

CHAPARRAL ADULT VILLAGE

Plan No. 9810287
2018 Reserve Fund Study



Prepared For:

The Board of Directors
Chaparral Adult Village Condominium Corporation

c/o FirstService Residential
1100, 840 – 7 Ave S.W.
Calgary, Alberta, T2P 3G2

Prepared By:

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October 9, 2018

Chaparral Adult Village Condominium Corporation
c/o FirstService Residential
1100, 840 – 7 Ave S.W.
Calgary, Alberta, T2P 3G2

FOR: The Board of Directors

Dear Members of the Board:

Reserve Fund Study
Condominium Plan No. 9810287

Westview Consulting Ltd was retained by the Board of Directors to conduct a Reserve Fund Study of the Chaparral Adult Village Condominium Complex. I have prepared and submit to you this report.

The Reserve Fund Study describes the reserve fund concepts and various reserve fund items. It provides current and future replacement reserve estimates and recommends reserve fund actions. The Reserve Fund Study is a complex document and should be reviewed in detail and within the context of this report.

In my opinion, the current reserve fund position of Chaparral Adult Village will be sufficient to meet the ongoing reserve obligations of the corporation, provided that, a reserve fund plan and strategy is adopted and that the annual contributions to the reserve fund are aligned with the recommendations as outlined in schedule "B" of the addenda.

Westview Consulting Ltd would be pleased to provide you with complete review and updating services for the reserve fund requirements as required in the future.

The Assumptions and Limiting Conditions that apply to the opinions expressed herein are also contained in the report.

Should there be any additional questions, please do not hesitate to contact me directly.

Yours truly,



John Cox,
CPM®, CRP, CMOC
403-700-3235

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Executive Summary of Facts and Conclusions

This executive summary has been prepared as a quick reference of pertinent facts and estimates of this Reserve Fund Study, and it is provided as convenience only. Readers are advised to refer to the full text of this Reserve Fund Study for detailed information.

PROPERTY DATA		
Applicant	FirstService Residential 1100, 840 – 7 Ave S.W. Calgary, Alberta, T2P 3G2	
Date of Study	August 22, 2018	
Property	Chaparral Adult Village Chaparral Pointe S.E. Calgary, Alberta	
Reserve Fund Items	Architectural Components - 12 Roofing Components – 3 Site Improvements & Miscellaneous - 11	
Construction Inflation Factor	2.0%	
Interest Rate	1.5%	
Reserve Fund Estimates:	Current Replacement Costs	\$1,873,570
	Future Replacement Costs	\$2,426,559
	Current Reserve Fund Requirements	\$1,081,586
	Future Reserve Fund Accumulation	\$1,281,407
	Current Reserve Requirements	\$1,145,151
	Annual Reserve Assessment	\$84,439

CASH FLOW TABLE

Westview Consulting Ltd. has prepared the following Cash Flow Table, which projects minimum annual funding requirements proposed to meet estimated Reserve Fund expenditures.

CHAPARRAL ADULT VILLAGE - Plan No. 9810287						
Year ending 31-Dec	Opening Balance	Recommended Annual Contribution	Estimated Inflation Adjusted Expenditures	Estimated Interest Earned 1.50%	Percentage Increase in Recommended Annual Contributions	Closing Balance
2018	\$508,839	\$54,000	\$130,570	\$7,633	n/a	\$439,902
2019	\$439,902	\$56,700	\$36,414	\$6,599	5.00%	\$466,786
2020	\$466,786	\$59,535	\$0	\$7,002	5.00%	\$533,323
2021	\$533,323	\$62,512	\$0	\$8,000	5.00%	\$603,834
2022	\$603,834	\$65,637	\$272,638	\$9,058	5.00%	\$405,891
2023	\$405,891	\$68,919	\$69,977	\$6,088	5.00%	\$410,922
2024	\$410,922	\$72,365	\$43,650	\$6,164	5.00%	\$445,801
2025	\$445,801	\$75,983	\$0	\$6,687	5.00%	\$528,471
2026	\$528,471	\$79,783	\$0	\$7,927	5.00%	\$616,181
2027	\$616,181	\$83,772	\$26,818	\$9,243	5.00%	\$682,377
2028	\$682,377	\$87,960	\$11,600	\$10,236	5.00%	\$768,973
2029	\$768,973	\$92,358	\$0	\$11,535	5.00%	\$872,866
2030	\$872,866	\$96,976	\$0	\$13,093	5.00%	\$982,936
2031	\$982,936	\$101,825	\$0	\$14,744	5.00%	\$1,099,505
2032	\$1,099,505	\$106,916	\$380,705	\$16,493	5.00%	\$842,209
2033	\$842,209	\$112,262	\$352,000	\$12,633	5.00%	\$615,104
2034	\$615,104	\$117,875	\$367,380	\$9,227	5.00%	\$374,826
2035	\$374,826	\$123,769	\$422,300	\$5,622	5.00%	\$81,917
2036	\$81,917	\$129,957	\$87,400	\$1,229	5.00%	\$125,703
2037	\$125,703	\$136,455	\$163,397	\$1,886	5.00%	\$100,647
2038	\$100,647	\$143,278	\$150,370	\$1,510	5.00%	\$95,065
2039	\$95,065	\$150,442	\$141,700	\$1,426	5.00%	\$105,233
2040	\$105,233	\$157,964	\$0	\$1,578	5.00%	\$264,775
2041	\$264,775	\$165,862	\$0	\$3,972	5.00%	\$434,609
2042	\$434,609	\$174,155	\$4,800	\$6,519	5.00%	\$610,484

RECOMMENDATIONS

Westview Consulting Ltd. recommendations, set out below and detailed in this report, will assist the corporation to achieve and maintain an adequate reserve fund. In our opinion, the current reserve fund balance, recommended annual contributions and earned investment income will adequately fund immediate and future reserve fund expenditures.

1. The corporation should prepare and implement a long-term reserve fund strategy.
2. Major repairs and replacements should be recorded in, and funded from, a reserve fund account.
3. We recommend that the reserve fund contribution of \$54,000 remains the same for 2018 and then increases annually by 5% annually thereafter, at least until the next study.
4. The reserve fund should be fully invested in guaranteed securities, yielding at least 1.5% per annum. We suggest the Board look into alternative funding options to maximize their investment returns moving forward.
5. The corporation should make such expenditures, as necessary to maintain the property in optimum condition.
6. The reserve fund should be reviewed every year to ensure that the underlying assumptions are still valid and that the estimates remain current.
7. The corporation should update the reserve fund study every five (5) years.
8. It should be noted that this is a 25-year study in accordance with the Provincial Condominium Act. The recommended increase in contributions maintains the fund at a level to complete planned replacements without over taxing the owners. This may change when the reserve study is completed in five years as the expenditures are within the 25-year period, however it should be noted that expenditures for common components between year 25 and beyond may change the contribution level.

RESERVE FUND PRACTITIONERS CERTIFICATION

I hereby certify that I inspected the within described property. The site, exterior, and interior of the building were inspected.

The analyses, opinions, and conclusions reported herein are my personal unbiased views and are limited only by the Contingent and Limiting Conditions contained in the report. To the best of my knowledge and belief, the statements contained in this report are true and correct, subject to the Limiting Conditions herein set forth.

All factors known to the report (and the extent that the data permits) that have an impact on the opinions contained in the Reserve Fund Study have been taken into consideration to the extent felt necessary in rendering a considered opinion of value. No significant data has been knowingly withheld.

Employment in and compensation for making this report are in no way contingent upon the opinions reported. The opinions contained in this report have not been influenced by any requirement to report a predetermined conclusion.

I further certify that I have no interest, present or contemplated, in the property or its management.

This Reserve Fund Study was prepared in conformity with accepted practices for reserve fund studies.

Not all details of the process are included in this report. Additional information is contained in the practitioner's files.

Unless otherwise stated, all work in completing this report has been personally completed by me.

John Cox, CRP
Certified Reserve Planner

TERMS AND LIMITING CONDITIONS

1. No title search has been made. The legal and survey description of the property as stated herein are those provided by the Board of Directors and the land titles office and are assumed to be correct.
2. Any architectural, structural, mechanical, electrical and other plans and specifications of the building and improvements provided by the Board of Directors and the Property Manager are assumed to be correct. Furthermore, all buildings and improvements are deemed to have been constructed and finished in accordance with such plans and specifications, unless otherwise noted.
3. Sketches, drawings, diagrams, photographs, or any exhibits in the report are intended to assist the reader in visualizing the property and its surroundings and are included for the sole purpose of illustration. The drawings are not intended as surveys and no responsibility is assumed for their cartographic accuracy. Any drawings are not intended to be exact in size, scale or detail.
4. No legal survey, soil tests, engineering investigations, detailed quantity survey compilations, nor exhaustive physical examinations have been made. Accordingly, no responsibility is assumed concerning these matters, or other technical and engineering techniques, which would be required to discover an inherent or hidden condition of the property.
5. Areas and dimensions of the property may or may not have been physically measured. If from plans, I assume the plans to be reasonably accurate.
6. In order to arrive at supportable replacement cost estimates, it was found necessary to utilize both documented and other cost data. A concerted effort has been put forth to verify the accuracy of the information contained herein. Accordingly, the information is believed to be reliable and correct, and it has been gathered to standard professional procedures, but no guarantee as to the accuracy of the data is implied.
7. The distribution of cost and other estimates in this report apply only under the program of utilization as identified in this report. The estimates herein must not be used in conjunction with any other appraisal or reserve fund study and are invalid if so used.
8. The client to whom this report is addressed may use it in deliberations affecting the subject property only, and in so doing, the report must not be extracted; it must be used in its entirety. Any and all liability is denied to all parties other than the party to whom this report is addressed.
9. The agreed compensation for services rendered in preparing this report does not include fees for consultations and/or arbitrations, if any. Should personal appearance be required in connection with this report, additional fees will have to be negotiated. Unless otherwise noted, all estimates are expressed in Canadian dollars.
10. All opinions stated are presented as the Reserve Fund Practitioner's considered opinion based on the information set forth in the report. I assume no responsibility for changes in market conditions.
11. It is assumed that the construction and use of the subject property complies with all public authorities having jurisdiction, including but not limited to the Canadian Environmental Protection Act and any other applicable federal, provincial, municipal, and local environmental impact or energy laws or regulations.
12. Copyrights of this report remain with the author. This report cannot be duplicated in any format without the express written consent of the author.

Purpose of Reserve Fund Study

The purpose of this Reserve Fund Study is to provide cost estimates of various reserve components, subject to major repairs and/or replacement over the life time of the property, and to estimate the funding required for such major repairs and replacement in accordance with the provisions of the Condominium Property Act of Alberta (September 2000).

This reserve fund study applies as of August 22, 2018.

Definition of Reserve Fund Study

This Reserve Fund Study is a financial document, and it includes cost estimates of major repairs and replacement of the common element components and assets of the corporation. It provides financial information, estimates and projections for funding the major repairs and replacement of the common element components and assets of the corporation.

Condominium Property

The property is located on Chaparral Pointe S.E., in Calgary, Alberta.

The property is legally described as follows: Bareland Condominium Plan of Lot 65, Block 17, Plan 9810097 within the N.E. ¼, Sec. 23, Twp. 22, Rge. 1, W. 5th M.

Boundaries of Condominium Units

Condominium unit boundaries are basically defined by the Surveys Act and section 9 (1) of the Condominium Property Act.

Reserve Fund Study

This Reserve Fund Study is a financial document, which provides the basis for funding major repairs and replacement of the common elements and assets of the corporation.

It is a practical guide to planning budgets and maintenance programs, and unlike a technical audit, it deals not in detailed technical matters but rather takes a business approach to reserve fund management.

This Reserve Fund Study comprises the following elements: It identifies the reserve components, their quality, normal life span and present condition;

- It identifies the reserve components, their quality, normal life span and present condition;
- It provides current replacement cost estimates including the cost of removing worn-out items and special safety provisions;
- It provides observed condition estimates of components in terms of year's effluxed and accrued reserve costs;
- It projects the useful life of reserve components in terms of remaining serviceable years:

- It projects current replacement costs at an appropriate and compounded inflation rate;
- It projects the value of current reserve funds compounded at a long-term interest rate;
- It calculates current reserve fund contributions required and to be invested in interest bearing securities.

The salient estimates and conclusions of this Reserve Fund Study are contained in the various schedules hereinafter. Any recommendations are for guidance to management and the board of directors.

Methodology

The methodology of a reserve fund study includes the examination of the condominium documentation, financial statements, budgets and existing reserve funds, the physical inspection of common elements, etc. Building plans; specifications and reports, field notes and other information is analyzed in preparation of various estimates and value judgements.

In estimating replacement reserves, the component method of valuation is used. Reserve items consist of building or site components, such as roof systems, pavement and sidewalks, each of which is deemed to have a limited life span, and therefore, they must be repaired, replaced or periodically upgraded to maintain the property in excellent condition.

Replacement cost estimates are based on the assumption of using quality materials, as specified or built, or in the case of older developments, as required under current building code regulations, at contractors' prices, using union labour and current construction techniques, and including contractors' overhead and profit. The RS Means Manual and local contractor estimates have been utilized for pricing replacement components.

In estimating the life span of the various components, physical deterioration, functional obsolescence and environmental factors are being contemplated. In measuring the reserve requirements, we have considered depreciation tables and normal life span experience records. Finally, I relied on my own judgement and experience of estimating the current condition and remaining life spans of reserve components.

Scope and Investigation

The property has been inspected. Available building plans (as indicated later in this report) have been examined for details of construction, improvements and other relevant component data. I also examined the condominium documents and available financial statements and/or budgets.

Cost data have been investigated, using construction cost services, modified as to time, location and quality of construction.

Reserve Fund Estimates

Replacement reserve estimates are conveniently classified in terms of building groups, common element facilities and site improvements. Reserve fund estimates include not only replacement components but also repairs to building and equipment.

Reserve fund estimates apply to structures, improvements and equipment, which comprise common elements.

Any additions or improvements made by unit owners to their respective premises are not included in these estimates. Owners are advised to adopt maintenance programs for their respective units.

Reserve fund estimates include provisions for demolition and disposal costs, dumping fees, as required, and the applicable Goods and Services Tax ("GST").

Reserve Fund Definitions and Concepts

In estimating reserves required for maintaining the building components and improvements at desired standards and conditions, one must quantify the various reserve components, estimate replacement costs and project cost estimates in accordance with anticipated life spans. Therefore, it is essential that the terminology and methodology be clearly understood.

Reserve Component or Item	Identification and description of the building component or improvement.
Replacement Cost	The estimated cost of repairing or replacing a reserve component at current prices including the cost of demolition and disposal.
Expected or Normal Life Span	The estimated life expectancy of a reserve component in terms of years under normal conditions.
Actual Age	The chronological age of the building components, expressed in years.
Effective Age	The observed condition estimate of building components and improvements not necessarily the actual age, expressed in years.
Remaining Life Span	The difference between the expected or normal life span and the effective age of the reserve component.

Projected Inflation	An estimated long-term inflation factor, used in projecting cost estimates.
Projected Interest Rate	An averaged long-term interest rate, used in calculating interest earned from the investment of reserve funds.
Current Replacement Costs	The estimated costs of replacing reserve components at current prices.
Future Replacement Costs	The estimated costs of replacing reserve components at future prices.
Future Reserve Accumulation	The current reserve requirements invested at the projected interest rate over the relevant time period.
Future Reserve Requirements	The shortfall between the future replacement cost estimate and the future reserve fund accumulation.
Annual Reserve Assessment	Annual amount required to be paid into the reserve fund and to be invested at the projected interest rate to fund the future reserve requirements.

Conditions and Assumptions

In estimating various reserve items, certain assumptions are made in respect to structural repairs and replacements of improvements. For example, reserves for exterior walls, structural repairs, replacements of mechanical and electrical components are difficult to predict and/or quantify. Therefore, the only reasonable approach is to provide contingency estimates.

The underlying assumptions and quantification of contingency reserves should be reviewed from time to time, particularly, in the context of repair experience and problem investigations, such as water damage, cracks in walls and concrete structures, noticeable deterioration, etc.

Reserve fund estimates are subjective, and it must be appreciated that reserve fund budgeting and projections are not exact sciences. They are, at best, prudent provisions for all possible contingencies, if, as and when they arise. Reserve fund requirements are subject to change and must be reviewed and modified over time, not less than every five years.

In essence, the corporation should adopt a long-term policy regarding reserve fund allocations, which must be flexible to accommodate changes in reserve fund requirements in the future.

Reserve Fund Projection Factors

Historically, building costs have been rising at various rates from year to year, depending on business cycles, economic conditions, interest rates, etc.

In boom periods, cost increases were fairly pronounced, whereas in recessionary times, cost increases were only nominal, or costs even declined.

Analyzing long term cost increases, I have examined the consumer price index.

Long term cost increases in the future, are not expected to be impacted by extreme inflationary pressures, and therefore, I expect the long-term average cost factor will remain at or slightly above 2.0%. For the purpose of this study, the long-term inflation rate is assumed to be 2.0%.

Similarly, interest rates have fluctuated from period to period, and they have been impacted by the inflation as well as government policies. There are some indications that rates could rise slightly over the foreseeable future.

Based on the amount of funds currently held by the Board and the capacity to generate additional sums on an annual basis, it is assumed that an overall long-term investment rate of 1.5% is reasonable

Inflation Rate	2.0%
Interest Rate	1.5%

RESERVE FUND PROJECTIONS SHOULD BE REGULARLY REVIEWED TO ADJUST FOR CHANGES IN INFLATIONARY TRENDS AND INVESTMENT RETURNS, AS THEY SIGNIFICANTLY IMPACT RESERVE FUND REQUIREMENTS.

Descriptions - Buildings and Improvements

GENERAL DESCRIPTION

Chaparral Adult Village was designed and constructed in 1998 and consists of 48 multi-unit residential townhome units.

Basic construction consists of reinforced concrete foundation, wood frame construction, double glazed windows and metal doors. The roofing on all buildings is a sloped asphalt assembly.

Site improvements include paved access drive, concrete driveways, town storm and sanitary sewers and water supply system, vinyl and wood fencing, and landscaping.

The project is architecturally designed and has numerous design features. The overall construction, materials and workmanship are of good quality, and the property is in good condition.

BUILDING PLANS

The condominium plans were reviewed and measurements for several of the building components were used from these plans.

The building and improvements have been inspected and photographed. Various construction details, facilities, equipment installations and improvements have been noted for consideration in the component estimates herein.

BASIC CONSTRUCTION COMPONENTS

Excavation and Foundations: reinforced concrete, compacted gravel reinforced footing and reinforced concrete floor.

Framing: wood frame structure and structural floors.

External Walls: wood frame, building paper, sheathing on framing, fibreglass insulation, vapour barrier, vinyl and stone accent siding, double-glazed vinyl windows and metal doors.

Roof Construction: consists of a sloped asphalt roof assembly. Building paper, sheathing, vapour barrier and insulation, metal soffits, fascia, eavestroughs and downspouts.

Electrical: Incoming service, wiring, fixtures; light and power, TV and telephone wiring.

Reserve Components - Principles and Concepts

Reserve components are considered to be such common element components or improvements, which will be subject to physical deterioration and/or functional obsolescence, and which must be repaired and/or replaced in the future.

Reserve components must be identified and analyzed. A detailed description and analysis of each reserve component will be provided in this Reserve Fund Study hereinafter.

The reserve fund analysis herein identifies, describes and analyzes reserve components in these terms:

Identification and Description:	This includes the name of the project and a brief description of the reserve component.
Quantity Survey:	This is the unit quantity of the reserve component within the project.
Unit Cost Estimate:	This is the current replacement cost estimate of the reserve component on a per unit basis.
Replacement Cost Estimate:	It provides a total current replacement cost estimate of the reserve component.
Life Span Analysis:	<p>This is the life cycle analysis of each reserve component based on the observed condition estimate involving:</p> <ul style="list-style-type: none"> • Life Span Estimate of the reserve component in terms of years; • Effective Age Estimate, which is an observed condition judgment in terms of years; and • Remaining Life Estimate, which is the useful life of the reserve remaining from the date of the inspection.
Reserve Fund Estimates:	<p>These are various estimates in respect to reserve fund budgeting, which include:</p> <ol style="list-style-type: none"> 1. Current Replacement Costs: these are the current replacement cost estimates of the various reserve components. 2. Future Replacement Costs: these are the future replacement cost estimates of the reserve components based on long-term inflationary trends.

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3. **Current Reserve Fund Requirements:** these are the current reserve fund requirements (or obligations), which consist of the amount of reserve funding required today based on the effective age analysis of each reserve component.
 4. **Future Reserve Fund Accumulation:** this is the estimated future reserve fund accumulation, which is the current amount in the reserve fund invested at a long term, stable interest rate, at the end of the life span of each reserve component.
 5. **Future Reserve Fund Requirements:** these are the estimated future reserve fund requirements, which consist of the estimated amount required for the repair or replacement of the reserve component, which must be funded by adequate reserve fund contributions over the estimated remaining life span of the reserve component.
 6. **Annual Reserve Fund Assessment:** this is the required reserve fund contribution expressed in annual payments invested at a long term, stable interest rate over the remaining life of the reserve component.
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Deficiency Analysis:

This is a brief description of any observed condition, which requires remedial action.

The reserve fund components are grouped in categories for easy reference and convenience. The cost estimates are taken from RS Means Repair & Remodeling Cost Data, Handscomb Yardsticks for Costing – cost data from contractors, the property manager, Condominium Corporation and our database of costs. The life span estimates herein are based on life cycle manuals, our experience and observation of conditions.

RESERVE FUND ESTIMATES:

UNDERLYING ASSUMPTIONS

The following assumptions underlie the reserve fund estimates hereinafter and are based on my investigation, observation and analysis of the various reserve components and our experience.

QUALITY OF CONSTRUCTION

The project had been designed and constructed in accordance with applicable building codes and then current construction practices. The quality of construction, materials and workmanship are generally considered to be good.

The reserve fund estimates hereinafter are affected by observed conditions, the current program of renovations and preventive maintenance, and an analysis of building components, which reflect the quality of construction and finishing.

DEMOLITION AND DISPOSAL COSTS

The estimates herein include provisions for demolition and disposal costs including dumping fees. These costs have been rising in recent years; particularly, dumping of certain materials has become problematic and very costly. It appears that certain codes and environmental regulations will become more stringent in future years, all of which will further increase disposal costs.

GOODS AND SERVICE TAX

The Goods and Services Tax ("GST") applies to all repairs and replacements including disposal costs. Therefore, these costs are included in the reserve fund estimates hereinafter.

CONTINGENCY RESERVES

It is impossible to forecast the incidence of repairs or replacements of various reserve components, particularly, major components, such as exterior walls, structural elements, sewer and water systems. Therefore, reserve estimates are of a contingency nature, and as such, they are subject to changing conditions and repair experience over time.

STRUCTURAL DEFICIENCIES

The building appears to be structurally sound and there have not been any reports of structural deficiencies.

MANAGEMENT POLICIES

The Board of Directors should devise appropriate policies of reserve fund planning and management, differentiating between operating expenses and reserve fund expenditures.

Routine maintenance and repairs are deemed to be operating expenses; in addition, any repairs or replacements under \$1,000 should be considered operating expenses and budgeted accordingly. Only major repairs and replacements more than \$1,000 should be charged to the reserve fund.

LIFE SPAN ANALYSIS

Each reserve item grouping herein has been analyzed in terms of life cycle condition and expected remaining useful life. This life span analysis is based on the following factors:

- 1. Normal Life Span**

Each reserve item has been analyzed in terms of component type, quality of construction, statistical records, and normal life experience.

- 2. Effective Life Analysis**

This is the critical analysis of a reserve component and consists of determining the effective age of the reserve item within its normal life cycle based on the observed condition of the reserve item.

The validity of this analysis depends on the experience of the reserve fund planner or analyst, as this is a subjective estimate rather than an objective assessment.

3. Remaining Life Span

Given a normal life span estimate and a sound estimate of the effective age, the remaining life span of a reserve item is determined by subtracting the effective age from the normal life span. This does not mean that reserve expenditures should only be made at the end of the remaining life. Reserve expenditures should and must be made during the remaining life span to maintain building components and facilities in good condition.

A life span analysis is a subjective, or empirical, assessment of the life cycle status of a reserve component, and as such, it is only as good as the considered opinion of the reserve fund analyst. Furthermore, the life span of a reserve component is subject to change due to numerous factors.

PROPERTY MANAGEMENT AND MAINTENANCE

The property is professionally managed. Effective maintenance of the building and improvements, as the quality of management has a direct effect on reserve planning and building maintenance. Proactive management can prolong the life span of reserve components and ensure efficient building maintenance and operations, all of which are considerations in the reserve estimates hereinafter.

PREVENTIVE MAINTENANCE

The Board of Directors are well advised to have a preventative maintenance program as this type of maintenance is critical to effective and efficient operation of building components and assists in preventing premature major repair or replacement.

The Board should regularly conduct inspections and commission surveys and investigations to ensure the continued efficient operation of the building systems and the most effective use of resources.

REPAIR AND REPLACEMENT COST ESTIMATES

The costs of repairs and/or replacements of the many building components are invariably higher than original building costs.

When a building is being constructed, contractors have considerable latitude of planning their work and utilize economies of scale to keep costs within construction budgets, whereas repair work must frequently be performed in an expedient manner, and workers must work around existing structures. There are also other constraints, which increase the costs of remedial work.

Cost estimates must, therefore, consider such additional costs as special construction, safety installations, limited access, noise abatements, and the convenience of the occupants.

INSURANCE REPAIRS

Insurance should cover the buildings and improvements against numerous perils, but it is not intended to be a maintenance program. The difference between an insurance claim and maintenance repairs is not always clear, and it can result in prolonged disputes.

For example, an unexpected sewer cave-in and resulting back up is a legitimate insurance claim, and as such, it should be covered by the insurance policy subject to the stated deductible. Whereas the deterioration of a catch basin and sewer connection, which caused a cave-in resulting into a sewer back-up, is a building repair expense.

Reserve Components - Description and Analysis

STRUCTURAL & ARCHITECTURAL COMPONENTS

Reserve Component: (1) Structures

This reserve provision covers the structural elements of the buildings.

The structure, footings and foundations consist of reinforced, cast-in-place concrete, and are deemed to have the building life span.

However, the structures are subject to freeze thaw cycles and settling over time that may cause damage to the foundations over their service life, therefore, we have reserved an allowance for a few foundation repairs.

Repairs to foundations can be completed from the inside for minor damage and with exterior excavation for any major damages.

This estimate should be reviewed in later years and updated based on any repair experience.

Reserve Component	Expected Life (Yrs.)	Effective Age (Yrs.)	Remaining Life (Yrs.)	Current Cost	Future Cost
Structures	50	20	30	20,000	36,227

Deficiency Analysis

During our site visit, we noted some repair foundations that appeared to have been patched/repared.

No other deficiencies have been noted or reported.

Reserve Component: (2) Vinyl Siding - Replacement

This reserve provision covers the vinyl siding which makes up the majority of siding on all buildings throughout the complex.

Vinyl siding is extruded polyvinylchloride (PVC). The colours go through the material, so scratching the surface will not reveal any colour inconsistencies. This allows for a more maintenance free finish that does not require repainting.

Good siding installations prevent or minimize water penetration.

With proper installation and maintenance this component has a life expectancy 35 plus years.

This estimate is for full replacement at the end of its service life.

This is a long-term reserve. This estimate should be reviewed in later years based on repair experience.

Reserve Component	Expected Life (Yrs.)	Effective Age (Yrs.)	Remaining Life (Yrs.)	Current Cost	Future Cost
Vinyl Siding - Replacement	35	20	15	200,000	269,174

Deficiency Analysis

No deficiencies were noted, and none were reported.

Any damage or deterioration should be promptly repaired and sealed to ensure the integrity of this exterior component.

Reserve Component: (3) Wood Siding

This reserve provision covers the wood siding on all buildings throughout the complex.

The wood siding is located around windows and at the roof level.

With proper installation and maintenance, we estimate this component has a life expectancy 35 plus years, however isolated replacement may be required over its service life.

This is a long-term reserve. This estimate should be reviewed in later years based on repair experience.

Reserve Component	Expected Life (Yrs.)	Effective Age (Yrs.)	Remaining Life (Yrs.)	Current Cost	Future Cost
Wood Siding	35	20	15	50,000	67,293

Deficiency Analysis

No deficiencies were noted, and none were reported.

Any damage or deterioration should be promptly repaired and sealed to ensure the integrity of this exterior component.

Reserve Component: (4) Insulation & Venting

This reserve provision covers adding additional insulation and vents, vent replacement.

These components have a long-life expectancy, however may require replacement throughout the service life.

For the purposes of this study we have estimated repairs and isolated replacements on a 35-year cycle.

This is a long- term contingency reserve, which covers shorter-term repairs. This estimate should be reviewed in later years and updated based on repair experience.

Reserve Component	Expected Life (Yrs.)	Effective Age (Yrs.)	Remaining Life (Yrs.)	Current Cost	Future Cost
Insulation & Venting	35	34	1	85,000	86,700

Deficiency Analysis

The Board has indicated that the insulation was not adequate when the project was constructed and they plan to add insulation this year.

Reserve Component: (5) Stone Siding - Repairs

This reserve provision covers repairs any ongoing repairs needed to the stone siding.

This siding has a long-life expectancy, however may require mortar repair or stone replacement throughout its service life.

For the purposes of this study we have estimated repairs and isolated replacements on a 15-year cycle.

This is a long- term contingency reserve, which covers shorter-term repairs. This estimate should be reviewed in later years and updated based on repair experience.

Reserve Component	Expected Life (Yrs.)	Effective Age (Yrs.)	Remaining Life (Yrs.)	Current Cost	Future Cost
Stone Siding - Repairs	5	4	1	1,000	1,020

Deficiency Analysis

No deficiencies were noted to the stone, and none were reported.

The exterior walls should be regularly inspected. Any cracks or deterioration should be promptly repaired/replaced to ensure the integrity of this exterior component.

Reserve Component: (6) Parging - Repairs

This reserve provision covers parging finishing on the building’s exterior.

Parging is the coating applied to the visible (above-grade) portion of the foundation walls. It is applied to poured-concrete foundations to hide surface imperfections, marks from formwork and the like, so its role is essentially decorative.

This is an estimate for the repair/replacement of this component and should be regularly monitored and updated based on repair experience.

Reserve Component	Expected Life (Yrs.)	Effective Age (Yrs.)	Remaining Life (Yrs.)	Current Cost	Future Cost
Parging - Repairs	10	5	5	3,000	3,312

Deficiency Analysis

During our site inspection we did not notice any deficiencies to the parging and none were reported.

The exterior walls should be regularly inspected. Any cracks or deterioration should be promptly repaired/replaced to ensure the integrity of this exterior component.

Reserve Component: (7) Windows & Sliding Doors

This reserve provision covers the windows and sliding doors that fall under common property and are included in this study.

They are constructed of vinyl material that we estimate to have a life expectancy of up to 35 years.

This is a long- term contingency reserve, which covers shorter term repair and replacement cycles.

Reserve Component	Expected Life (Yrs.)	Effective Age (Yrs.)	Remaining Life (Yrs.)	Current Cost	Future Cost
Windows & Sliding Doors	35	20	15	550,000	740,228

Deficiency Analysis

The windows appear to be in fair condition. No major deficiencies were reported. The Board provided the costing for these components.

Regular inspection of the windows will identify failed components at an early stage and allow for the prompt repair or replacement to maintain the integrity of the building envelope.

Reserve Component: (8) Doors

This reserve provision covers the unit entry doors located and the entrance of the units.

This is a long- term contingency reserve, which covers shorter term repair and replacement cycles which is estimated to be 30 years.

Reserve Component	Expected Life (Yrs.)	Effective Age (Yrs.)	Remaining Life (Yrs.)	Current Cost	Future Cost
Doors	35	20	15	100,000	134,587

Deficiency Analysis

There were no noted deficiencies, and none were reported.

The doors appear to be in fair condition.

Regular inspection of the doors will identify failed components at an early stage and allow for the prompt repair or replacement to maintain the integrity of the building envelope.

Reserve Component: (9) Overhead Doors

This reserve provision covers the double metal overhead garage doors.

These doors are all metal panel doors and appear to be in good condition, we estimate the effective age to be 20 years.

This type of door has an estimated life of 25 years if maintained as necessary.

This is a long-term contingency reserve, which covers shorter-term repair and replacement cycles.

Reserve Component	Expected Life (Yrs.)	Effective Age (Yrs.)	Remaining Life (Yrs.)	Current Cost	Future Cost
Overhead Doors	25	20	5	67,000	73,973

Deficiency Analysis

There were no noted deficiencies, and none were reported.

The overhead doors appear to be in fair condition.

Regular inspection of the doors will identify failed components at an early stage and allow for the prompt repair or replacement to maintain the integrity of the building envelope.

Reserve Component: (10) Decks

This reserve provision covers the rebuilding of the decks located at the back of the units.

For the purposes of this study we estimate a life of 25 plus years provided they were installed and maintained throughout their service life.

The Board has stated that deck railings are the responsibility of the owners.

Although this is a long-term contingency reserve, it covers any repairs that may be necessary and incidental costs, which may occur.

Reserve Component	Expected Life (Yrs.)	Effective Age (Yrs.)	Remaining Life (Yrs.)	Current Cost	Future Cost
Decks	25	19	6	120,000	135,139

Deficiency Analysis

There were no noted deficiencies to the decking, and none were reported.

These components should be regularly inspected and must be kept free from any water retaining covering or obstruction; they must always be well drained.

Reserve Component: (11) Caulking & Waterproofing

This reserve provision covers the costs related to caulking and waterproofing the building. This component consists of sealing the joints around windows, doors and wall openings as well as joints of differing building materials to ensure the integrity of the building against climatic elements.

This reserve estimate is based on using high quality caulking compounds and proper application on an estimated 15-year cycle.

The cost estimate for this reserve component is based on an educated guess. Due to the nature of the windows and exterior wall design, it is impossible to complete a unit in place cost estimate.

This is a critical component which helps to maintain the integrity of the building envelope and its resistance to water penetration.

Reserve Component	Expected Life (Yrs.)	Effective Age (Yrs.)	Remaining Life (Yrs.)	Current Cost	Future Cost
Caulking & Waterproofing	15	14	1	10,000	10,200

Deficiency Analysis

Caulking is an important part of sealing the building from outside elements and should be a cyclical function.

It is important to note that there are several types of sealants that can be used in building joints, including silicone, urethane, acrylic and others. The first step in a review of the building requirements is to assess the type of sealant required.

Caulking should be regularly inspected and repaired as required.

Reserve Component: (12) Exterior Painting / Staining

This reserve provision covers the painting of the exterior components mainly consisting of the window and garage door trim.

These components require painting on a cyclical basis to prevent early failure and to maintain the property in pristine condition.

Expenditure on new or updated painting/staining can be expected about every 10 years, depending on maintenance and exposure.

Reserve Component	Expected Life (Yrs.)	Effective Age (Yrs.)	Remaining Life (Yrs.)	Current Cost	Future Cost
Exterior Painting/Staining	10	3	7	38,000	43,650

Deficiency Analysis

There were no major deficiencies, and none were reported.

ROOFING

Reserve Component: (13) Asphalt Shingles

This reserve provision covers the sloped asphalt roofing system employed on all buildings, including the recycle/refuse building.

This type of sloped asphalt roof has an estimated life expectancy of 25 years with maintenance as needed.

Regardless of the type of shingle used, there are a few significant factors with regards to wear which are exposure, hail and slope.

Sunlight and hail are a couple of the biggest enemies of asphalt roofs and in many areas, the south and west exposures wear out the fastest. The steeper the slope the longer the shingle will last.

Although this is a long-term contingency reserve, it covers any repairs that may be necessary and incidental costs, which may occur.

This component should be reviewed and updated based on any repair experience.

Reserve Component	Expected Life (Yrs.)	Effective Age (Yrs.)	Remaining Life (Yrs.)	Current Cost	Future Cost
Asphalt Shingles	25	6	19	240,000	349,635

Deficiency Analysis

The roofs were viewed from ground level and we did not note any deficiencies, and none were reported.

The roofing system is an important part of keeping the building envelope in good condition and should be inspected regularly. Vents and flashings should be inspected as part of an annual review and repaired and secured as necessary.

Reserve Component: (14) Prefinished Metal

This reserve provision covers the prefinished metal soffit and fascia. These components have a life expectancy of 35 plus years with maintenance as required.

Soffit helps to protect rafters from the roof assembly from the weather elements. This component also helps the with building ventilation to reduce mold buildup and beams from rotting.

Fascia typically runs along the roofline of the building and acts as a finishing edge that connects the ends of the rafters and trusses. Much like the soffit it also helps protect the roof assembly from the elements.

This is a long- term contingency reserve, which covers periodic repairs throughout its service life.

The Board may want to review this component in future years and make the appropriate adjustments based on the repair history.

Reserve Component	Expected Life (Yrs.)	Effective Age (Yrs.)	Remaining Life (Yrs.)	Current Cost	Future Cost
Prefinished Metal	35	20	15	20,000	26,917

Deficiency Analysis

There were no noted deficiencies, and none were reported.

Regular inspection on these components can identify problems at an early stage and allow for the prompt repair or replacement.

Reserve Component: (15) Eavestroughs & Downspouts

This reserve provision covers the metal eavestroughs and downspouts that provide drainage away from the building.

These components help to protect the walls of the buildings from water that would ordinarily run off the roof.

Eavestroughs and Downspouts are especially important in buildings with basements or crawlspaces as they help take water away from the foundation reducing the risk of water penetration.

This estimate should be reviewed in later years based on repair experience. Isolated repair/replacement can be completed to areas that may be damaged or fail early.

This is a long- term contingency reserve, which covers shorter-term repair and replacement cycles.

Reserve Component	Expected Life (Yrs.)	Effective Age (Yrs.)	Remaining Life (Yrs.)	Current Cost	Future Cost
Eavestroughs & Downspouts	25	4	21	30,000	45,470

Deficiency Analysis

No deficiencies were noted, and none were reported.

All eavestroughs and downspouts are prone to leakage at the joints and seems. Missing end caps and poor connections to downspouts are other common sources of leakage.

These areas of leakage can cause considerable damage to fascia's, soffits and exterior cladding. Regular inspection on these components can identify problems at an early stage and allow for the prompt repair or replacement.

SITE IMPROVEMENTS & MISCELLANEOUS

Reserve Component: (16) Asphalt

This component covers the asphalt driveway providing access to the units and the outdoor parking areas.

With proper maintenance, this component can have a life expectancy of up to 25 plus years with ongoing maintenance.

Repairs to asphalt would likely consist of localized replacement of deteriorated areas. We have allocated a small amount every 5th year for repairs while also reserving for a top coat in approximately 5 years.

This is a long-term contingency reserve, which covers shorter-term repair and should be reviewed and updated based on repair experience.

Reserve Component	Expected Life (Yrs.)	Effective Age (Yrs.)	Remaining Life (Yrs.)	Current Cost	Future Cost
Asphalt	25	20	5	60,000	66,245

Deficiency Analysis

The asphalt is starting to show its age and will likely require replacement around the time of the next study in five years.

Regular seal cycles will help extend the useful life of the asphalt, while reducing future resurfacing expenses.

This component must be regularly inspected as part of a preventative maintenance program. Any deficiencies must be promptly repaired.

Reserve Component: (17) Concrete

This is a contingency reserve provision to cover the repair and replacement of the concrete components around the property.

The concrete pad, sidewalks, curbs and various other concrete components.

Concrete has a long life, up to the life of the project, however replacement to isolated areas may be required due to freeze thaw or poor material or workmanship.

For the purposes of this study we have estimated repairs on a 25-year cycle.

This is a long-term contingency reserve, which covers shorter-term repair. This estimate should be reviewed and updated based on repair/replacement experience.

Reserve Component	Expected Life (Yrs.)	Effective Age (Yrs.)	Remaining Life (Yrs.)	Current Cost	Future Cost
Concrete	25	20	5	55,000	60,724

Deficiency Analysis

Other than typical cracking to concrete on a few driveway pads, no other deficiencies were noted, and none were reported.

This component must be regularly inspected as part of a preventative maintenance program. Any deficiencies must be promptly repaired.

Reserve Component: (18) Sewer & Water Supply Systems

This reserve includes all catch basins, area drains and storm and sanitary sewer systems and connections and backflow valves.

This allocation includes the incoming water main and connections.

The sewer and water supply system is a long-term contingency reserve. Many the components will have the building life.

The reserve being made is an allowance allocation, which is to cover the costs to make minor repairs, which may occur from time to time.

Reserve Component	Expected Life (Yrs.)	Effective Age (Yrs.)	Remaining Life (Yrs.)	Current Cost	Future Cost
Sewer & Water Supply Systems	40	20	20	50,000	74,297

Deficiency Analysis

This component should be periodically inspected as part of a preventative maintenance program.

Reserve Component: (19) Outdoor Lighting & Electrical

This reserve provision covers replacement of outdoor lighting throughout the property, mainly consisting light standards throughout the property.

This is a long-term contingency reserve, which covers shorter-term repair and replacement cycles.

Much of the electrical system will last the life of the building; however, there are several short-lived items, which will require replacement from time to time.

Reserve Component	Expected Life (Yrs.)	Effective Age (Yrs.)	Remaining Life (Yrs.)	Current Cost	Future Cost
Outdoor Lighting & Electrical	30	20	10	12,000	14,628

Deficiency Analysis

There were no noted deficiencies, and none were reported.

We recommend cleaning of the fixtures on a regular basis to ensure full illumination.

Reserve Component: (20) Recycle/Refuse Building

This reserve is for the ongoing repair/replacement of the recycle/refuse building and their materials that are consistent with the rest of the complex.

Management should expect to repair and remodel periodically to maintain a good aesthetic. Funding here is for periodic replacements on a 30-year cycle.

This component is subject to the ongoing use of all the residents.

This estimate is an allowance allocation and should be reviewed in future years and updated based on repair experience.

Reserve Component	Expected Life (Yrs.)	Effective Age (Yrs.)	Remaining Life (Yrs.)	Current Cost	Future Cost
Recycle/Refuse Building	30	20	10	10,000	12,190

Deficiency Analysis

There were no noted deficiencies, and none were reported.

This component must be regularly inspected as part of a preventative maintenance program. Any deficiencies must be promptly repaired.

Reserve Component: (21) Privacy Fence - Vinyl

This reserve is for the repair/replacement of the vinyl privacy panels that separate the back of each unit.

It is best to eventually replace all fencing at the same time to maintain a uniform appearance.

Vinyl fencing can have an expected life of up to 30 years provided it was installed correctly and maintained properly.

This is a long-term contingency reserve, which covers shorter-term repair and replacement cycles for items such as replacing and repairing broken panels and rails.

Reserve Component	Expected Life (Yrs.)	Effective Age (Yrs.)	Remaining Life (Yrs.)	Current Cost	Future Cost
Privacy Fence - Vinyl	30	15	15	35,000	47,105

Deficiency Analysis

There were no noted deficiencies, and none were reported.

This component must be regularly inspected as part of a preventative maintenance program. Any deficiencies must be promptly repaired.

Reserve Component: (22) Wood Fence - Replacement

This reserve is for the repair/replacement of the common area wood fencing throughout the property.

Regular paint cycles will help protect the fencing from damaging weather and irrigation elements, while maintaining an attractive appearance.

It is best to eventually replace all fencing at the same time to maintain a uniform appearance.

Wood fencing can have an expected life of up to 25 years provided it was installed correctly and maintained properly.

This is a long-term contingency reserve, which covers shorter-term repair and replacement cycles for items such as replacing and repairing broken panels and rails.

Reserve Component	Expected Life (Yrs.)	Effective Age (Yrs.)	Remaining Life (Yrs.)	Current Cost	Future Cost
Wood Fencing - Replacement	25	20	5	62,000	68,453

Deficiency Analysis

The original wood fencing on the north and south boundaries appear to be reaching their life expectancy and will likely need replacement at the time of the next study in 5 years.

This component must be regularly inspected as part of a preventative maintenance program. Any deficiencies must be promptly repaired.

Reserve Component: (23) Paint Wood Fence

This reserve provision covers replacement of the staining/painting of the wood fence.

We have estimated staining/painting on a 10-year cycle.

This is a long-term contingency reserve, which covers shorter-term repair and replacement cycles for items such as replacing and repairing damaged components and should be updated based on repair experience.

Reserve Component	Expected Life (Yrs.)	Effective Age (Yrs.)	Remaining Life (Yrs.)	Current Cost	Future Cost
Paint Wood Fence	10	4	6	12,000	13,514

Deficiency Analysis

We have estimated a remaining life of 6 years to coincide with the wood fence replacement in 5 years. Management should expect to paint or stain the new fence one year after installation.

This component must be regularly inspected as part of a preventative maintenance program. Any deficiencies must be promptly repaired.

Reserve Component: (24) Landscaping, Irrigation & Drainage

This provision is a 25-year budget for the ongoing replacement of the shrubs, trees, mulch, and various other landscaping components including irrigation and landscaping around the foundation of the units to help with proper drainage.

These components have varying life cycles; therefore, the reserve being made is an allowance allocation, which is to cover the costs to make minor repairs, which may occur from time to time.

This component should be regularly monitored and updated based on repair experience.

Reserve Component	Expected Life (Yrs.)	Effective Age (Yrs.)	Remaining Life (Yrs.)	Current Cost	Future Cost
Landscaping, Irrigation & Drainage	20	18	2	35,000	36,414

Deficiency Analysis

The Board has advised us that the earth around some of the units has sunk creating a negative slope toward the foundation.

They have also advised that they will be contacting a third party to come up with a remedial plan for this issue.

Reserve Component: (25) Contingency

This component is for any unforeseen events or circumstances and includes consulting services such as structural engineering reviews, building envelope reviews, etc.

This contingency should be reviewed and updated based on experience.

Reserve Component	Expected Life (Yrs.)	Effective Age (Yrs.)	Remaining Life (Yrs.)	Current Cost	Future Cost
Contingency	5	0	5	5,000	5,520

Deficiency Analysis

Not applicable.

Reserve Component: (26) Reserve Fund Study

This component is for the reserve fund study which should be carried out on at least a five-year cycle, in accordance with the Alberta Condominium Legislation.

Reserve Component	Expected Life (Yrs.)	Effective Age (Yrs.)	Remaining Life (Yrs.)	Current Cost	Future Cost
Professional Fees	5	0	5	3,570	3,942

Deficiency Analysis

Not applicable.

Reserve Fund Estimates

Reviewing the various reserve fund components in terms of their condition and life cycle and analyzing the contingencies for such items as exterior walls, structural elements, roofing and sewers, we have produced individual reserve fund estimates.

In estimating the replacement costs of reserve components, I relied on Building Service and Costing publications, such as Means Repair & Remodeling Cost Data and Yardsticks for Costing. In addition, I verified some estimates by seeking quotations from contractors, fabricators, and suppliers, as well as, my own cost compilations.

The Reserve Fund Estimates for Chaparral Adult Village are shown in Schedule “A” – Benchmark Analysis hereinafter. Schedule “A” has been included in the addenda of this report. In summary, the current replacement reserve estimates, the current reserve fund requirements, and estimated annual reserve fund assessment are as follows:

BENCHMARK ANALYSIS - SCHEDULE A

Current Replacement Costs	\$1,873,570
Current Reserve Fund Requirements	\$1,081,586
Annual Reserve Fund Assessment	\$84,439

The above estimates are calculated on schedule “A”. Current replacement costs are the reserve fund provisions at current prices and under current economic conditions.

Current reserve fund requirements refer to reserve funds, which should now be retained by the corporation and be invested in interest bearing securities.

The annual reserve fund assessment consists of the annual payments by the unit owners into the reserve fund to meet all potential capital expenditure requirements in the future.

The reserve fund estimates herein have been prepared without regard to the current financial position of the corporation or the current reserve fund contributions by unit owners, and as such, they represent the optimum reserve fund operation, which assumes that the corporation has continuously assessed adequate reserve funding from the beginning.

It appears that the deficiency of the current reserve is partially a result of the corporation not collecting sufficient reserve fund contributions in earlier years, and therefore, reserve fund contributions must increase in later years.

SUMMARIES - RESERVE FUND ESTIMATES

The various reserve fund estimates in the Schedule of Reserve Fund Components herein before are further expanded and summarized in Schedule "A". Benchmark Analysis pursuant to prudent reserve fund practices, which provide for inflationary cost increases over time and interest income from reserve fund investments. In the preparation of the Schedule of Reserve Fund Estimates, the following criteria were considered:

- 1. Reserve fund estimates are grouped into categories which can readily be used for reserve fund budget preparation and accounting.**
- 2. The reserve fund components are identified, and current replacement reserves are estimated.**
- 3. Future replacement reserves are estimated by applying a long-term inflationary factor to the current replacement reserve estimates.**
- 4. Current reserve requirements are calculated by applying the effective age to the current replacement reserve estimates.**
- 5. Current reserve fund requirements when invested over time will grow at the compound rate of interest selected, and hence, they become future reserve accumulations.**
- 6. Subtracting future reserve accumulations from future replacement costs, the difference is the amount of reserves to be funded by reserve fund contributions, or future reserve requirements.**
- 7. Since reserve fund contributions are continually invested, the payments of such contributions represent discounted payments, which must be assessed by the condominium corporation.**

The foregoing program represents the practical application of reserve fund budget planning and management. When applied, as outlined, the reserve fund will cover anticipated reserve fund expenditures and any contingencies. Moreover, unit owners must always contribute their fair share to the reserve fund.

The following Schedule of Reserve Fund Estimates shows detailed computations of various reserve items using the inflationary factor of 2.0% and a long-term interest rate of 1.5%. Due to rounding automatically executed by computer, there may be minor discrepancies in the data, which are not deemed significant.

FINAL SUMMARIES - RESERVE FUND ESTIMATES

The Reserve Fund position and requirements of Chaparral Adult Village as estimated herein are as follows:

BENCHMARK ANALYSIS - SCHEDULE A

Current Replacement Reserves or Costs provisions for all major repairs and replacements at current prices	\$1,873,570
Future Replacement Reserves or Costs provisions for all major repairs and replacement costs in the future at the end of the expected life span	\$2,426,559
Current Reserve Fund Requirements reserve fund estimates based on the notion of effective age and should have been contributed by unit owners	\$1,081,586
Future Reserve Fund Accumulations the current reserve fund requirements together with interest compounded over the remaining life span	\$1,281,407
Future Reserve Fund Requirements which are to be funded by unit owners' payments to the reserve fund plus any interest earned	\$1,145,151
Annual Reserve Fund Assessments The annual reserve fund payments to be made by unit owners	\$84,439

In accordance with these estimates, Chaparral Adult Village should have approximately \$1,081,586 in its reserve fund and the assessed annual payments or contributions to the reserve fund by unit owners should be approximately \$84,439 based on the stated assumptions and in an optimal fully funded scenario.

Reserve Fund Analysis and Recommendations

Analyzing the reserve fund position and practices of Chaparral Adult Village, we have reviewed the available financial information provided by the Corporation.

The purpose of the corporation is to control, manage and maintain the real, personal and common property and to provide common services for the benefit of the owners of the 48-unit condominium common elements, as defined in the corporation's plan and By-laws.

The corporation, as required by the Condominium Property Act Revised Statutes of Alberta, has established a reserve for financing future major repairs and replacements of the common elements.

RESERVE FUND OPERATIONS

Based on the available information, the current opening balance in the reserve fund is approximately \$508,839 and the annual estimated level of contributions within the reserve fund is approximately \$54,000.

RECOMMENDATIONS (SEE SCHEDULE "B" 25-YEAR CASH FLOW PROJECTION AND ANALYSIS)

The reserve fund of Chaparral Adult Village will be sufficient provided the contributions are increased as noted in schedule "B".

1. **The corporation should prepare and implement a long-term reserve fund strategy.**
2. **The reserve fund should be fully invested in guaranteed Securities, yielding at least 1.5% per annum.**
3. **The corporation should make such expenditures, as are necessary to maintain the property in excellent condition.**
4. **The reserve fund must be reviewed every five years to ensure that the underlying assumptions are still valid and that the estimates remain current.**
5. **It should be noted that this is a 25-year study in accordance with the Provincial Condominium Act. The recommended increase in contributions maintains the fund at a level to complete planned replacements without over taxing the owners. This may change when the reserve study is completed in five years as the expenditures are within the 25-year period, however it should be noted that expenditures for common components between year 25 and beyond may change the contribution level.**

MANAGEMENT PROGRAM

Adequate reserve funding must be the primary objective of management since a sound reserve fund ensures the long-term integrity and viability of a condominium project, and hence, it will enhance the value to the owner and the property value in the marketplace. The following comments and projections assume that the corporation will implement a proactive management program.

RESERVE FUND PROGRAM

It is important that a Formal Reserve Fund program be established and implemented. A Reserve Fund Program will ensure that reserve fund requirements are adequate for contemplated major repairs and replacements and that reserve fund contributions are sufficient to cover all contingencies. Moreover, the Reserve Fund Program must be reviewed and adjusted from time to time to keep pace with changing conditions.

RESERVE FUND CONTRIBUTIONS

We have been advised that the current amount in the reserve fund is approximately \$508,839 and the budget contribution to the fund is approximately \$54,000.

We recommend that the reserve fund contribution of \$54,000 remains the same for 2018 and then increases annually by 5% annually thereafter, at least until the next study.

As demonstrated in Schedule "B", this funding model meets the capital requirements over the next 25 years of this study and maintains a surplus closing balance to meet the ongoing cyclical capital requirements of this project.

RESERVE FUND EXPENDITURES

The corporation should implement a reserve fund expenditure program contemplated by management to ensure appropriate expenditures and the maintenance of the property in excellent condition.

Major reserve fund expenditures are projected in the 25-Year Cash Flow Projections and Analysis contained in Schedule "B" attached to the addenda.

25-Year Cash Flow Projections and Analysis (schedule "B")

The Reserve Fund Projected Cash Flow and Analysis presents a 25-year reserve fund projection showing cash positions, cash flows and cash expenditures in a format, which meets the Regulations pursuant to the Condominium Property Act (2000). Following is a description of the "Headings" contained on schedule "B".

Near the upper left-hand corner of the cash flow projection sheet are two parameters, which can be changed to show the effects of different scenarios. The first parameter is "Annual Rate of RF assessment incr." This parameter sets the annual rate of increase of reserve fund contributions.

The second parameter is "Annual rate of interest". This parameter sets that annual rate of interest at which the reserve fund investments are made.

In completing the analysis these parameters are changed and the resulting effects are studied. This information is used to develop recommendations to remediate the reserve fund shortfall.

OPENING CASH BALANCE

This is the reserve fund position at the beginning of each and every fiscal year showing the cash resources available, which consist of (1) bank deposits, (2) qualified investments, and (3) accrued interest earned.

TOTAL CASH RESOURCES

This is the total amount of cash, which is on hand. It is made up of the opening balance, annual contributions, special assessments (if any), and interest income. The interest income is calculated using the interest rate selected and the "Opening Balance". This entry represents the total cash resources available in any fiscal year and includes the current year's cash flow.

CASH EXPENDITURES

These are annual expenditures listed in the categories established by the Reserve Fund Study. Records or ledger accounts of these expenditure categories should be kept showing reserve fund allocations and charges in a chronological order for control and reference.

CLOSING BALANCE

This is the reserve fund position at the end of each Fiscal year, which is carried forward to the next year.

Addendum

- Schedule "A" Benchmark Analysis - Summary of Reserve Data Estimates
- Schedule "B" 25 Year Cash Flow Projections & Analysis

CHAPARRAL ADULT VILLAGE		BENCHMARK ANALYSIS - SCHEDULE OF RESERVE FUND ESTIMATES								SCHEDULE "A"
RESERVE COMPONENTS	EXPECTED LIFESPAN Years	EFFECTIVE AGE Years	REMAINING LIFE SPAN Years	1 CURRENT REPLACEMENT COST	2 FUTURE REPLACEMENT COSTS	3 CURRENT RESERVE FUND REQUIREMENTS	4 FUTURE RESERVE FUND ACCUMULATION	5 FUTURE RESERVE FUND REQUIREMENTS	6 ANNUAL RESERVE FUND ASSESSMENT	RESERVE FUND ASSESSMENT ALLOCATION
48 Units										
Rate of Interest used in calculations	1.5%									
Rate of inflation used in calculations	2.0%									
STRUCTURAL & ARCHITECTURAL COMPONENTS										
1 Structures	50	20	30	20,000	36,227	8,000	12,505	23,723	632	0.75%
2 Vinyl Siding - Replacement	35	20	15	200,000	269,174	114,286	142,884	126,290	7,570	8.97%
3 Wood Siding	35	20	15	50,000	67,293	28,571	35,721	31,573	1,893	2.24%
4 Insulation & Venting	35	34	1	85,000	86,700	82,571	83,810	2,890	2,890	3.42%
5 Stone Siding - Repairs	5	4	1	1,000	1,020	800	812	208	208	0.25%
6 Parging - Repairs	10	5	5	3,000	3,312	1,500	1,616	1,696	329	0.39%
7 Windows & Sliding Doors	35	20	15	550,000	740,228	314,286	392,930	347,298	20,819	24.66%
8 Doors	35	20	15	100,000	134,587	57,143	71,442	63,145	3,785	4.48%
9 Overhead Doors	25	20	5	67,000	73,973	53,600	57,742	16,231	3,150	3.73%
10 Decks	25	19	6	120,000	135,139	91,200	99,722	35,417	5,685	6.73%
11 Caulking & Waterproofing	15	14	1	10,000	10,200	9,333	9,473	727	727	0.86%
12 Exterior Painting/Staining	10	3	7	38,000	43,650	11,400	12,652	30,998	4,233	5.01%
ROOFING										
13 Asphalt Shingles	25	6	19	240,000	349,635	57,600	76,432	273,202	12,534	14.84%
14 Prefinished Metal	35	20	15	20,000	26,917	11,429	14,288	12,629	757	0.90%
15 Eavestroughs & Downspouts	25	4	21	30,000	45,470	4,800	6,562	38,908	1,590	1.88%
SITE IMPROVEMENTS & MISCELLANEOUS										
16 Asphalt	25	20	5	60,000	66,245	48,000	51,710	14,535	2,821	3.34%
17 Concrete	25	20	5	55,000	60,724	44,000	47,400	13,324	2,586	3.06%
18 Sewer & Water Supply Systems	40	20	20	50,000	74,297	25,000	33,671	40,626	1,757	2.08%
19 Outdoor Lighting & Electrical	30	20	10	12,000	14,628	8,000	9,284	5,344	499	0.59%
20 Recycle/Refuse Building	30	20	10	10,000	12,190	6,667	7,737	4,453	416	0.49%
21 Privacy Fence - Vinyl	30	15	15	35,000	47,105	17,500	21,879	25,226	1,512	1.79%
22 Wood Fencing - Replacement	25	20	5	62,000	68,453	49,600	53,433	15,020	2,915	3.45%
23 Paint Wood Fence	10	4	6	12,000	13,514	4,800	5,249	8,265	1,327	1.57%
24 Landscaping, Irrigation & Drainage	20	18	2	35,000	36,414	31,500	32,452	3,962	1,966	2.33%
25 Contingency	5	0	5	5,000	5,520	0	0	5,520	1,071	1.27%
26 Professional Fees	5	0	5	3,570	3,942	0	0	3,942	765	0.91%
TOTAL RESERVES				1,873,570	2,426,559	1,081,586	1,281,407	1,145,151	84,439	100%

CHAPARRAL ADULT VILLAGE

25 YEAR RESERVE FUND CASH FLOW PROJECTION & DEFICIENCY ANALYSIS

SCHEDULE "B"

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
Annual rate of increase = 5.0%	0.05	Year	Year	Year	Year	Year	Year	Year	Year	Year	Year	Year	Year	Year	Year	Year	Year	Year	Year	Year	Year	Year	Year	Year	Year	Year	Year
Annual rate of Interest = 1.5%	0.015	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	
OPENING BALANCE		508,839	439,902	466,786	533,323	603,834	405,891	410,922	445,801	528,471	616,181	682,377	768,973	872,866	982,936	1,099,505	842,209	615,104	374,826	81,917	125,703	100,647	95,065	105,233	264,775	434,609	
Reserve Fund Contributions		54,000	56,700	59,535	62,512	65,637	68,919	72,365	75,983	79,783	83,772	87,960	92,358	96,976	101,825	106,916	112,262	117,875	123,769	129,957	136,455	143,278	150,442	157,964	165,862	174,155	
Reserve Fund Intrest Income		7,633	6,599	7,002	8,000	9,058	6,088	6,164	6,687	7,927	9,243	10,236	11,535	13,093	14,744	16,493	12,633	9,227	5,622	1,229	1,886	1,510	1,426	1,578	3,972	6,519	
Reserve Makeup		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total Cash Resources		570,472	503,200	533,323	603,834	678,529	480,899	489,451	528,471	616,181	709,195	780,573	872,866	982,936	1,099,505	1,222,914	967,104	742,206	504,217	213,103	264,044	245,435	246,933	264,775	434,609	615,284	
STRUCTURAL & ARCHITECTURAL COMPONENTS																											
1 Structures																											
2 Vinyl Siding - Replacement																67,300	68,600	70,000	71,400								
3 Wood Trim		10,000														16,800	17,100	17,500	17,800								
4 Insulation & Venting		85,000																									
5 Stone Siding - Repairs		1,000					1,100				1,200						1,300					1,500					
6 Parging - Repairs						3,312										4,000										4,800	
7 Windows & Sliding Doors																185,000	188,700	192,500	196,400								
8 Doors																33,600	34,300	35,000	35,700								
9 Overhead Doors						73,973																					
10 Decks							46,000															101,000					
11 Caulking & Waterproofing		10,000															14,000										
12 Exterior Painting/Staining								43,650										52,380									
ROOFING																											
13 Asphalt Shingles																				87,400	89,100	90,900	92,700				
14 Prefinished Metal		8,000														26,900											
15 Eavestroughs & Downspouts		6,000																					45,470				
SITE IMPROVEMENTS & MISCELLANEOUS																											
16 Asphalt						66,200																					
17 Concrete						60,700																					
18 Sewer & Water Supply Systems																						74,297					
19 Outdoor Lighting & Electrical											14,628																
20 Recycle/Refuse Building											12,190																
21 Privacy Fence - Vinyl																47,105											
22 Wood Fencing - Replacement						68,453																					
23 Paint Wood Fence		2,000					13,415										16,500										
24 Landscaping, Irrigation & Drainage			36,414																					49,000			
25 Contingency		5,000					5,520				6,100						6,700						7,300				
26 Professional Fees		3,570					3,942				4,300						4,800						5,200				
TOTAL EXPENDITURES		130,570	36,414	0	0	272,638	69,977	43,650	0	0	26,818	11,600	0	0	0	380,705	352,000	367,380	422,300	87,400	163,397	150,370	141,700	0	0	4,800	
CLOSING BALANCE		439,902	466,786	533,323	603,834	405,891	410,922	445,801	528,471	616,181	682,377	768,973	872,866	982,936	1,099,505	842,209	615,104	374,826	81,917	125,703	100,647	95,065	105,233	264,775	434,609	610,484	