2.08	Basement Windows	replace	\$42,500											
2.09	Exterior Entry and Storm Doors	replace								\$132,000	\$132,000	\$132,000	\$132,000	\$132,000
2.10	Caulking - Building	allowance	\$20,000											
2.11	Caulking - Windows and Doors	allowance	\$55,000											
2.12	Foundation - Repairs	selective repair				\$25,000	\$25,000				\$25,000	\$25,000		
A3.0 SITE WORK														
3.01	Miscellaneous Concrete Works - Repairs	selective repair					\$40,000					\$40,000		
3.02	Concrete Entry Steps	replace	\$10,000	\$10,000	\$10,000	\$10,000						\$10,000	\$10,000	\$10,000
3.03	Concrete Retaining Wall	allowance	\$75,000											
3.04	Window Wells	replace	\$15,000	\$15,000										
3.05	Chain Link Fencing	replace	\$5,000											
3.06	Asphalt Pavement - Repair	repair			\$20,000					\$20,000				
3.07	Asphalt Pavement - Replace	replace		\$187,500	\$187,500	\$187,500	\$187,500							
3.08	Wood Fencing (2007)	replace				\$70,000								
3.09	Wood Fencing (2008-2014)	replace									\$160,000			
3.10	Wood Fencing (2015)	replace												\$135,000
3.11	Wood Fencing and Trim Boards	restain	\$50,000					\$50,000					\$50,000	
3.12	Metal Trims and Rails	repaint								\$60,000				
3.13	Wrought Iron Handrails	replace												
3.14	Bridge Structure	allowance												
A4.0 MECHANICAL SYSTEMS														
4.01	Storm and Sewer System	selective repair							\$75,000					
4.02	Water Works System	repair					\$50,000							
4.03	Water Works – Saddle Connections	replace	\$21,000	\$21,000										
4.04	Hose Bibs and Exhaust Vents	repair					\$5,000					\$5,000		
4.05	Fire Hydrants	allowance				\$10,000								
A5.0 ELECTRICAL SYSTEMS														
5.01	Transformers and Main Services	repair												
5.02	Exterior Unit Lights	replace	\$32,500											
5.03	Light Standards	replace												
5.04	Exterior Plug-ins	repair				\$5,000					\$5,000			
5.05	Parking Receptacles	selective repair		\$8,000					\$8,000					\$8,000
YEARLY TOTALS			\$2,763,500	\$241,500	\$237,500	\$467,500	\$467,500	\$50,000	\$218,000	\$232,000	\$322,000	\$212,000	\$192,000	\$285,000
FUTURE DOLLARS			\$3,574,882	\$318,654	\$319,644	\$641,777	\$654,613	\$71,412	\$317,585	\$344,740	\$488,045	\$327,748	\$302,765	\$458,405

RESERVE FUND PROJECTIONS FOR
Callingwood Court Condominium Plan CDE 8476

SCENARIO ONE

For Year Ending: 2014

Initial Contribution of \$320,000.

Date Of Study: August 2015

Adjusted Contribution of \$331,200. in 2016

Cash Flow Projection: 25 years

Annual Increase of 2.0% thereafter

Interest Rate: 2.5%

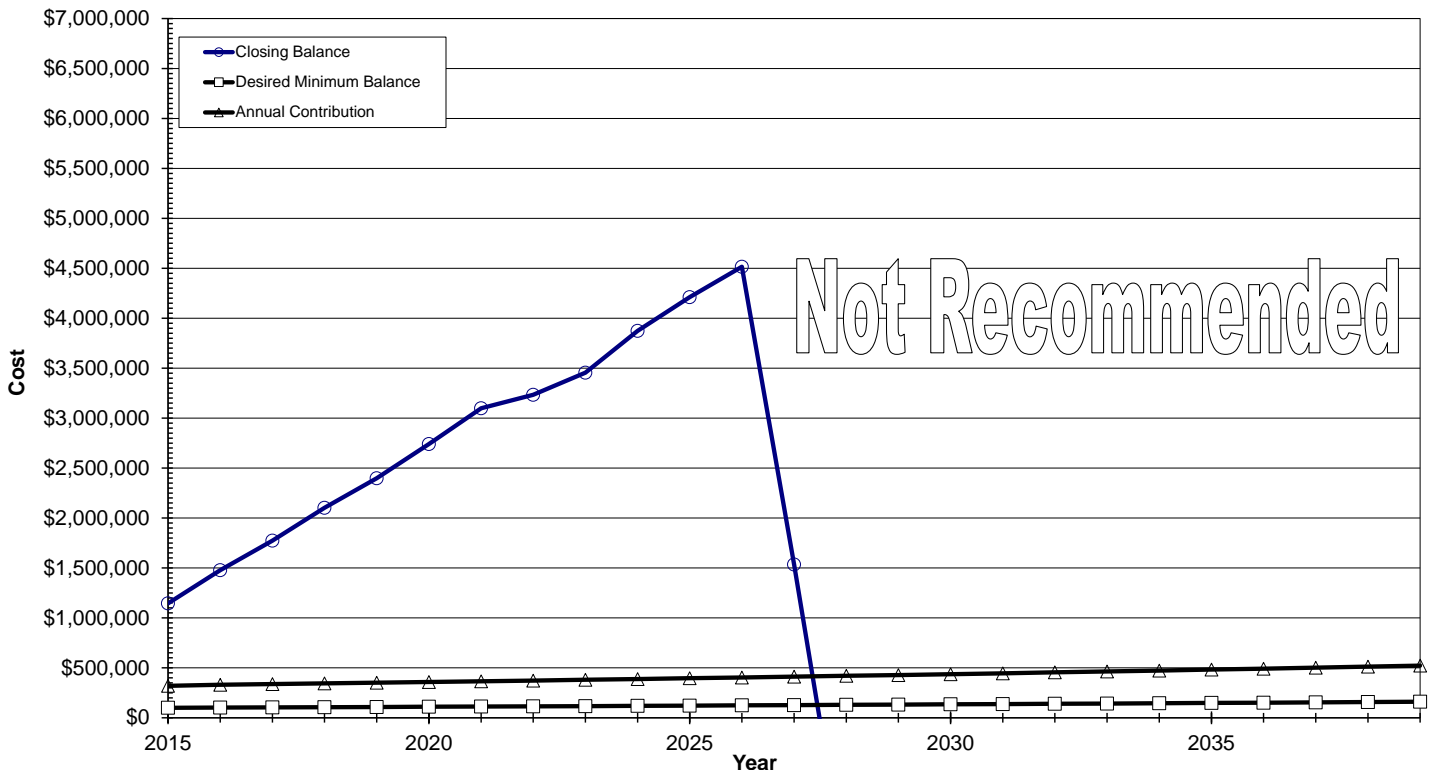
RJC Job No.: EDM.100641.0003

Inflation Rate: 2.0%

Number of Units: 131

Year	Opening Balance	Predicted Annual Contribution* (future dollars)	Special Assessment	Expenditure Adjusted for Inflation	Interest Earned	Closing Balance	**Approx. Monthly Contrib. Per Suite to the Reserve Fund
							**not based on Unit Factors
2015	\$900,000	\$320,000		\$100,000	\$25,250	\$1,145,250	\$204
2016	\$1,145,250	\$331,200		\$30,600	\$32,389	\$1,478,239	\$211
2017	\$1,478,239	\$337,824		\$83,232	\$40,138	\$1,772,969	\$215
2018	\$1,772,969	\$344,580		\$63,672	\$47,836	\$2,101,713	\$219
2019	\$2,101,713	\$351,472		\$111,491	\$55,543	\$2,397,237	\$224
2020	\$2,397,237	\$358,502		\$78,390	\$63,432	\$2,740,781	\$228
2021	\$2,740,781	\$365,672		\$79,958	\$72,091	\$3,098,586	\$233
2022	\$3,098,586	\$372,985		\$317,037	\$78,164	\$3,232,698	\$237
2023	\$3,232,698	\$380,445		\$241,362	\$82,556	\$3,454,337	\$242
2024	\$3,454,337	\$388,054		\$58,560	\$90,477	\$3,874,308	\$247
2025	\$3,874,308	\$395,815		\$159,688	\$99,809	\$4,210,243	\$252
2026	\$4,210,243	\$403,731		\$206,400	\$107,723	\$4,515,297	\$257
2027	\$4,515,297	\$411,806		\$3,466,739	\$74,696	\$1,535,059	\$262
2028	\$1,535,059	\$420,042		\$3,574,882	Insufficient Funds	Insufficient Funds	\$267
2029	Insufficient Funds	\$428,443		\$318,654	Insufficient Funds	Insufficient Funds	\$273
2030	Insufficient Funds	\$437,011		\$319,644	Insufficient Funds	Insufficient Funds	\$278
2031	Insufficient Funds	\$445,752		\$641,777	Insufficient Funds	Insufficient Funds	\$284
2032	Insufficient Funds	\$454,667		\$654,613	Insufficient Funds	Insufficient Funds	\$289
2033	Insufficient Funds	\$463,760		\$71,412	Insufficient Funds	Insufficient Funds	\$295
2034	Insufficient Funds	\$473,035		\$317,585	Insufficient Funds	Insufficient Funds	\$301
2035	Insufficient Funds	\$482,496		\$344,740	Insufficient Funds	Insufficient Funds	\$307
2036	Insufficient Funds	\$492,146		\$488,045	Insufficient Funds	Insufficient Funds	\$313
2037	Insufficient Funds	\$501,989		\$327,748	Insufficient Funds	Insufficient Funds	\$319
2038	Insufficient Funds	\$512,028		\$302,765	Insufficient Funds	Insufficient Funds	\$326
2039	Insufficient Funds	\$522,269		\$458,405	Insufficient Funds	Insufficient Funds	\$332
TOTALS		\$10,395,721		\$0	(\$12,817,397)	\$870,103	

25 Year Projection



RESERVE FUND PROJECTIONS FOR
Callingwood Court Condominium Plan CDE 8476

SCENARIO TWO

For Year Ending: 2014

Date Of Study: August 2015

Cash Flow Projection: 25 years

Interest Rate: 2.5%

Inflation Rate 2.0%

Initial Contribution of \$320,000.

Adjusted Contribution of \$331,200. in 2016

Annual Increase of 2.0% thereafter

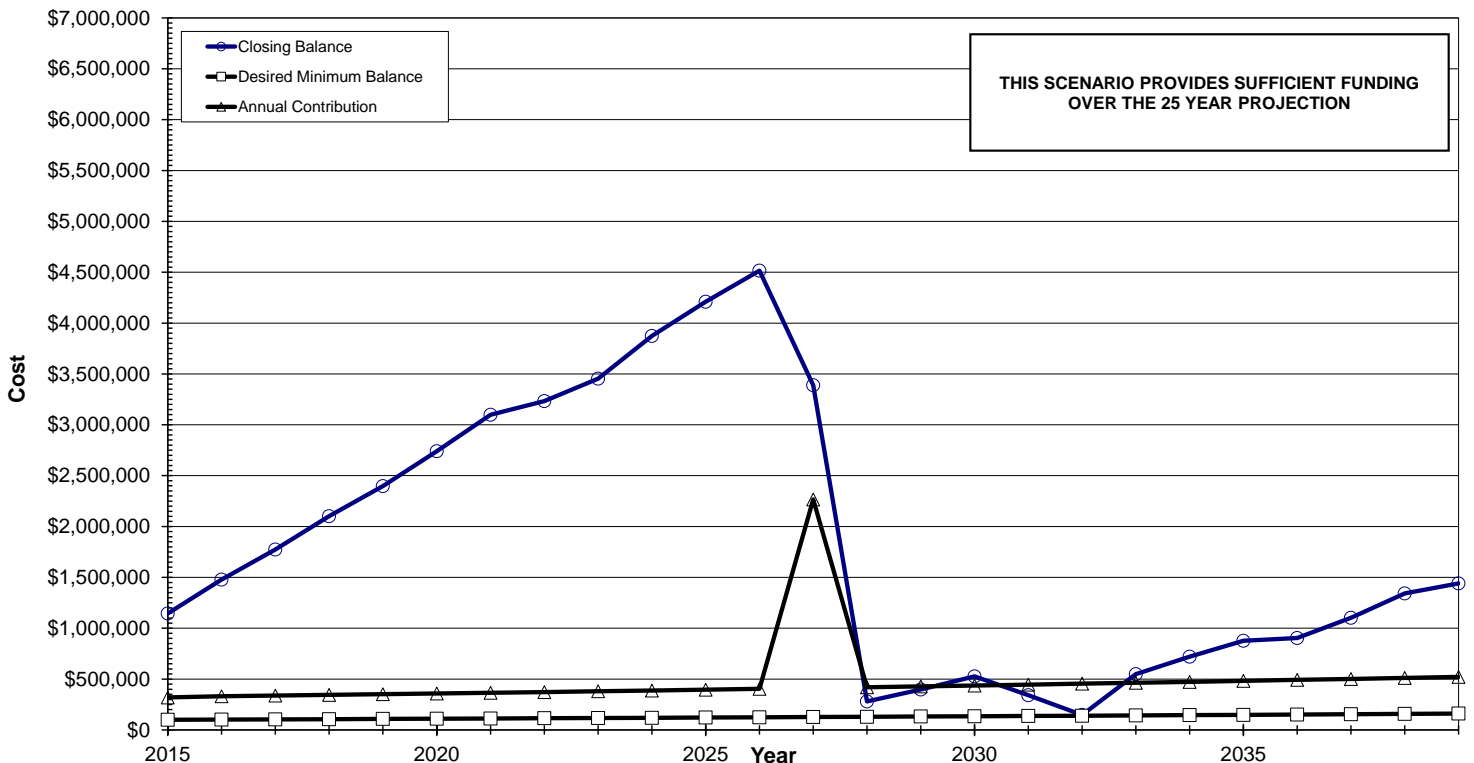
Special Assessments Totalling \$1,854,550.

RJC Job No.: EDM.100641.0003

Number of Units: 131

Year	Opening Balance	Predicted Annual Contribution* (future dollars)	Special Assessment	Expenditure Adjusted for Inflation	Interest Earned	Closing Balance	**Approx. Monthly Contrib. Per Suite to the Reserve Fund
							**not based on Unit Factors
2015	\$900,000	\$320,000		\$100,000	\$25,250	\$1,145,250	\$204
2016	\$1,145,250	\$331,200		\$30,600	\$32,389	\$1,478,239	\$211
2017	\$1,478,239	\$337,824		\$83,232	\$40,138	\$1,772,969	\$215
2018	\$1,772,969	\$344,580		\$63,672	\$47,836	\$2,101,713	\$219
2019	\$2,101,713	\$351,472		\$111,491	\$55,543	\$2,397,237	\$224
2020	\$2,397,237	\$358,502		\$78,390	\$63,432	\$2,740,781	\$228
2021	\$2,740,781	\$365,672		\$79,958	\$72,091	\$3,098,586	\$233
2022	\$3,098,586	\$372,985		\$317,037	\$78,164	\$3,232,698	\$237
2023	\$3,232,698	\$380,445		\$241,362	\$82,556	\$3,454,337	\$242
2024	\$3,454,337	\$388,054		\$58,560	\$90,477	\$3,874,308	\$247
2025	\$3,874,308	\$395,815		\$159,688	\$99,809	\$4,210,243	\$252
2026	\$4,210,243	\$403,731		\$206,400	\$107,723	\$4,515,297	\$257
2027	\$4,515,297	\$411,806	\$1,854,550	\$3,466,739	\$74,696	\$3,389,609	\$1442
2028	\$3,389,609	\$420,042		\$3,574,882	\$45,305	\$280,074	\$267
2029	\$280,074	\$428,443		\$318,654	\$8,374	\$398,236	\$273
2030	\$398,236	\$437,011		\$319,644	\$11,423	\$527,027	\$278
2031	\$527,027	\$445,752		\$641,777	\$10,725	\$341,726	\$284
2032	\$341,726	\$454,667		\$654,613	\$6,044	\$147,824	\$289
2033	\$147,824	\$463,760		\$71,412	\$8,600	\$548,772	\$295
2034	\$548,772	\$473,035		\$317,585	\$15,662	\$719,884	\$301
2035	\$719,884	\$482,496		\$344,740	\$19,719	\$877,359	\$307
2036	\$877,359	\$492,146		\$488,045	\$21,985	\$903,446	\$313
2037	\$903,446	\$501,989		\$327,748	\$24,764	\$1,102,451	\$319
2038	\$1,102,451	\$512,028		\$302,765	\$30,177	\$1,341,892	\$326
2039	\$1,341,892	\$522,269		\$458,405	\$34,346	\$1,440,102	\$332
TOTALS		\$10,395,721	\$1,854,550	(\$12,817,397)	\$1,107,228		

25 Year Projection



RESERVE FUND PROJECTIONS FOR
Callingwood Court Condominium Plan CDE 8476

SCENARIO THREE

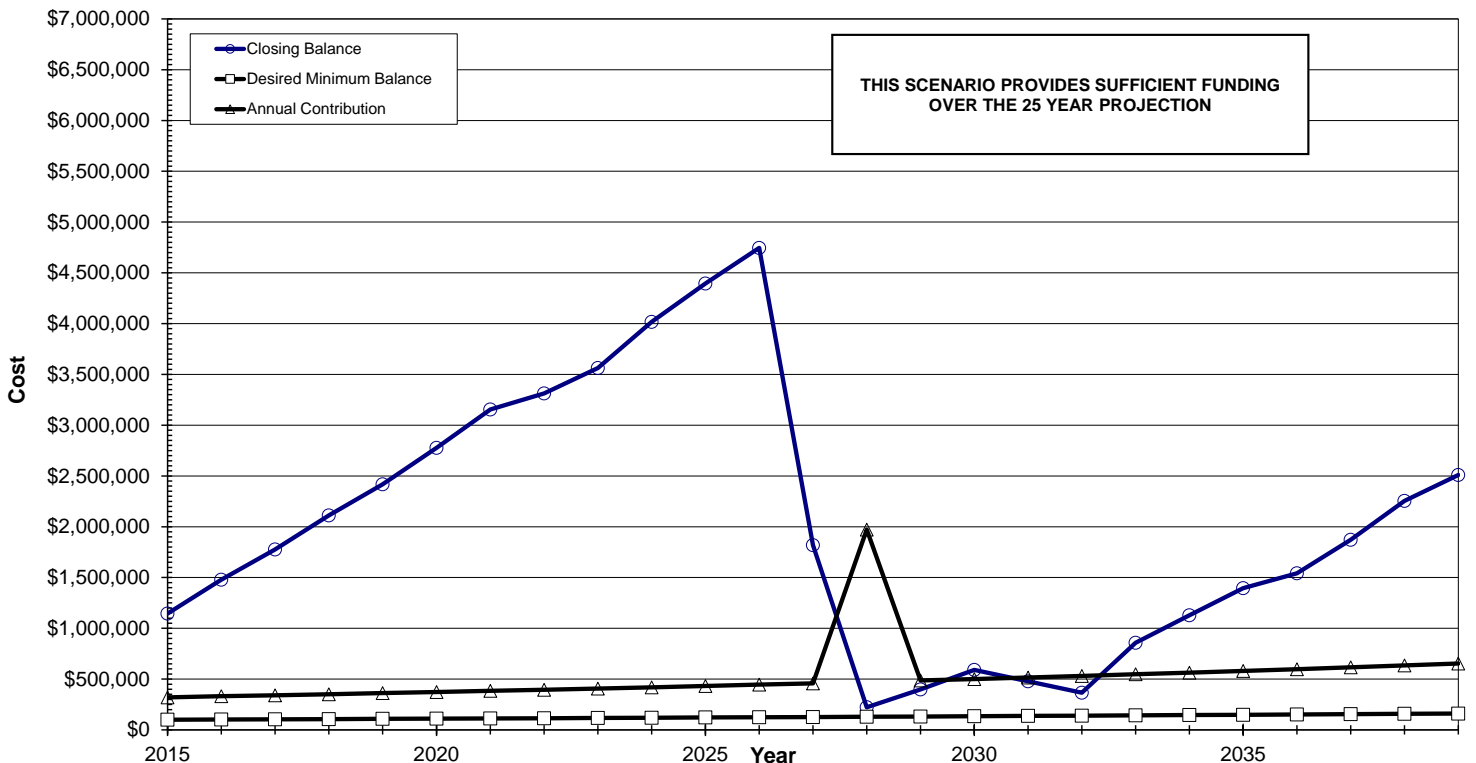
For Year Ending: 2014
Date Of Study: August 2015
Cash Flow Projection: 25 years
Interest Rate: 2.5%
Inflation Rate: 2.0%

Initial Contribution of \$320,000.
Adjusted Contribution of \$331,200. in 2016
Annual Increase of 3.0% thereafter
Special Assessments Totalling \$1,500,000.

RJC Job No.: EDM.100641.0003
Number of Units: 131

Year	Opening Balance	Predicted Annual Contribution* (future dollars)	Special Assessment	Expenditure Adjusted for Inflation	Interest Earned	Closing Balance	**Approx. Monthly Contrib. Per Suite to the Reserve Fund
							**not based on Unit Factors
2015	\$900,000	\$320,000		\$100,000	\$25,250	\$1,145,250	\$204
2016	\$1,145,250	\$331,200		\$30,600	\$32,389	\$1,478,239	\$211
2017	\$1,478,239	\$341,136		\$83,232	\$40,180	\$1,776,323	\$217
2018	\$1,776,323	\$351,370		\$63,672	\$48,004	\$2,112,024	\$224
2019	\$2,112,024	\$361,911		\$111,491	\$55,931	\$2,418,376	\$230
2020	\$2,418,376	\$372,769		\$78,390	\$64,139	\$2,776,894	\$237
2021	\$2,776,894	\$383,952		\$79,958	\$73,222	\$3,154,110	\$244
2022	\$3,154,110	\$395,470		\$317,037	\$79,833	\$3,312,376	\$252
2023	\$3,312,376	\$407,334		\$241,362	\$84,884	\$3,563,233	\$259
2024	\$3,563,233	\$419,554		\$58,560	\$93,593	\$4,017,821	\$267
2025	\$4,017,821	\$432,141		\$159,688	\$103,851	\$4,394,124	\$275
2026	\$4,394,124	\$445,105		\$206,400	\$112,837	\$4,745,666	\$283
2027	\$4,745,666	\$458,458		\$3,466,739	\$81,038	\$1,818,424	\$292
2028	\$1,818,424	\$472,212	\$1,500,000	\$3,574,882	\$6,677	\$222,431	\$1255
2029	\$222,431	\$486,378		\$318,654	\$7,657	\$397,813	\$309
2030	\$397,813	\$500,970		\$319,644	\$12,212	\$591,351	\$319
2031	\$591,351	\$515,999		\$641,777	\$13,212	\$478,784	\$328
2032	\$478,784	\$531,479		\$654,613	\$10,430	\$366,080	\$338
2033	\$366,080	\$547,423		\$71,412	\$15,102	\$857,193	\$348
2034	\$857,193	\$563,846		\$317,585	\$24,508	\$1,127,962	\$359
2035	\$1,127,962	\$580,761		\$344,740	\$31,149	\$1,395,133	\$369
2036	\$1,395,133	\$598,184		\$488,045	\$36,255	\$1,541,527	\$381
2037	\$1,541,527	\$616,130		\$327,748	\$42,143	\$1,872,052	\$392
2038	\$1,872,052	\$634,613		\$302,765	\$50,949	\$2,254,850	\$404
2039	\$2,254,850	\$653,652		\$458,405	\$58,812	\$2,508,909	\$416
TOTALS		\$11,722,047	\$1,500,000	(\$12,817,397)	\$1,204,259		

25 Year Projection



RESERVE FUND PROJECTIONS FOR
Callingwood Court Condominium Plan CDE 8476

SCENARIO FOUR

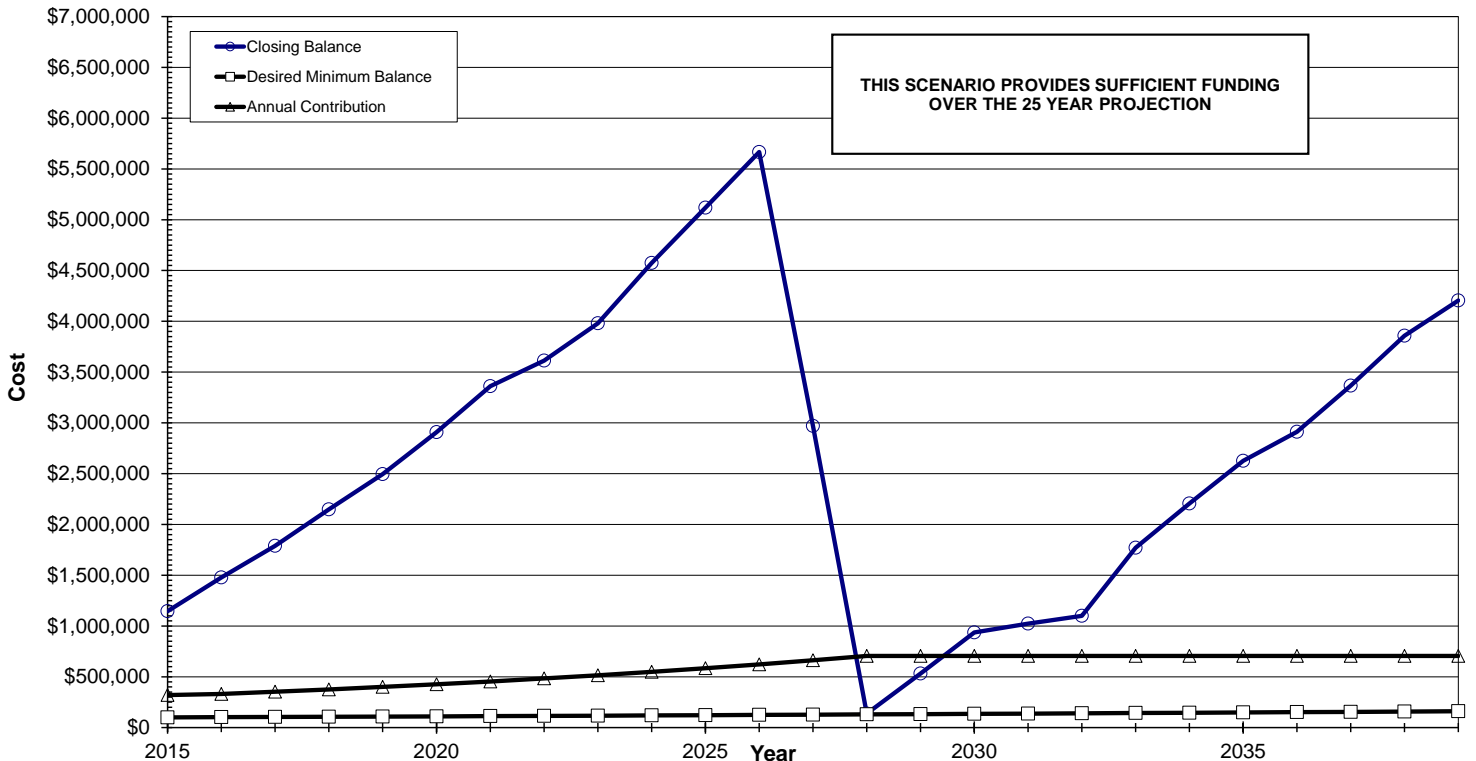
For Year Ending: 2014
Date Of Study: August 2015
Cash Flow Projection: 25 years
Interest Rate: 2.5%
Inflation Rate 2.0%

Initial Contribution of \$320,000.
Adjusted Contribution of \$331,200. in 2016
Annual Increase of 6.5% thereafter
Fixed Contribution of \$705,157. in 2028 and beyond

RJC Job No.: EDM.100641.0003
Number of Units 131

Year	Opening Balance	Predicted Annual Contribution* (future dollars)	Special Assessment	Expenditure Adjusted for Inflation	Interest Earned	Closing Balance	**Approx. Monthly Contrib. Per Suite to the Reserve Fund
							**not based on Unit Factors
2015	\$900,000	\$320,000		\$100,000	\$25,250	\$1,145,250	\$204
2016	\$1,145,250	\$331,200		\$30,600	\$32,389	\$1,478,239	\$211
2017	\$1,478,239	\$352,728		\$83,232	\$40,325	\$1,788,059	\$224
2018	\$1,788,059	\$375,655		\$63,672	\$48,601	\$2,148,644	\$239
2019	\$2,148,644	\$400,073		\$111,491	\$57,323	\$2,494,549	\$254
2020	\$2,494,549	\$426,078		\$78,390	\$66,710	\$2,908,947	\$271
2021	\$2,908,947	\$453,773		\$79,958	\$77,396	\$3,360,159	\$289
2022	\$3,360,159	\$483,268		\$317,037	\$86,082	\$3,612,471	\$307
2023	\$3,612,471	\$514,680		\$241,362	\$93,728	\$3,979,518	\$327
2024	\$3,979,518	\$548,135		\$58,560	\$105,608	\$4,574,701	\$349
2025	\$4,574,701	\$583,763		\$159,688	\$119,668	\$5,118,444	\$371
2026	\$5,118,444	\$621,708		\$206,400	\$133,152	\$5,666,904	\$395
2027	\$5,666,904	\$662,119		\$3,466,739	\$106,615	\$2,968,899	\$421
2028	\$2,968,899	\$705,157		\$3,574,882	\$38,351	\$137,525	\$449
2029	\$137,525	\$705,157		\$318,654	\$8,269	\$532,297	\$449
2030	\$532,297	\$705,157		\$319,644	\$18,126	\$935,936	\$449
2031	\$935,936	\$705,157		\$641,777	\$24,191	\$1,023,506	\$449
2032	\$1,023,506	\$705,157		\$654,613	\$26,219	\$1,100,269	\$449
2033	\$1,100,269	\$705,157		\$71,412	\$35,429	\$1,769,442	\$449
2034	\$1,769,442	\$705,157		\$317,585	\$49,081	\$2,206,095	\$449
2035	\$2,206,095	\$705,157		\$344,740	\$59,658	\$2,626,169	\$449
2036	\$2,626,169	\$705,157		\$488,045	\$68,368	\$2,911,649	\$449
2037	\$2,911,649	\$705,157		\$327,748	\$77,509	\$3,366,567	\$449
2038	\$3,366,567	\$705,157		\$302,765	\$89,194	\$3,858,153	\$449
2039	\$3,858,153	\$705,157		\$458,405	\$99,538	\$4,204,444	\$449
TOTALS		\$705,157	\$0	(\$12,817,397)	\$1,586,781		

25 Year Projection



RESERVE FUND PROJECTIONS FOR
Callingwood Court Condominium Plan CDE 8476

SCENARIO FIVE

For Year Ending: 2014

Initial Contribution of \$320,000.

Date Of Study: August 2015

Adjusted Contribution to \$331,200. in 2016

Cash Flow Projection: 25 years

Adjusted Contribution to \$452,600. in 2017

Interest Rate: 2.5%

Annual Increase of 2.0% thereafter

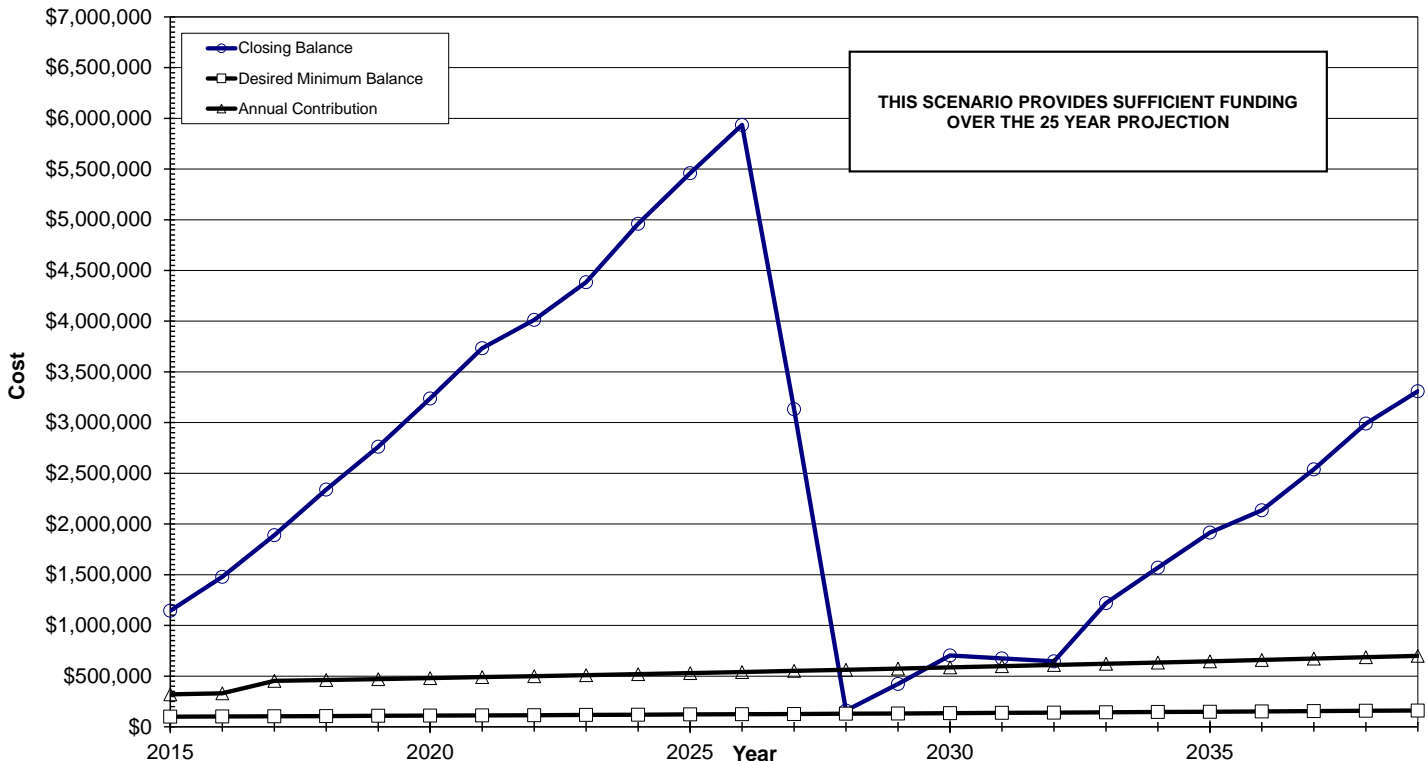
RJC Job No.: EDM.100641.0003

Inflation Rate 2.0%

Number of Units 131

Year	Opening Balance	Predicted Annual Contribution* (future dollars)	Special Assessment	Expenditure Adjusted for Inflation	Interest Earned	Closing Balance	**Approx. Monthly Contrib. Per Suite to the Reserve Fund
							**not based on Unit Factors
2015	\$900,000	\$320,000		\$100,000	\$25,250	\$1,145,250	\$204
2016	\$1,145,250	\$331,200		\$30,600	\$32,389	\$1,478,239	\$211
2017	\$1,478,239	\$452,600		\$83,232	\$41,573	\$1,889,180	\$288
2018	\$1,889,180	\$461,652		\$63,672	\$52,204	\$2,339,364	\$294
2019	\$2,339,364	\$470,885		\$111,491	\$62,977	\$2,761,735	\$300
2020	\$2,761,735	\$480,303		\$78,390	\$74,067	\$3,237,715	\$306
2021	\$3,237,715	\$489,909		\$79,958	\$86,067	\$3,733,733	\$312
2022	\$3,733,733	\$499,707		\$317,037	\$95,627	\$4,012,030	\$318
2023	\$4,012,030	\$509,701		\$241,362	\$103,655	\$4,384,024	\$324
2024	\$4,384,024	\$519,895		\$58,560	\$115,367	\$4,960,727	\$331
2025	\$4,960,727	\$530,293		\$159,688	\$128,651	\$5,459,983	\$337
2026	\$5,459,983	\$540,899		\$206,400	\$140,681	\$5,935,162	\$344
2027	\$5,935,162	\$551,717		\$3,466,739	\$111,941	\$3,132,081	\$351
2028	\$3,132,081	\$562,751		\$3,574,882	\$40,650	\$160,601	\$358
2029	\$160,601	\$574,006		\$318,654	\$7,207	\$423,160	\$365
2030	\$423,160	\$585,486		\$319,644	\$13,902	\$702,905	\$372
2031	\$702,905	\$597,196		\$641,777	\$17,015	\$675,339	\$380
2032	\$675,339	\$609,140		\$654,613	\$16,315	\$646,181	\$387
2033	\$646,181	\$621,323		\$71,412	\$23,028	\$1,219,120	\$395
2034	\$1,219,120	\$633,749		\$317,585	\$34,430	\$1,569,714	\$403
2035	\$1,569,714	\$646,424		\$344,740	\$43,014	\$1,914,413	\$411
2036	\$1,914,413	\$659,353		\$488,045	\$50,002	\$2,135,723	\$419
2037	\$2,135,723	\$672,540		\$327,748	\$57,703	\$2,538,218	\$428
2038	\$2,538,218	\$685,991		\$302,765	\$68,246	\$2,989,689	\$436
2039	\$2,989,689	\$699,710		\$458,405	\$77,759	\$3,308,754	\$445
TOTALS		\$13,706,430	\$0	(\$12,817,397)	\$1,519,720		

25 Year Projection



RESERVE FUND PROJECTIONS FOR
Callingwood Court Condominium Plan CDE 8476

SCENARIO SIX

For Year Ending: 2014
Date Of Study: August 2015
Cash Flow Projection: 25 years
Interest Rate: 2.5%
Inflation Rate: 2.0%

Initial Contribution of \$320,000.
Adjusted Contribution to \$185,000. in 2016
Annual Increase of 15.6% up to 2028
Adjusted Contribution to \$352,800. in 2030
Annual Increase of 5.0% thereafter

RJC Job No.: EDM.100641.0003
Number of Units: 131

Year	Opening Balance	Predicted Annual Contribution* (future dollars)	Special Assessment	Expenditure Adjusted for Inflation	Interest Earned	Closing Balance	**Approx. Monthly Contrib. Per Suite to the Reserve Fund
							**not based on Unit Factors
2015	\$900,000	\$320,000		\$100,000	\$25,250	\$1,145,250	\$204
2016	\$1,145,250	\$185,000		\$30,600	\$30,561	\$1,330,211	\$118
2017	\$1,330,211	\$213,860		\$83,232	\$34,888	\$1,495,727	\$136
2018	\$1,495,727	\$247,222		\$63,672	\$39,688	\$1,718,965	\$157
2019	\$1,718,965	\$285,789		\$111,491	\$45,153	\$1,938,416	\$182
2020	\$1,938,416	\$330,372		\$78,390	\$51,610	\$2,242,008	\$210
2021	\$2,242,008	\$381,910		\$79,958	\$59,825	\$2,603,785	\$243
2022	\$2,603,785	\$441,488		\$317,037	\$66,650	\$2,794,886	\$281
2023	\$2,794,886	\$510,360		\$241,362	\$73,235	\$3,137,119	\$325
2024	\$3,137,119	\$589,976		\$58,560	\$85,071	\$3,753,606	\$375
2025	\$3,753,606	\$682,012		\$159,688	\$100,369	\$4,376,299	\$434
2026	\$4,376,299	\$788,406		\$206,400	\$116,683	\$5,074,988	\$502
2027	\$5,074,988	\$911,398		\$3,466,739	\$94,933	\$2,614,579	\$580
2028	\$2,614,579	\$1,053,576		\$3,574,882	\$33,848	\$127,121	\$670
2029	\$127,121	\$1,217,933		\$318,654	\$14,419	\$1,040,820	\$775
2030	\$1,040,820	\$352,800		\$319,644	\$26,435	\$1,100,411	\$224
2031	\$1,100,411	\$370,440		\$641,777	\$24,119	\$853,192	\$236
2032	\$853,192	\$388,962		\$654,613	\$18,009	\$605,550	\$247
2033	\$605,550	\$408,410		\$71,412	\$19,351	\$961,899	\$260
2034	\$961,899	\$428,831		\$317,585	\$25,438	\$1,098,583	\$273
2035	\$1,098,583	\$450,272		\$344,740	\$28,784	\$1,232,899	\$286
2036	\$1,232,899	\$472,786		\$488,045	\$30,632	\$1,248,272	\$301
2037	\$1,248,272	\$496,425		\$327,748	\$33,315	\$1,450,265	\$316
2038	\$1,450,265	\$521,246		\$302,765	\$38,988	\$1,707,734	\$332
2039	\$1,707,734	\$547,309		\$458,405	\$43,805	\$1,840,443	\$348
TOTALS		\$12,596,782	\$0	(\$12,817,397)	\$1,161,057		

25 Year Projection

