

Reserve Fund Study

for

Condominium Corporation No. 9411439 Darlington Arms



by

Calgary Condominium Consulting Ltd.

Effective July 1, 2013, based on 2012 field inspections

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Introduction

As authorized by the Board of Directors of Darlington Arms (Condominium Corporation No. 9411439), Calgary Condominium Consulting Ltd. has completed the following “Reserve Fund Study”. The dollar amounts quoted are not “hard” or exact, but rather the best projections that we can make based on the data available. It is intended to provide realistic guidance for establishing and maintaining a reserve fund for the complex.

After completing field inspection of the property and reference to available drawings and records we have endeavoured to establish the condition, theoretical service life, age, cost, remaining life and quantity of each identifiable component or system in the complex. Components have been considered in general classes including; “site components” (such as paving), “building envelope components”, “interior decor” and “mechanical components”. Component ages were taken to range from reported date of replacement (with condition adjustments) to a maximum of 42 years (the building approximate age). It was noted that numerous items were renewed in the course of condominium conversion in 1998 and that subsequent improvements have been done on a consistent basis.

Limiting Conditions

Service lifetimes quoted by manufacturers and suppliers of the various components examined in this study should be taken as guidelines only. Varying service conditions and the quality of ongoing maintenance will decrease or extend the actual life of each item. Quantities of materials quoted are either from actual measurements (usually rounded upward) or approximated where measurement was not a practical option. Available published data used to compile this study included;

1. **Condominium Plan 9411439**
2. **Site Map**
3. **By-laws of the Corporation, the Condominium Property Act of Alberta and Regulation 168/2000**
4. **Archival documents from suppliers and consultants**
5. **Information provided by the Board of Directors**
6. **Historic data from our files**

An on-site visual inspection of the complex was completed on June 26, 2012. It is important to note that short of destructive testing, hidden conditions may affect the service life of components and thus the time frame for some costs. Data provided in this study becomes less reliable with time. **It is an Alberta legal requirement that a new study including a visual inspection and financial update be completed at intervals of no longer than five years.**

It should be noted that Regulation 168/2000 specifies that a capital repair is not to be considered an improvement as long as it was accounted for in the most recent study done by the corporation. Section 38 (2) of the Act specifies that in the case of any other capital improvement the use of reserve fund money must be authorized by special resolution of owners. As an example, funding shown would normally be to replace a boiler with the same efficiency and size of unit. An improved efficiency or larger unit would have to be accounted for at the time of the study that was in effect or any extra cost should be paid from a source other than the reserve. If reserve money was to be used for an improvement not shown in the study, it is specified that it must be surplus to the needs shown in the study and authorized by special resolution of owners.

Qualifications

As per 23.(3)a. of regulation 168/2000, applicable to the new Act, a summary of the author's background and qualifications follow:

Emery Leraand, A.C.C.I.

General Manager of Calgary Condominium Consulting Ltd.

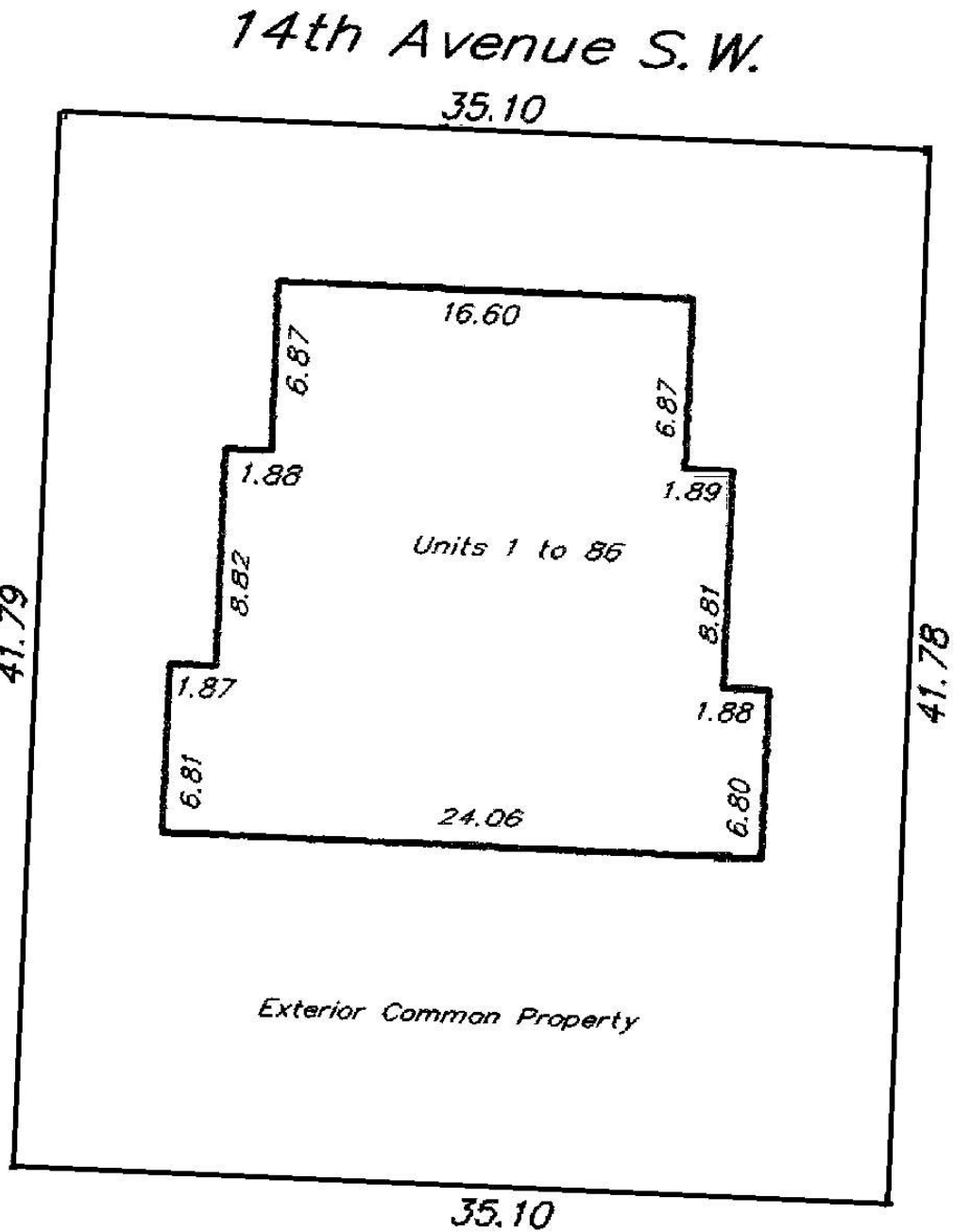
- Degree in mechanical engineering from **University of Alberta** in 1982
- Former **Realtor** specializing in residential condominium sales January, 1987 to April 1, 2000
- Retired sessional instructor for **Mount Royal College** for Real Estate 1000 (pre licencing course) teaching the section on condominium property
- Past contributor to the development of the **Alberta Real Estate Association "Condominium Sales Course"**
- Retired primary presenter of the advanced credit **Condominium Sales Course** to Calgary **Realtors** through **AREA, Mount Royal College, CREB** and through individual real estate companies
- Co-author of "**The Calgary Condominium Guide**"
- Condominium owner since 1983
- Served on numerous condominium boards over a span of 25 plus years
- First court appointed administrator of a residential condominium in southern Alberta
- Past member of the board of directors of the **Canadian Condominium Institute (Southern Alberta Chapter)**
- Professional member of the **Canadian Condominium Institute (Southern Alberta Chapter)**, holding the designation **A.C.C.I.** (Professional Associate of the Canadian Condominium Institute)
- Author of over 500 reserve fund studies for complexes ranging from 2 units to over 350 units
- Author of over 4,500 pre-purchase condominium document reports
- **Over 25 years of experience in the Alberta condominium field.**

Building Description/General Observations

Darlington Arms is comprised of 86 legal condominium units including 40 apartments, 24 titled underground stalls and 22 titled storage units. The building is constructed of conventionally reinforced concrete and has additional parking outdoors on the south side of the main structure, sited over the extended roof area of the parking garage. It was constructed circa 1970 and converted from all rental to primarily owner occupancy about 1998.

It appears the Board of Directors has in the past and continues to do maintenance and improvements to the structure as needs and funding allow.

Site Map



Site Components

Paving

Surface parking on the south side of the complex is actually on the roof of an extended portion of the underground garage. Base on information from the contractor that did the last paving work, the concrete slab is believed to be protected by a bituminous membrane below the asphalt surface. Any repair of the asphalt must be done with this in mind. A yearly crack filling program will help to protect both asphalt and membrane.

The surface comprises **some 5,300 sq ft** and was reported to have been redone at the time of conversion of the building to condominium in 1998. A “seal coat” was applied in 2008 at an approximate cost of **\$2,550**. Some of the seal coat is flaking and it is recommended that yearly maintenance of the asphalt include cleaning and re-coating any such areas.



No signs of current leakage were noted on the underside of the slab and with maintenance, the surface should last another **11 years** on a revised **25 year cycle**. Current dollar cost to put a top lift on the pavement should be about **\$22,000**.

Note that a previous reserve study speculated that the weight of paving equipment used during the last paving job may have caused structural issues with the garage roof. It is strongly recommended that a second structural engineering opinion be sought as to the extent (if any) and potential seriousness of the damage.

Any future re-paving should be done with equipment not exceeding the weights recommended by such a structural engineer. Asphalt may have to be brought onto the slab by a small skid steer loader instead of dumped directly from trucks and it may be necessary to consider removal of some existing material at that time to keep overall weight within a safe range. A **year 1** allocation of **\$3,000** has been shown to fund a thorough inspection of the roof slab and support structure.

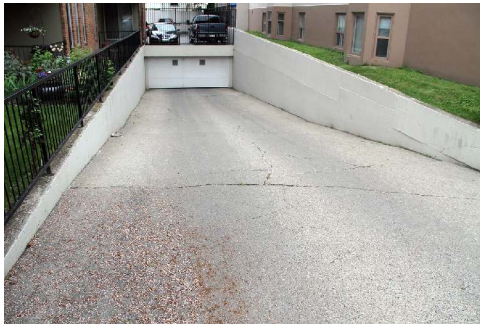
Paving Stones

Nearly **300 sq ft** of paving stones provide a front-access walk to the building. The paving stones are serviceable and should be reset and replaced as needed from the maintenance funding **No separate funding** recommended at this time.



Non-structural Concrete

The underground garage is accessed by a ramp on the north west corner of the site and the surface parking by an on-grade concrete drive on the east side of the building. These are in very poor condition. As this is primarily a cosmetic problem, the timing and method of repair are a bit flexible. Total area is about **2,800 sq ft** and the cost to replace should be in the order of **\$40,000**. Allocate funds for the work in **year 1**.



Replacement concrete flatwork has currently been estimated to have a service life of from **20 years to life of the project**. Allocate funding for **15%** replacement of the new concrete in **year 21** and every **8th year** subsequent.

Retaining Walls

The east, south, and a large part of the west perimeter of Darlington Arms are defined by concrete retaining walls. Only the south side retains any significant loading and all of the walls appear to be straight and plumb. No significant cracking or displacement was seen. As they seem to have done well in **40 years plus** of service, at this point only continued monitoring of their condition has been recommended.



Fences

The Darlington Arms has **80 lin ft** of original style painted steel fencing on the east side of the garage driveway and on the west side of the surface parking driveway (the “Low Steel Fence”). It should last the economic life of the project, but occasional repair of post anchorage or other incidental damage is to be expected. Allocate **\$1,350** every **8th year** recurring in **year 5** for painting and general repairs. This allocation has been deemed to include painting and repairs to the surface parking gate. The gate operator has been dealt with in the mechanical section below.



In 2000 about **220 ft** of factory finished fencing was added to the east and west boundaries of the site (the “High Steel Fence”). It will require painting and repairs over the coming years, but painting may be deferred for a number of years. Allocate **\$2,800** for the maintenance of the east and west fence on an **8 year** cycle starting in **year 9**.

A high concrete wall on the south end of the site has lattice work and other odd bits of fencing on top, all of which are assumed to be the property of the neighbors.



Security Gate

The surface parking area at the south end of the building is secured by a powered swinging steel gate. It was installed new in 2005 at an approximate total cost of **\$16,000** including a remote entry system. Allocate **\$2,500** every **6th year** starting in **year 2** for necessary repairs.



Exterior Electric

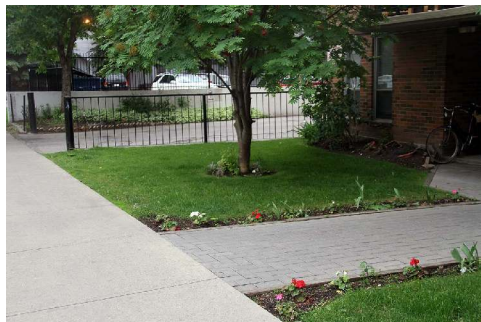
About **60** duplex outlets and a number of high intensity security lights are located on the balconies and around the perimeter of the building. Balcony lights appeared to be individual additions, improperly wired to the outlets below them. Weather-resistant covers were not present on any of the observed balcony locations. These should be installed immediately. This is handyman work that should be done from the yearly maintenance budget. Most of the outlets are located on well-sheltered balconies and replacements should last well.



The outlets and lights would currently cost in the order of **\$8,400** to replace. Allocate funds for **33%** replacement every **10th year** starting in **year 5**.

Landscaping Fund

The site is planted with very limited grassed areas and trees. These do not have a specific service life, and can last indefinitely with good care. Some costs will be incurred on a non-annual basis and a landscaping fund of **\$1,200** every **5th year** recurring in **year 3** has been recommended



Utility Services Fund

Responsibility for all utility services on land owned by a condominium corporation belongs to that corporation. In some limited instances the service supplier takes on this responsibility either because they want to retain the position of being the supplier or as in the case of the gas company, they do not want to chance the quality of work that may be done by a third party.

- **Telephone & Cable**
Lines were installed by the utilities and should be maintained by them as long as they remain your service provider. Should you add common satellite or other services, this could change;
- **Electric**
The delivery utility (Enmax) typically will maintain lines up to and including the supply transformer and the corporation the lines from the supply transformer to the building switch gear;
- **Gas**
Lines were installed by Atco Gas and should be maintained by them as long as they remain your delivery utility;
- **Water Supply**
Supply pipes may for this age of project are likely to last well over 50 years but there is no way to be certain of this lifetime. It is prudent to allow for future breaks in the fund specified below;
- **Sanitary Sewer and Storm Sewer**
Piping should, but may not, last the economic life of the project.

Maintain an accumulating dig-and-repair fund specifically for utility service problems. In a site with **40 apartment suites** and services that are in the range of **40 plus years** old, an accumulating fund of **\$10,000** every **8th year** starting in **year 1** is suggested. This fund should be allowed to accrue for major breaks or blockages only. It is not possible to say that this amount will be adequate, but it will offset the costs when they occur and the line item will validate the use of reserve money for this work in the future.

The fund should not be used for ongoing storm or sanitary line flushing. Such costs should be part of your annual maintenance budget.

Building Envelope Components

Garage Roof

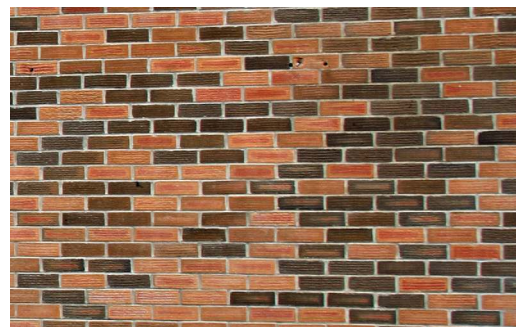
As per the Paving section above, it has been recommended that a structural engineer verify the condition of the roof and set guidelines for future paving of the surface. Funding for the roof inspection has been shown in the paving section.

Cladding

About **1,000 sq ft** of masonry stucco forms the outer siding below most of the windows on the building. To replace all these small areas of material would cost at least **\$28,000 in 2012 dollars**. With consistent maintenance, it should have an indefinite service life. It is suggested that a rigorous ongoing program of inspection and maintenance be carried on. Allocate **\$1,800** every **7th year** recurring in **year 5** for ongoing stucco inspection and repair.



In the order of **15,000 sq ft** of brick veneer, worth in the order of **\$337,500** in current dollars, has been used as the main exterior cladding on the building. Some brick was replaced and general repairs done in 2007. It is the opinion of the author of this report that the brick has the potential to have an indefinite service life if it is adequately maintained over the coming years.



Allocate **\$12,000** every **8 years** recurring in **year 3** to inspect the brick and to repair and repoint as required. During the last reserve inspection of the building no problems were noted with the brick, but investigation of anchorage and control joints is beyond the scope of a reserve fund study.

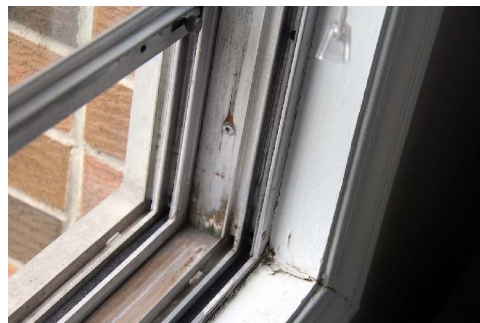
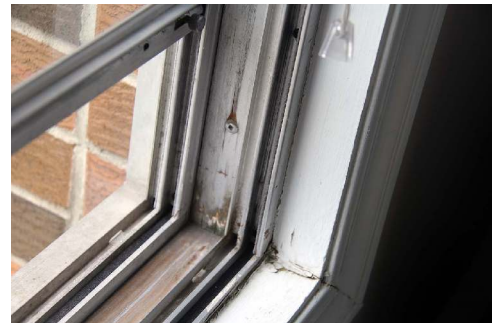
Entrance Canopy

The front entry of the building features a small fabric canopy which is likely about **15 years** old. It appears to remain in very good condition, likely a result of the north exposure and limited direct sunlight on it. Replacement of the fabric would cost about **\$3,000** in current dollars and it should still last at least **7 years**. Fund for replacement in **year 8**. Steel framing for the canopy should only require periodic repainting (in conjunction with the steel fences), no separate budget suggested.



Exterior Windows & Patio Doors

The site has nearly **165** casement multi-pane windows and fixed windows, **44** balcony doors, **65** common-area and unit-entry doors (interior), and a number of metal-clad and/or commercial-glassed exterior entry doors. Theoretical service life for the windows would be at least **45 years** and replacement cost in **2012 dollars** would be about **\$350,000**.



The current windows and sliding doors are neither attractive or particularly energy efficient, but they could remain in service for a long time to come. The corporation reimburses suite owners for needed repairs to windows and patio doors and has a written policy for sharing 50-50 the cost of discretionary replacements for owners who want them.

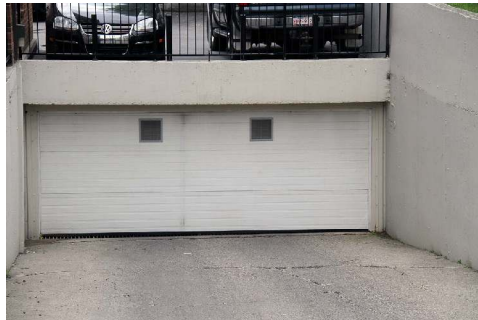
To date it has been reported that no owners have decided to make such replacements, but it is likely to happen at some point. If not the, full replacement by the corporation will have to be done over a period of time. Allocate funding for **20%** in **year 10** and every **5th year** subsequent. It has been assumed that track and roller repair as needed on the sliding doors and weatherstripping and hardware repair as needed on the windows would be paid from operating funds.

Note that it is recommended that the board adopt the following or something with similar intent, but worded by a lawyer. “A discretionary replacement would be defined as a replacement done at the choice of an owner (with a window or sliding door pre-approved by the board) prior to the time that the board or a competent inspector approved by the board deemed the replacement to be required.”

The Act requires that a “like with like” required replacement be fully paid for by the corporation.

Garage Door & Lift

The underground parking garage is accessed via an overhead door employing an electric lift with a keyed entry system. The door and lift was replaced in 2009 at a cost of **\$4,900** and is expected to last up to **20 years** with good maintenance. The 2012 cost of the door would be in the order of **\$5,500** and the next replacement is shown in **year 17**.



Caulking

Resilient sealants between unlike materials such as siding and door trim have an expected life in the order of **15 years**. All caulking on the building was reported to have been redone in 2007 and the next replacement is shown for **year 11** at a likely cost in the order of **\$26,500**.

Balconies

Darlington Arms has pre-finished metal railings on the balconies. This material should last the life of the project, but surface oxidation of the finish makes periodic repainting a good choice. At the date of the last field inspection a lot of surface deterioration was seen. Balcony rail painting can be expensive due to the need to either access them through units or set up staging for exterior access. Allocate **\$9,500** every **8th year** starting in **year 1** to prepare and paint the balcony rails.



The balcony decks appear to be un-coated concrete. It is recommended that the group consider having a pedestrian-grade urethane coating (or equivalent) applied to extend the life of the concrete. As this would be an improvement, no funding has been shown in the reserve study.

Upper Decks

About **1,500 sq ft** of the roof of the 7th floor is used for two exclusive-use decks. These are built over the tar and gravel roof with deck boards fastened to wood sleepers on top of the roof membrane. It is reported that all costs associated with them are deemed to be unit owner responsibility, no reserve funding has been shown.



Post Tensioning

Darlington Arms does not appear to incorporate any post tensioned cables.

Roof

The Darlington Arms has a multi-level flat roof covered by a conventional built-up tar and gravel membrane totaling some **5000 sq ft**. It would have had an original **20 year** life expectancy, and was reported to have been replaced at the time of conversion in 1998. The board has commissioned a lot of maintenance work on the roof and it has been taken to be effectively **12 years** old. Current cost to replace with a similar membrane should be about **\$95,000** and replacement has been shown in **year 9**.



Building Interior

Mail Box

A mailbox is located in the entry lobby of the building. With ongoing repair and service, it should have an indefinite service life. Locks, hinges, etc. should be replaced as they wear out and no separate funding is shown for replacement.



Interior Decor

1. Flooring

The bulk of the flooring material in the building is commercial carpet. It amounts to over **200 sq yds** and was replaced in 2008 at a cost of about **\$16,600** to replace today;



Tile (**700 sq ft**) was found in the entry and elevator which would have a replacement cost of about **\$13,500**;

Some of the service areas have painted concrete floors. In 2007 portions were improved with anti-slip paint;

2. Common-Area Wall Painting

Textured plaster with a paint finish was found in most of hallways. The total area amounts to about **7,000 sq ft**;

The walls in the two common area stairwells in Darlington Arms are paint finished. This is a very low-duty area and paint should last very well;



3. Ceilings

Common area ceilings in Darlington Arms are painted drywall and should not need very frequent painting;



4. Interior Doors

Interior door paint appeared to remain in good condition;



5. Common Area Lighting

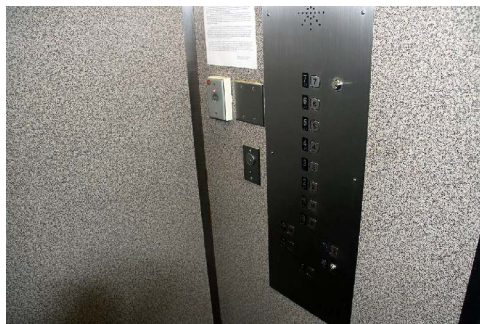
Lighting for the common areas includes; 60 low-wattage fluorescent ceiling fixtures, seven sets of two-tube four-foot-long florescent fixtures, and 15 general-purpose lights. Lighting in the lower lobby was improved in 2007. Garage and entry lights were replaced circa 2008 with energy-efficient t8 fixtures at a cost of about **\$7,600**;



The exit lights appear to be fully functional originals. LED units are strongly recommended for all future replacements. Although more expensive to buy, they have a much longer service life and take about 1/7 the energy of a regular bulb;

6. Elevator Car

Decor in elevator cars dates with time and over the years 2002, 2004 and 2005 it was upgraded at Darlington Arms. This approach of staged changes is not very common, but appears to work very well at the subject property;



7. Miscellaneous

Over the years the corporation has added storage lockers and two bike rooms and had racks built for bike storage.

Work on the cosmetic condition of interior common areas is driven by owner demand and Board decisions, which can impact the market value of suites, but has little bearing on the safety and mechanical condition of the building. As work is going to be done based on subjective decisions of the owner group, it is very difficult to estimate amounts and timing on the work to be done.

An interior decor fund of **\$12,000** every **6th year** beginning in **year 4** has been shown to cover the costs of maintaining the condition of the interior common areas.

Mechanical Components

Intercom/Security Cameras

A telephone-integrated intercom system is employed to provide guest access through the front entry of the building. It should have a **35 year** life and would currently cost about **\$4,250** to replace. Remaining life has been projected to be **21 years**.



4 CCTV cameras, a lobby-based “proof you’re on TV” monitor and a DVR were installed in the building circa 2005 at an approximate cost of **\$9,000**. Such equipment is evolving very quickly and tends to be replaced periodically. Allocate **\$5,000** for partial replacement of the system in **year 4** and every **10th year** subsequent



Water Service

City water supply-lines are required to be equipped with back flow check valves that must be serviced and certified annually by a qualified mechanical contractor. They are currently estimated to have a service life expectancy of **20 years** and a replacement allocation of **\$17,500** has been shown in **year 5**. Note that replacement of the valves may be deferred as long as your mechanical contractor can keep them operational at a reasonable cost.

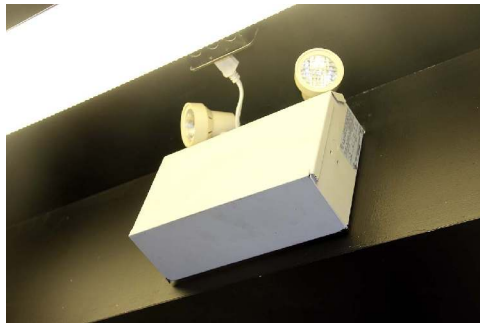
Electrical Service

The main electrical service and panels for the building should last the economic life of the project. No budget is suggested, but a qualified commercial electrician should be checking main connections for tightness on a regular basis. It is also recommended that the corporation commission periodic thermal scans of all accessible electrical devices and conductor to check for high resistance areas that could lead to damage or even fires.



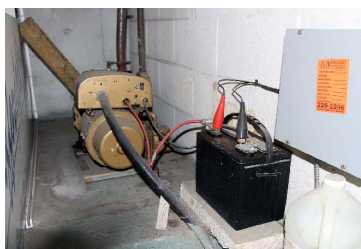
Emergency Lighting

The building incorporates emergency lights that are battery operated. Lights were added to supplement the service provided by an emergency generator system in the building and all should be serviceable for the foreseeable future. They are reportedly inspected quarterly and battery replacements as required plus other parts treated as an operating expense.



Emergency Generator

An 2.8 kW generator plant is located in the mechanical room. Replacement cost would now run close to **\$6,000** for an equivalent unit. It is on a very low-duty cycle and should last indefinitely if given good care. It should be started and run on a monthly basis and get at least annual oil changes. The battery is equipped with a continuous trickle charger and should be changed out every **4 or 5 years**. No funding for replacement suggested at this date.



Common Area Convectors

The entries and service area in the building are heated by a combination of fan cabinet and baseboard convector units. They are simple and generally very long lasting but it has been deemed prudent to include a major repair fund for them. Allocate **\$2,500** every **8th year** starting in **year 4** for common area convector major repairs



Hallway Make-up Air Furnace

A gas-fired corridor pressurisation furnace is employed in the complex. It should have a service life of **25 to 30 years** and would cost **\$25,000** to replace today. The fan and filter stage appeared to be originals coupled to a newer Reznor single-stage indirect fired furnace. Replacement projected for **year 6**.



Parkade Exhaust Fan/CO Detectors

Fans consist of a minimal number of parts (i.e. motor, belt, shaft, some type of rotor and the housing) and generally may be rebuilt on an economical basis almost indefinitely. CO detectors require regular testing and re-calibration (an operating rather than reserve cost) and replacement at irregular intervals. A rebuilt and replacement fund of **\$2,500** every **8th year** starting in **year 5** has been shown for this purpose. Review for adequacy at each update of this report.



Boilers

An original boiler with cast iron heat exchanger was replaced in 2002 with two new Laars Teledyne packaged boilers (model PH 0715 IN 1 K 1 C C TC units) with indoor/outdoor controllers, micron filter and chemical feed pot. They now provide hot water for the hydronic heating system in the building. They should have a service life of **30 to 35 years** and will cost in the order of **\$17,500** each in current dollars to replace.



It should be noted that they are standard-efficiency boilers which are not likely to be available by the time the next replacement is needed. Condensing boilers or some future improvement on them will be the likely more energy-efficient type available and they will be relatively more expensive. Replacement funding of **\$45,000** has been shown in **year 25** in the expectation that the higher-efficiency units will be the only type available.

Pumps

Redundant heavy-duty pumps (Bell and Gossett) are employed to circulate the water through the building heating system. Current practice with this type of pump is multiple rebuilds and they are seldom completely replaced. Allocate **\$900** every **6th year** starting in **year 2** for pump rebuilding.



A fractional-horsepower Taco 006-BCF-IFC pump has been employed to circulate domestic hot water to the apartments. These have a typical life expectancy of around **9 years**, but can be run to failure with no real problem for the building. Allocate **\$1,050** for an equivalent pump in **year 5**.



Expansion Tank

An Extrol high-pressure diaphragm type expansion tank has been installed in the boiler room since we last viewed it, most likely at the time the new boilers went in. Remaining life is taken as **10 years** on a replacement **20 life cycle**. Replacement cost will be the order of **\$2,600**.



Domestic Hot Water Tanks

Two power-vented 65 US gallon A O Smith hot water tanks with spark ignition are providing domestic hot water to the building. They were reportedly installed in 2002 and 2003, putting them near the end of a current typical service life expectancy. Allocate **\$6,750** to replace one in **year 1** and one in **year 2**. Note that the tanks can be run to failure with no likely down side, sometimes well beyond the **9 year** life we see with the majority of the newer tanks.



Sump Pump

One sump pump was observed in a pit in the floor of the mechanical room. It was not accessible for close-up examination, but has been replaced in the past **10 years** and has a high-water alarm system attached to it. Allocate **\$1,250** for replacement in **year 6** on a **15 year cycle**.



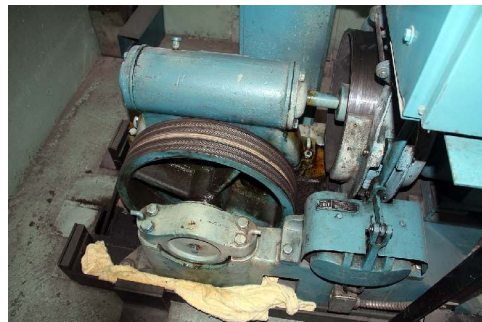
Roof Exhaust Fans

The building has a number of axial-vane exhaust fans on the roof, mostly fairly recent replacements. They are simple and quite durable in most applications and an allocation of **\$750** has been shown on a **5 year** cycle starting in **year 5** for periodic replacements as required.



Elevator

Darlington Arms is served with an original Turnbull elevator with relay controls. Elevators in this type of building are used on a very low-duty cycle, and with the exception of decor items in the car, should last for **45 or more years**. Many are replaced due to perceived lack of parts availability, but the service contractor for Darlington Arms has apparently been able to access hard-to-get items over the internet. There is no way to determine how long this will stay possible and it is only prudent to plan for the need to replace and hope to defer the timing.



Elevator replacement in similar buildings has been running in the order of **\$175,000** or more and replacement is projected for **year 8**. It should be noted that because of code requirements it is nearly impossible to do partial updates to the elevators without close to complete replacement, but replacement of parts is fine. If parts can be sourced and service is satisfactory, continue to defer replacement.

Piping Replacement Fund

Piping in the building was partially replaced about **10 years** ago. Allocate **\$25,000** every **10th year** recurring in **year 5** for future replacements. Note that the next replacements have been deferred based on no reports of leaking lines. Further deferment may be possible depending on future performance of the piping.

Controls and Miscellaneous Mechanical

Costs will be incurred from time to time for; valves, controls and the like. Allocate **\$1,000** every **5th year** recurring in **year 2** to cover replacements, review carefully at next update.

Reserve Fund Studies

Alberta Regulation 168/2000 specifies that a new reserve fund study must be completed every **5th year**. Allocate **\$4,850** in **year 5** and then every **5th year** thereafter.

Spreadsheets

The following pages include spreadsheet presentation of:

Component Quantity and Cost Consolidation

This chart shows the effective age, estimated service life, and total cost of each component or system. Remaining service life is calculated from the effective age and the estimated life. Where contingency amounts are shown, the assumption is that these amounts will be allowed to accumulate over time to provide the dollars that will inevitably be needed in years to come.

Cash Flow

4 pages of tables are presented with the first 3 pages spanning 7 years each and the 4th spanning 4 years. As each replacement time is reached for a component, the inflation-corrected cost appears in the table. Contingency amounts show in every year and are generally meant to accumulate until needed. Below the grayed out line a total of each year's expenditure is shown, an opening balance of the fund for that year, the amount to be allocated from condo fees for the year and the amount of expected return (interest) on savings. An average contribution per suite per month is also shown.

An inflation rate of **4%** has been applied to costs and to contributions. This means that an item that would cost **\$50,000** today would be projected to cost **\$51,500** next year and **\$86,584** in **15 years**. Suggested contributions to the draft reserve plan have been based on not allowing the closing balance to go below zero in any of the next **25 years**.

Return on invested funds has been calculated at a rate of **2.5%** per year for each one-year period on the opening minus expenses plus ½ of the budgeted contribution for each year.

It should be noted that the board of directors for each condominium in Alberta is obligated to develop and approve a 5-year reserve Plan based on the reserve study. This document gives the corporation the opportunity to make such changes as they feel are prudent to the recommendations of the reserve analyst. It is not subject to either review or approval by your reserve analyst.

Component Quantity and Cost Consolidation

Item	Effective Age	Life Cycle	Remaining Life	Replacement Year	Total Current Cost
Paving	15	25	10	11	\$22,000
Slab Inspection	one time			1	\$3,000
Paving Stones	no funding shown				
Non Structural Concrete *	8	8	0	1	\$40,000
Retaining Walls	no funding shown				
Low Steel Fence Paint & Repair	4	8	4	5	\$1,350
High Steel Fence Paint & Repair	0	8	8	9	\$2,800
Security Gate	7	8	1	2	\$2,500
Exterior Electric 33%	6	10	4	5	\$2,800
Landscaping Fund	3	5	2	3	\$1,200
Utility Services Fund	8	8	0	1	\$10,000
Stucco Repair Fund	3	7	4	5	\$1,800
Brick Repair Fund	6	8	2	3	\$12,000
Entrance Canopy Fabric	8	15	7	8	\$3,000
Windows & Patio Doors 20%	defer	5	9	10	\$70,000
Garage Door & Lift	4	20	16	17	\$5,500
Caulking & Sealants	5	15	10	11	\$26,500
Balcony Rail Painting	8	8	0	1	\$9,500
Balcony Deck Coating	no funding shown				
Roof	12	20	8	9	\$95,000
Interior Decor Fund	3	6	3	4	\$12,000
Intercom	15	35	20	21	\$4,250
Security Camera Fund	7	10	3	4	\$5,000
Back Flow Check Valves	16	20	4	5	\$17,500
Electrical Service	no funding shown				
Emergency Lighting	no funding shown				
Emergency Generator	no funding shown				
Common Area Convactor Fund	5	8	3	4	\$2,500
MUA Furnace	25	30	5	6	\$25,000
Parkade Exhaust Fan/CO Detectors	4	8	4	5	\$2,500
Boilers	10	34	24	25	\$45,000
Heating Pump Rebuild Fund	5	6	1	2	\$900
Recirc Pump	5	9	4	5	\$1,050
Expansion Tank	10	20	10	11	\$2,600
DHW Tanks **	9	9	0	1	\$6,750
Sump Pump	2	15	13	14	\$1,250
Roof Exhaust Fans	1	5	4	5	\$750
Elevator	38	45	7	8	\$175,000
Piping Replacement Fund	6	10	4	5	\$25,000
Misc Mechanical	4	5	1	2	\$1,000
Reserve Fund Studies	5	5	0	1	\$4,850

* Drops to 20% of concrete total value after the first cycle and is deferred to year 21

** Replaced over more than 1 year

Cash Flow Years 1 to 7 (Inflation 4%, Return on Savings 2.5%)

Year Number	1	2	3	4	5	6	7
Item/Year	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20
Paving							
Slab Inspection	\$3,000						
Paving Stones							
Non Structural Concrete *	\$40,000						
Retaining Walls							
Low Steel Fence Paint & Repair					\$1,642		
High Steel Fence Paint & Repair							
Security Gate		\$2,704					
Exterior Electric 33%					\$3,407		
Landscaping Fund			\$1,462				
Utility Services Fund	\$10,000						
Stucco Repair Fund					\$2,190		
Brick Repair Fund			\$13,498				
Entrance Canopy Fabric							
Windows & Patio Doors 20%							
Garage Door & Lift							
Caulking & Sealants							
Balcony Rail Painting	\$9,500						
Balcony Deck Coating							
Roof							
Interior Decor Fund				\$14,038			
Intercom							
Security Camera Fund				\$5,849			
Back Flow Check Valves					\$21,291		
Electrical Service							
Emergency Lighting							
Emergency Generator							
Common Area Convector Fund				\$2,925			
MUA Furnace						\$31,633	
Parkade Exhaust Fan/CO Detectors						\$3,042	
Boilers							
Heating Pump Rebuild Fund		\$973					
Recirc Pump					\$1,277		
Expansion Tank							
DHW Tanks **	\$6,750	\$7,301					
Sump Pump							
Roof Exhaust Fans					\$912		
Elevator							
Piping Replacement Fund					\$30,416		
Misc Mechanical	\$4,850					\$6,137	
Reserve Fund Studies							
Years Expenditures	\$74,100	\$10,978	\$14,961	\$22,812	\$61,137	\$40,811	\$0
Opening Balance	\$236,044	\$238,250	\$276,902	\$314,196	\$346,202	\$341,628	\$359,749
Years Contribution	\$41,736	\$43,405	\$45,142	\$46,947	\$48,825	\$50,778	\$52,809
Return On Savings	\$4,570	\$6,224	\$7,113	\$7,871	\$7,737	\$8,155	\$9,654
Closing Balance	\$208,250	\$276,902	\$314,196	\$346,202	\$341,628	\$359,749	\$422,213
Average Cost Per Suite Per Month	\$87	\$90	\$94	\$98	\$102	\$106	\$110
Transfer from Operating Funds	\$30,000	\$0	\$0	\$0	\$0	\$0	\$0

Cash Flow Years 8 to 14 (Inflation 4%, Return on Savings 2.5%)

Year Number	8	9	10	11	12	13	14
Item/Year	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27
Paving				\$33,868			
Slab Inspection							
Paving Stones							
Non Structural Concrete *							
Retaining Walls							
Low Steel Fence Paint & Repair						\$2,248	
High Steel Fence Paint & Repair		\$3,985					
Security Gate			\$3,701				
Exterior Electric 33%							
Landscaping Fund	\$1,779					\$2,165	
Utility Services Fund		\$14,233					
Stucco Repair Fund					\$2,882		
Brick Repair Fund				\$18,473			
Entrance Canopy Fabric	\$4,106						
Windows & Patio Doors 20%			\$103,617				
Garage Door & Lift							
Caulking & Sealants				\$40,796			
Balcony Rail Painting		\$13,521					
Balcony Deck Coating							
Roof		\$135,215					
Interior Decor Fund			\$17,763				
Intercom							
Security Camera Fund							\$8,658
Back Flow Check Valves							
Electrical Service							
Emergency Lighting							
Emergency Generator							
Common Area Convector Fund					\$4,003		
MUA Furnace							
Parkade Exhaust Fan/CO Detectors						\$4,163	
Boilers							
Heating Pump Rebuild Fund	\$1,232						\$1,559
Recirc Pump							\$1,818
Expansion Tank				\$4,003			
DHW Tanks **			\$9,992	\$10,391			
Sump Pump							\$2,165
Roof Exhaust Fans			\$1,110				
Elevator	\$239,500						
Piping Replacement Fund							
Misc Mechanical				\$7,466			
Reserve Fund Studies							
Years Expenditures	\$246,616	\$166,954	\$136,182	\$114,997	\$6,884	\$8,575	\$14,200
Opening Balance	\$422,213	\$235,595	\$128,189	\$51,952	-\$1,265	\$56,700	\$116,984
Years Contribution	\$54,922	\$57,119	\$59,403	\$61,779	\$64,251	\$66,821	\$69,494
Return On Savings	\$5,076	\$2,430	\$543	\$0	\$599	\$2,038	\$3,438
Closing Balance	\$235,595	\$128,189	\$51,952	-\$1,265	\$56,700	\$116,984	\$175,716
Average Cost Per Suite Per Month	\$114	\$119	\$124	\$129	\$134	\$139	\$145

Cash Flow Years 15 to 21 (Inflation 4%, Return on Savings 2.5%)

Year Number	15	16	17	18	19	20	21
Item/Year	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34
Paving							
Slab Inspection							
Paving Stones							
Non Structural Concrete *							\$45,575
Retaining Walls							
Low Steel Fence Paint & Repair							\$3,076
High Steel Fence Paint & Repair			\$5,454				
Security Gate				\$5,065			
Exterior Electric 33%	\$5,043						
Landscaping Fund				\$2,634			
Utility Services Fund			\$19,479				
Stucco Repair Fund					\$3,792		
Brick Repair Fund					\$25,282		
Entrance Canopy Fabric							
Windows & Patio Doors 20%	\$126,066					\$153,379	
Garage Door & Lift			\$10,713				
Caulking & Sealants							
Balcony Rail Painting			\$18,505				
Balcony Deck Coating							
Roof							
Interior Decor Fund		\$22,476					
Intercom							\$9,685
Security Camera Fund							
Back Flow Check Valves							
Electrical Service							
Emergency Lighting							
Emergency Generator							
Common Area Convector Fund						\$5,478	
MUA Furnace							
Parkade Exhaust Fan/CO Detectors							\$5,697
Boilers							
Heating Pump Rebuild Fund						\$1,972	
Recirc Pump							
Expansion Tank							
DHW Tanks **				\$13,674	\$14,221		
Sump Pump							\$2,848
Roof Exhaust Fans	\$1,351					\$1,643	
Elevator							
Piping Replacement Fund	\$45,024						
Misc Mechanical		\$9,084					\$11,052
Reserve Fund Studies							
Years Expenditures	\$177,483	\$31,560	\$54,152	\$21,372	\$43,296	\$162,472	\$77,934
Opening Balance	\$175,716	\$71,366	\$116,905	\$143,470	\$207,464	\$253,879	\$182,723
Years Contribution	\$72,273	\$75,164	\$78,171	\$81,298	\$84,549	\$87,931	\$91,449
Return On Savings	\$859	\$1,935	\$2,546	\$4,069	\$5,161	\$3,384	\$3,763
Closing Balance	\$71,366	\$116,905	\$143,470	\$207,464	\$253,879	\$182,723	\$200,000
Average Cost Per Suite Per Month	\$151	\$157	\$163	\$169	\$176	\$183	\$191

Cash Flow Years 22 to 25 (Inflation 3%, Return on Savings 2.5%)

Year Number	22	23	24	25
Item/Year	2034/35	2035/36	2036/37	2037/38
Paving				
Slab Inspection				
Paving Stones				
Non Structural Concrete *				
Retaining Walls				
Low Steel Fence Paint & Repair				
High Steel Fence Paint & Repair				\$7,464
Security Gate				
Exterior Electric 33%				\$7,464
Landscaping Fund		\$3,204		
Utility Services Fund				\$26,658
Stucco Repair Fund				
Brick Repair Fund				
Entrance Canopy Fabric		\$7,394		
Windows & Patio Doors 20%				\$186,609
Garage Door & Lift				
Caulking & Sealants				
Balcony Rail Painting				\$25,325
Balcony Deck Coating				
Roof				
Interior Decor Fund	\$28,439			
Intercom				
Security Camera Fund			\$12,817	
Back Flow Check Valves				\$46,652
Electrical Service				
Emergency Lighting				
Emergency Generator				
Common Area Convector Fund				
MUA Furnace				
Parkade Exhaust Fan/CO Detectors				
Boilers				\$119,963
Heating Pump Rebuild Fund				
Recirc Pump		\$2,588		
Expansion Tank				
DHW Tanks **				
Sump Pump				
Roof Exhaust Fans				\$1,999
Elevator				
Piping Replacement Fund				\$66,646
Misc Mechanical				
Reserve Fund Studies				
Years Expenditures	\$28,439	\$13,186	\$12,817	\$488,781
Opening Balance	\$200,000	\$272,146	\$365,581	\$465,737
Years Contribution	\$95,107	\$98,911	\$102,867	\$106,982
Return On Savings	\$5,478	\$7,710	\$10,105	\$761
Closing Balance	\$272,146	\$365,581	\$465,737	\$84,699
Average Cost Per Suite Per Month	\$198	\$206	\$214	\$223

Conclusions and Recommendations

It is important to view the above report as one option among many to fund and maintain a safe reserve for your complex. Answers can be right without being the only right way to get the job done. Your complex was found to be in generally good to very good condition.

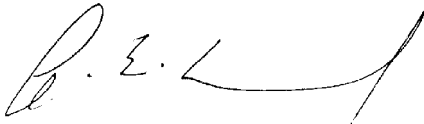
Based on observed conditions and information supplied, the following has been estimated to be required for adequate future funding;

1. Reported opening reserve at July 1, 2013 - \$236,044
2. Reserve contributions from fees in 2012/13 - \$41,736 (\$87 per average suite per month)
3. Subsequent increases at the rate of inflation or as needs indicate at the next update
4. Transfer from operating funds to reserve of \$30,000 on or about January 1, 2013

Note that several items in the report have funding based on estimated worst case scenarios and that if the elevator is kept in service for a year or two extra or the roof lasts a little longer than projected or if the window change outs are done more slowly than projected, the numbers look a whole lot stronger. This can cut both ways, and earlier replacements or increased costs are always possible

Please address your questions or concerns to the undersigned through your elected board of directors. Email emery@calgarycondoconsulting.ca.

Respectfully submitted,



Emery Leraand, A.C.C.I.
General Manager
Calgary Condominium Consulting Ltd.
February 6, 2013,final