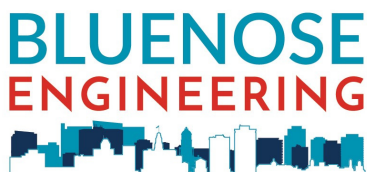


RESERVE FUND STUDY

277 Rutledge Street

Bedford, NS.

Halifax County Condominium Corporation No. 276



SITE ASSESSMENT ON:

September 25th, 2019

DATE:

November 26th, 2019

BY:

Bluenose Engineering
Unit 160 Box 374, 3650 Hammonds Plains Road, Upper Tantallon, NS. B3Z 4R3

FOR:

HCCC#276
c/o Canmar Services.
PO Box 25142
RPO Clayton Park
Bedford, NS. B3M 4H4



EXECUTIVE SUMMARY

A reserve fund study of Halifax County Condominium Corporation No. 276 (“the Condominium”) was conducted by Bluenose Engineering in 2019, at the request of Canmar Services. (“the Property Manager”).

The Condominium includes 36 residential apartment units and below-grade parking in a four-storey building, completed in 2005.

Common elements include the site improvements, structure, exterior walls and roofs, common areas, equipment and services, and mechanical and electrical services within each unit. Unit owners are responsible for interior finishes and fixtures within each unit.

The financial year of the Condominium is Jan. 1st – Dec. 31st. The referenced financial statements indicate a reserve fund balance of \$24,964 at the start of 2019. Contributions to the reserve fund in 2019 are budgeted to be \$45,000.

The site and building are in good condition overall.

The reserve fund study makes projections for future repairs or replacements: these are summarized by component in **Appendix Table A**. The projected expenditures are presented by year in **Table B** for each year of the evaluation period.

As shown in **Table A**, the most significant costs over the evaluation period are window replacements, siding refurbishment, roof replacements, boiler replacement and balcony door replacements.

Appendix Table C presents the projected annual expenditures, contributions and year-end balances over the evaluation period.

As shown in **Table C**, the recommended contribution in 2020 is \$49,500, which is 10% higher than the \$45,000 budgeted in 2019.

Table C indicates contributions increase by 10% annually for nine years. Thereafter, contributions are escalated in relation to inflation.

The contributions are anticipated to provide a stable level of funding for the long-term upkeep of the condominium’s common elements, subject to the recommendations of future updates to the study.



LIMITING CONDITIONS

The information and opinions expressed in this report are solely for the benefit of the named client(s). The report may not be relied upon by any party other than that indicated without written consent of the named client(s) and the engineer.

This report summarizes the condition of the various items of the condominium's common elements and provides an opinion of long-term recapitalization costs. The quality of this information is limited by the extent of the property observed and information provided, as identified in the report. The information is provided specifically for decisions to be made by the condominium on its contributions to the reserve fund.

Any opinions presented herein are solely for the purposes stated in the report. In particular, the reader is cautioned not to read the opinions related to any condominium component or element of the report in isolation, or to base decisions or actions related to any condominium component on this report without carrying out appropriate investigations, project management and design.

No responsibility is assumed for legal surveys, soil tests, environmental assessments, detailed engineering calculations, quantity surveying or other activities unless required for the purpose of the report and specifically identified as being a part of the report. Unless specifically identified otherwise, the report does not include an assessment of fire safety or barrier-free access. Bluenose Engineering and its sub-contractors' liability for any claim whatsoever arising in connection with this report shall be strictly limited to the fees received for service provided.

This report, and any additions or amendments thereto, is confidential and privileged and contains information intended only for the client(s) named herein and Bluenose Engineering. Any copying, disclosure, distribution or transmission of this reserve fund study is strictly prohibited at law and shall constitute an infringement of copyright.



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INTRODUCTION

A reserve fund study of Halifax County Condominium Corporation No. 276 was conducted by Bluenose Engineering in 2019, at the request of the Canmar Services. The report was prepared by Jim Fletcher, P.Eng..

The report summarizes the condition of the various items or components of the common elements of the condominium and provides an opinion of long-term recapitalization costs. The information is provided specifically for decisions to be made on managing the reserve fund and recommending contributions to the fund.

The study provides a budget for future expenditures; it does not, however, commit the condominium to these expenditures, or prevent other capital work from being carried out. It is recommended that the condominium conduct the appropriate project management, investigations and design prior to committing to the expenditures budgeted in this study.

SCOPE, METHODS, REFERENCES

1. Regulations and Definitions

CONDOMINIUM ACT

The Condominium Act, R.S., c. 85, last revised December 2017, provides requirements for the declaration and registration of Condominiums in Nova Scotia, and provides the framework for Condominium Corporations to manage the 'common elements', 'common expenses' and 'common interest' of condominium 'owners' - all as defined in the Act.

Section 31 of the Act defines financial provisions for 'common expenses and the Reserve Fund established by the corporation pursuant to subsection (1A)'. The Reserve Fund is described as follows:

(1A) The corporation shall establish and maintain a reserve fund for major repair and replacement of the common elements and assets of the corporation including, where applicable and without limiting the generality of the foregoing, roofs, exteriors of condominiums, roads, sidewalks, sewers, heating, electrical and plumbing systems, elevators, laundry, recreational and parking facilities.

Section 46 provides the framework for Regulations under the Act.



CONDOMINIUM REGULATIONS

The Condominium Regulations, last amended April, 2015, include regulations regarding Reserve Fund Studies in Part K (Sections 77 to 81).

The Regulations include the following definitions:

- a) *"component" means an individual item that is included in the physical analysis portion of a reserve-fund study as described in subsection 79(2), and shall include an item*
 - i. *that is the responsibility of the corporation,*
 - ii. *for which major repair or replacement costs are anticipated to be incurred during its useful life,*
 - iii. *for which the costs of repair or replacement will not be covered as part of the annual operating or maintenance budget;*
- b) *"master reserve-fund spread sheet" means a spread sheet with calculations of the annual funding requirements for each component based on its remaining useful life, the basic annual contribution and the shortfall contribution options, but without an allowance for inflation or interest earned;*
- c) *"projected cash flow tables" means tables that demonstrate the effect of interest earned on investments and inflation of expenses and validate that a shortfall option will not jeopardize the funding plan;*
- d) *"reserve-fund study" means a study undertaken to determine a funding plan that adequately offsets expenditures for major repair or replacement of components;*
- e) *"remaining useful life" means the estimated time, in years, that a component can be expected to continue to serve its intended function.*

For existing condominiums with ten units or more, the Regulations require a comprehensive reserve fund study be carried out every ten years, and updates at five-year intervals or at any time that there is significant change to the assets of the corporation.

Comprehensive reserve fund studies include:

- ❖ An inventory of the Components of the Condominium's Common Elements. The inventory is based on an on-site review; a review of the corporation's architectural, electrical and mechanical plans; a review of the declaration and by-laws; a review of the corporation's history with respect to the maintenance, replacement and repair of its components; and any planned changes to its components;
- ❖ An assessment of the remaining useful life, replacement cost, and the major maintenance and repairs related to each Component;
- ❖ A financial analysis of the Condominium's reserve fund income and projected expenses, indicating the annual contribution required to be paid into the reserve fund to adequately offset expenditures for the major repair or replacement of the components.

Updates of reserve fund studies include:



- ❖ A site visit to update the component inventory and assessment of remaining useful life, replacement costs and major maintenance or repairs; and
- ❖ An update of the financial analysis.

In either case, the physical assessment is based on an on-site review of the major common area components, a review of drawings, previous inspection reports, complaints from occupants and maintenance records, and interviews with the property manager.

The complete Act and Regulations are available on-line at

<https://nslegislature.ca/sites/default/files/legc/statutes/condominium.pdf> and

https://www.novascotia.ca/just/regulations/regs/conregs.htm#TOC2_10 , respectively.

2. Scope and Methods

The study was carried out in accordance with the Nova Scotia Condominium Act and Regulations.

The scope and methods for physical assessment are consistent with the American Society for Testing and Materials (ASTM) Standard E2018-15, Standard Guide for Property Condition Assessments: Baseline Property Condition Assessment Process. The Guide sets standards for a walk-through survey by an observer, document reviews and interviews, and report preparation.

The quality of the assessment is limited by the extent of the property observed and the information gathered. The scope of the assessment and data received are outlined in the section **Reference Information** below.

Assumptions regarding the life expectancy of the Condominium's components and replacement costs are based on information provided by manufacturers, cost survey literature, and observations and experience with similar materials and systems.

A valuation period of 25 years was used for the purpose of this study. Where replacement is anticipated beyond the 25-year window, the report includes an assessment of potential repairs, partial replacement, and/or partial funding for the eventual complete replacement of the component. Some components of the Condominium (e.g., storm water piping) may be assessed as having an "indefinite" life expectancy as compared to the expected useful life of other components. Localized repairs may be required to these components; accordingly, contingency amounts or cyclical repair costs are recommended for these items.

Where budgets are provided for contingencies, allowances or cyclical repairs, the contingency amount is based on the probable cost of work which may occur at a given time, and the frequency reflects the estimated total long-term cost. The actual costs and timing may vary from those assessed in this study.

Generally, the costs presented in the physical assessment section of this report are current costs, regardless of when the activity may be required. Allowances for inflation are included



in the financial analysis.

Costs presented in this report include taxes payable by the Condominium for the component and all indirect costs of project management, design, etc. Recapitalization cost items less than \$1,000 are generally not included.

The financial assessment identifies assumptions that were made regarding inflation, interest, maintenance and affordability. The report details possible fund accumulation scenarios. Regulations require reports provide the following optional scenarios for applying the interest earned on the fund: interest is applied (i) into the fund, or (ii) to operations, or (iii) as a portion of the contributions to the fund.

Consultant qualifications are summarized at www.blunoseengineering.com

3. Reference Information

SITE ASSESSMENT

A site assessment was conducted by Jim Fletcher, P.Eng. on September 25th, 2019, accompanied by Don Buck, Partner, and Kim Ryder, Property Manager, Canmar Services and Mike Kennedy, President, HCCC#276.

The assessment included a visual examination of the site and the building exterior and interior common element areas.

Exterior common elements include the roof, the exterior walls, doors, windows and balconies. In general, the upper balconies were not accessed for assessment of these elements or the adjacent exterior doors and windows: budgets for these components are based on previous study reports and on information provided by the Property Manager and Condominium. One unit and common area were accessed for assessment of the balcony, doors and windows.

The interior common elements which were assessed included the interior parking area, common areas, service rooms, equipment and services, and a portion of the attic space.

DOCUMENTS REVIEWED

The following documents and/or information were made available:

- Survey drawings (6 sheets); R K Carrick; registered September 2005
- Record drawings A1-21, S1-12, SD1-3; W M Fares; registered September 2005
- Design drawings – site, architectural, mechanical electrical; 2004-2005
- Reserve fund balance (unaudited) and budget data; Canmar Services, 2019-05-28, 2019-11-26
- HCCC#276 Reserve Fund Report; BKR Engineering; Draft, October 2014



DECLARATION AND BY-LAWS, HCCC#276

(not reviewed)

The Declaration and ByLaws may contain clauses related to reserve funds which are superseded by current regulations. Condominium Regulations require funds to be as recommended by the current reserve fund study.

PROPERTY DESCRIPTION

The Condominium includes 36 residential apartment units and below-grade parking in a four-storey building, completed in 2005.

The building includes concrete foundations and framing, pre-engineered wood truss roof framing, asphalt shingle roofing, and brick veneer and siding exterior wall finishes. Interior common areas include a below-grade parking garage, lobbies, corridors and stairwells, a fitness room, meeting room, guest suite, sunroom and deck and storage and service rooms. Interior equipment includes one elevator and plumbing, heating, sprinkler and electrical services. The site has a driveway entrance, site parking, landscaped areas and buried utility services.

Common elements include the site improvements, structure, exterior walls and roofs, common areas, equipment and services, and mechanical and electrical services within each unit. Unit owners are responsible for interior finishes and fixtures within each unit.

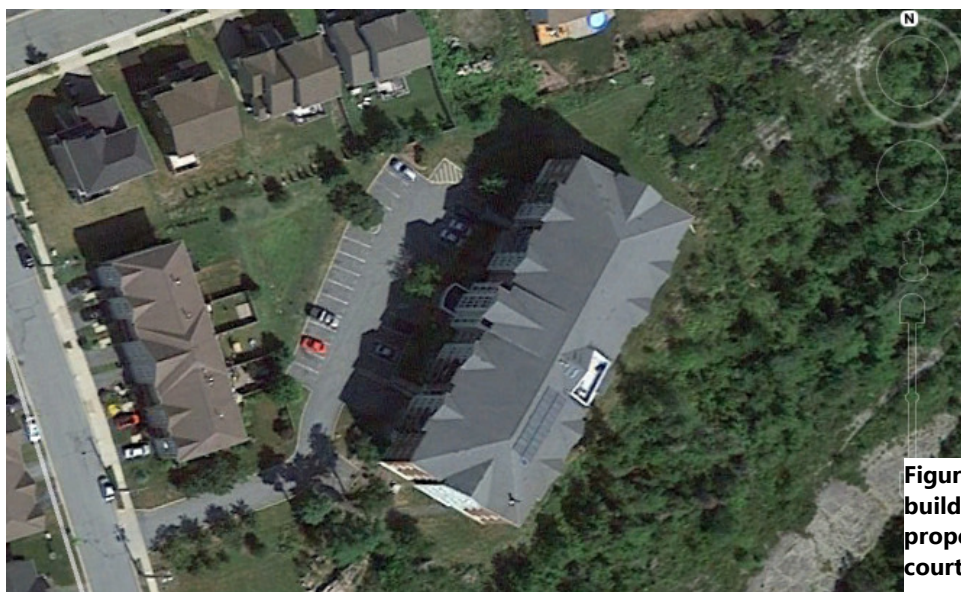


Figure 1 – Plan view of building and surrounding properties, Sept. 5th, 2015 - courtesy Google Earth



PHYSICAL ASSESSMENT

1. Site

SITE DRAINAGE

Surface drainage of the site and adjoining properties is from the north downward to the south. The site drains by infiltration and surface runoff to a retention pond to the northwest, a catch basin in parking area, culvert to the north and to natural areas in the adjacent properties to the east and south. Roof drainage is by gutter and downspout to an underground system.

Assessment: There is positive drainage away from the building on all sides. No issues with surface drainage were observed or reported.

BURIED SERVICES

Buried services include a water supply main and storm and sanitary sewers, all of which are connected to municipal systems at the street.

Assessment: In general, the buried services are considered to have an indefinite useful life; any major repairs are budgeted in the **Site Contingency Allowance** below. Cleaning out the catch basin is considered a maintenance item.

ASPHALT PAVED AREAS

Paved areas include an access driveway, exterior at-grade parking area for approx. 23 vehicles and access to below grade parking. There is also a paved path from the building's north exit.

Assessment: The driveway is in good condition overall; the parking area is in fair condition with longitudinal and transverse cracks (photos) and local settlement at parking stalls. The area may remain serviceable for several years but will continue to deteriorate.



Recommendation: replace all paving as funds permit, within 5-10 years. The replacement



paving is expected to have a useful life of 30 years or more.

Note: Table A at the end of this report presents the quantities, unit costs and timing for refurbishments and replacements. The table includes the remaining life before action is required, and the expected useful life of the action. Where the activity is phased, the cost of each phase is shown in **Table A** and the years in which the cost is projected are shown in **Table B**. The budgeted cost (before inflation), timing and frequency of the action are summarized below.

(asphalt pavement - replacement: \$84,000; 2025; 30 year cycle)

The paved path is uneven locally but is otherwise in good condition; its remaining useful life is assessed to be beyond the evaluation period, and any repairs may be included as maintenance.

SITE CONCRETE WORK

This item includes concrete flatwork at the main entrance and the below grade parking north exit, two stairs and railings and a retaining wall at exits and concrete curbs at paved areas throughout.

Assessment: The concrete work is in good condition overall and is considered to have an indefinite useful life; any major repairs are budgeted in the **Site Contingency Allowance** below.

FENCES

There is a coated chain link fence to the south west of the property. Wood fences to the north and west appear to be owned by the respective adjacent properties.

Assessment: The fences are in good condition and, with maintenance, are assessed to have a remaining life beyond the evaluation period.

SOFT LANDSCAPING

Soft landscaping includes grass areas throughout, and trees and shrub plantings adjacent to the driveway and main entrance.

Assessment: The landscaping is in good condition overall and is well maintained. Landscaping is, in general, budgeted as a maintenance item.

SITE CONTINGENCY ALLOWANCE

A site contingency allowance is recommended for less predictable major repair costs or smaller items not covered above. The contingencies include potential repairs to buried services, repairs and marking of asphalt finishes, and repairs to concrete curbs, sidewalks, site lighting and major landscaping refurbishments. The budget for site contingencies is included below in **Section 10, General – Contingency Allowance**.



2. Structures

CONCRETE FOUNDATIONS AND STRUCTURE

The building has reinforced concrete foundations, retaining walls, floors and columns.

Assessment: There was no evidence of excessive settlement or deformation observed or reported, or issue with moisture penetration into areas below grade. The structural concrete and provisions for foundation waterproofing are considered to be in good condition overall. Any repairs that may be required are included in the **Structure – Contingency Allowance** below.

CONCRETE SLAB ON GRADE

The below grade parking level extends to the building exterior walls on all sides and is finished with a concrete slab on grade.

Assessment: The slabs are cracked due to shrinkage shortly after construction. The surface is worn at the vehicle corridor near the entrance, with aggregate exposed to a depth of approx. ¼". Neither of these conditions are expected to affect the long-term serviceability of the slabs. The slabs are considered to have an indefinite life with repairs and stripe painting carried out as maintenance items.

WOOD FRAMING

The roof framing is pre-engineered roof trusses with wood fibre (OSB) sheathing. Exterior walls have wood studs and OSB sheathing.

Assessment: Where viewed in the attic space, the roof framing and sheathing was in good condition. The framing is assessed to have an indefinite useful life. Any repairs are included in the **Structure – Contingency Allowance** below.

Note: The attic space is divided into compartments. Openings were noticed in these compartments which may require sealing for fire protection. (Architectural Drawing A17 provides generic fire safety requirements.)

BALCONIES

The balconies are 'free cantilever' extensions of the concrete floors. All balconies have aluminum railings which are fastened to the concrete balcony and adjacent walls (photo).

Assessment: The balconies and railings appear to be in good condition overall



except for wear of the original paint coatings. There are no structural concerns reported. Through-floor moisture is suspected at one location where staining of the underside of balcony was noted (photo).



Recommendation: budget for recoating all railings within five years as funding permits; include an allowance for pressure washing of floors and for railing inspection and repairs to connection fasteners.

(balcony railings – refurbish and paint: \$36,000; 2022; 15 year cycle)

STRUCTURE – CONTINGENCY ALLOWANCE

A contingency allowance is recommended for unforeseen repairs to concrete framing, water migration at retaining walls and wood wall and roof framing, and balcony refurbishments. The allowance is included below in **Section 10, General – Contingency Allowance**

3. Roofs

ASPHALT SHINGLE ROOFING

The roof membrane is standard asphalt shingle, laid on un-insulated wood roof sheathing with a slope of 5.5:12 in most areas. Roof insulation is provided above the ceiling in the attic spaces and between roof deck joists. The shingles are original to construction in 2004. One leak was repaired in 2016 (at flashings adjacent to a higher wall).

Assessment: The assessment was limited to the east elevation and portions of the attic space. No leaks were reported in the main roof field. There is shingle wear in areas used to access and install roof-mounted solar panels (photo); otherwise, the east elevation appears to be in good condition after 15 years in service. The expected life of roofing varies from less than 15 years to more than 25. The remaining life is assessed to be 5-15 years.



Recommendations: budget for future replacement; inspect and repair in the short term as a maintenance item.

(roof – replacement allowance: \$117,000; 2031; 25 year cycle)



FASCIA, SOFFIT, GUTTERS, DOWNSPOUTS

The fascia trim, soffits, gutters and downspouts are coated aluminum. These items are in good condition overall. Cleaning, repairs and minor replacements are included in the **Roofing Contingency Allowance** below.

ROOF DECK WATERPROOFING

The roof deck has a Duradeck® flexible vinyl roofing membrane which extends as scuppers to perimeter gutters (photo). All were replaced most recently in 2017 and are reported to be in good condition.

Assessment: The expected useful life of this type of system and application has improved in recent years through improved quality control of construction details. Useful life may now be determined by surface wear and maintenance. For budgeting purposes, the deck is assessed to have a remaining life 20 years, consistent with an average expected life of 25 years.

Recommendations:

1. budget for replacement of roofing and the supporting wood decking to which the sheet vinyl is adhered, including removal and replacement of railings, post covers and siding to install deck flashings. The timing is matched to the replacement of balcony doors.

(balcony decking - replacement: \$10,000; 2040; 25 year cycle)

2. include an allowance for repairs to scuppers in the **Roofing Contingency Allowance**.

ROOFING – CONTINGENCY ALLOWANCE

A contingency allowance is recommended for roofing inspections and repairs, rainwear repairs and repairs to Duradeck® assemblies where not covered by warranty. The allowance is included below in **Section 10, General – Contingency Allowance**.

4. Exterior Walls

The drawings indicate the exterior walls are concrete below the first floor. At and above the first floor the wall construction includes building paper, wood fibre (OSB) sheathing, wood studs with insulation, vapour barrier and 'Type 'X' fire code gypsum board. Exterior finishes are brick at approx. 2/3 of the façade and siding at the remainder.

BRICK VENEER

The brick veneer is standard clay brick masonry with an air gap, with metal brick ties for lateral



support from the wood substrate. The brick is supported vertically on the perimeter of the first floor concrete slab.

Assessment: The brick is in good condition overall. No deficiencies were observed. Periodic inspections and repairs are included in the **Exterior Wall Contingency Allowance** below.

VINYL SIDING

Vinyl siding with vinyl corner boards and trim have replaced the original fibre-cement siding on the north, east and south sides of the building. The siding was installed between 2015 and 2017 on the east and south elevations and in 2018 on the north elevation.

Assessment: The vinyl siding is in good condition overall. No deficiencies were observed. Periodic inspections and repairs are included in the **Exterior Wall Contingency Allowance** below.

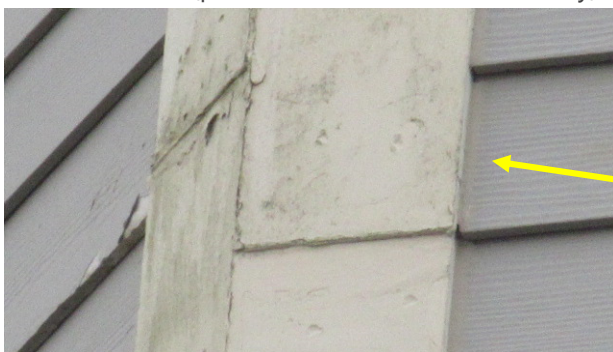
FIBRE-CEMENT SIDING

The west (front) elevation has Hardiplank® fibre-cement horizontal lap siding and Hardiboard® fibre-cement corner boards and trim which was installed with construction in 2004 and/or 2005. Areas of the façade have been painted since construction.

Assessment:

The horizontal lap siding is in good condition overall except locally in several areas where the manufactured coating has delaminated and water has been absorbed by the siding (photo). With local repairs and painting, the siding may be serviceable for 10-20 years.

Corner boards are in fair condition, with deterioration at the ends of boards in several locations (photos below – above main entry).



Recommendations: replace corner boards with vinyl boards at 2/3 of locations, and repair and paint the remaining siding and boards in the short-term; budget for replacement of all siding and boards with vinyl within ten years.

(exterior siding – refurbish west wall: \$36,000; 2020; (replace within a ten year cycle))

(exterior siding – replace west wall: \$200,000; 2027; 40 year cycle)

EXTERIOR WALLS - CONTINGENCY

The contingency includes unforeseen repairs to masonry and wood siding, and wall system leaks. The allowance is included below in **Section 10, General – Contingency Allowance.**

5. Exterior Doors and Windows

Exterior doors and windows were assessed visually from the exterior. Windows and doors of one unit and three common areas were assessed from the interior.

BUILDING ENTRY, EXIT AND SERVICE DOORS

The main entry has aluminum framed glazing with a bi-parting door with matching vestibule doors, original to the development. Exits include two insulated metal glazed doors in wood frames and one insulated steel door in steel frame, original to the development. The parking overhead door was replaced in 2015; its operator is original to the development.

Assessment: The doors are in good condition, consistent with years in service. The expected service lives are 40-50 years for the entry, 30 years for exits and 20 years for the parking overhead door.

Recommendation: budget for partial replacement of doors and hardware based on respective service lives.

(exterior common entry doors – allowance: \$5,000; 2023; five year cycle)

BALCONY DOORS

Each unit has an insulated metal glazed door in a wood frame.

Assessment: Based on assessment of one door and information provided, the doors are in good condition; however, the doors are not compatible with exposed conditions on the east side of the building. A remaining life of 10 years is assessed, based on exposure.

Recommendation: budget for replacement of all doors in approx. ten years to current standards for exposure. The actual phasing and timing may be determined to match siding replacement on the west wall.

(balcony doors – replacement allowance: \$108,000; 2030; 30 year cycle)



UNIT WINDOWS

The windows are single- or double-hung 'solid vinyl' framed units with vertical sliders original to the development.

Assessment: The windows are reported to be, in general, in good operating condition. Leaks were reported at two- or three- panel windows in two units on the east elevation following recent severe weather. Multiple-panel window mullions appear adequate for nominal conditions but marginal where exposed on the east elevation. The rate of deterioration is expected to be slow. Expected life is assessed to be 25-40+ years, depending on exposure.

Recommendation: budget for the phased replacement of windows in 10-20 years; select the windows for exposed conditions where applicable.

(unit windows – phased replacement allowance: \$144,000; 2029, 2034 and 2039; 40 year cycle)

FIXED GLAZING SYSTEMS

This item includes fixed glazing and spandrel 'window wall' panels at the main entrance and two stairwells (total four no.), and the fixed window system with balcony door at the sunroom and deck. Insulated glazing is framed in wood. The systems are original except the balcony door was replaced in 2018.

Assessment: The window wall systems appear to be in good condition overall and are assessed to have a remaining life beyond the evaluation period. The sunroom system is reported to have leaks at the vinyl-framed glazing units and/or wood framing (photo). The wood framing exterior finishes are in fair condition (photo).



Recommendation: replace four vinyl-framed fixed glazing panels in the sunroom, possibly with sliding or bi-parting doors, within the next three years; select the units for exposed conditions. Refinish exterior framing, possibly with sheet aluminum cladding, during replacements.

(sunroom fixed glazing – partial replacement: \$12,800; 2021; 30 year cycle)



6. Building Interiors

UNIT ENTRANCE AND COMMON ROOM DOORS

Entrance doors are wood doors in metal frames, with locksets and closers. The doors are generally original to the development.

Assessment: Doors and hardware are in good condition. The remaining useful life of the doors is beyond the evaluation period. An allowance is included in the **Interior Door Contingency Allowance** below for the replacement of individual doors and hardware as required.

STAIRWELL FIRE DOORS

Stairwells and passageways have steel fire doors with wired glazing in metal frames.

Assessment: Doors and hardware are in good condition. The remaining useful life of the doors is beyond the evaluation period. An allowance is included in the **Interior Door Contingency Allowance** below for the replacement of individual doors and hardware as required.

SERVICE AND STORAGE DOORS

Service rooms in the parking area have single- and double-leaf steel doors. Storage in the parking level and service doors in the residential floors are wood with steel frames

Assessment: Doors and hardware are in good condition. The remaining useful life of the doors is beyond the evaluation period. An allowance is included in the **Interior Door Contingency Allowance** below for the replacement of individual doors and hardware as required.

INTERIOR DOOR – CONTINGENCY ALLOWANCE

A budgetary allowance is included for unforeseen replacements of doors and hardware. The allowance is based on the replacement of 1.0% of the replacement cost of the doors and hardware annually.

(interior doors - contingency allowance: \$1,200; annually)

COMMON AREA FINISHES

Interior common areas include corridors at all levels, lobbies, two stairwells and common rooms. Floor finishes include carpet in corridors and common rooms, ceramic tile at the main floor lobby, carpet, carpet tile, vinyl tile and ceramic tile in common rooms, and carpet and ceramic tile in stairwells. Walls are painted gypsum board and trim. Ceilings are painted gypsum board.

Assessment: The common area finishes are in good condition overall. The corridor carpets are original; flooring replacements have been made in common rooms.



Recommendation: replace carpets and wall and ceiling finishes at the condominium's discretion. Budgets are included based on a 20 year cycle for carpet, corridor painting every 10 years and painting of other common areas every 20 years. The upkeep of ceramic tile and vinyl flooring is considered a maintenance item.

(interior finishes – replace carpet: \$40,000; 2025; 20 year cycle)
(interior finishes – walls and ceilings: \$18,000; 2025; 10 year cycle)

COMMON AREA FINISHES – SERVICE ROOMS

Common areas include storage and service rooms and the garbage room. Finishes include minimal paintwork of concrete, concrete masonry and gypsum board walls, ceilings and floors.

All service rooms entered were in good condition. No issues are reported. In general, the finishes are serviceable and durable, and their upkeep is considered a maintenance item. A contingency allowance is included in **Section 10, General – Contingency Allowance**.

7. Interior Fixtures and Equipment

ELEVATOR

The building has an Otis hydraulic elevator with a 2500 lb capacity, which accesses all five floor levels. The machine room is in the parking level. The elevator was installed with original construction in 2005.

Assessment: The elevator is reported to be in good working condition. Maintenance is contracted. No major upgrades have been required to date. The expected useful life of mechanical components, controls and cab interiors is 20-40 years, depending on the amount of use and other factors. Replacements are assessed to have a useful life of 30 years. The cab is in good condition and is assessed to have a remaining life beyond the evaluation period.

Recommendation: budget for the replacement of the hydraulic fluid tank, and mechanical and controls refurbishments after 30 years of service.

An independent elevator condition assessment is recommended after 20 years of service and is budgeted with future reserve fund studies.

(elevator – replace controls: \$42,000; 2036; 30 year cycle)
(elevator – mechanical refurbishment: \$40,000; 2036; 30 year cycle)

ENTRY DOOR OPERATORS

Recommendation: add electrical door operators and related security controls to the entrance and vestibule doors within five years, as funds permit.

(entry door operators – install: \$7,000; 2023; 25 year cycle)



FIXTURES AND FURNISHING

This item includes:

- mailboxes and furniture in the entrance lobby
- fitness room fixtures, furnishing and exercise equipment
- common room and sunroom kitchen and washroom cabinetry, fixtures, equipment and furnishing.

Assessment: All fixtures and furnishing were observed or reported to be in good condition. Typical expected life is beyond the evaluation period except 20 years for exercise equipment.

Recommendation: budget for replacement of exercise equipment on a 20-year cycle, kitchen appliances on a 25-year cycle and mailboxes on a 40-year cycle. The upkeep of all other items is considered maintenance.

(fixtures and furnishing – replacement allowance: \$1,200; annually)

8. Mechanical Systems

PLUMBING

Plumbing systems include the water service entrance, hot and cold water piping to and within the units, drains and plumbing ventilation. Back-flow prevention equipment is installed and maintained.

Domestic hot water is heated indirectly by the boiler plant circulating the heating system water through heat exchange coils in two 120 gallon domestic hot water storage tanks.

There is a solar water heating system which pre-heats water in the circulating domestic hot water system. The system includes 20 roof-mounted panels, two storage tanks and related glycol circulation piping, pumps and controls.

Plumbing equipment and fixtures in the units are the unit owners' responsibility.

Assessment:

No issue was identified with these systems.

With an expected useful life of more than 50 years, no system refurbishment is expected to the plumbing service, distribution and venting piping systems or roof drainage system.

Domestic hot water storage tanks are assessed to have an average service life of 25 years. Related are below the evaluation threshold.

At the time of assessment, the solar water heating system did not appear to be functioning.



Recommendations:

1. budget for replacement of two Triangle Tube Phase III storage heaters, model TR-120, 119 gallon storage
2. provide a contingency for plumbing system refurbishments and replacements of the domestic hot water three-way valve as part of the **Mechanical Contingency Allowance** below.
3. inspect the solar water heating system and implement a planned annual maintenance plan

(domestic hot water tanks - replacement: \$18,000; 2029; 25 year cycle)

HEATING

Building heat is provided by an oil-fired boiler plant which supplies heating system water to individual baseboard radiators in the units and common areas. The heating plant consists of two cast iron boilers connected into a common piping system with heating circulators pumping the heating water throughout the building. A separate circulator supplies heating water to the domestic hot water storage tanks. The boilers are original to the development in 2005.

Heating fixtures in common elements include baseboard radiators in common rooms and forced-flow heaters and unit heaters in the entrance vestibule, stairwells and parking area.

Assessment:

The piping system is expected to last the life of the building provided that the heating system water receives regular chemical treatment.

Anticipated replacements include boilers based on an expected life of 30 years and oil storage tanks based on a service life of 12-20 years for single-walled steel tanks.

Boiler controls were reported to be problematic and require overhaul in the short-term.

The upkeep of common area air heaters and radiators are considered maintenance.

Recommendations:

1. budget for replacement of two 1000MBH Burnham® boilers in 15 years, four 200 gallon oil storage tanks in 2020 and overhaul of controls in 2020.
2. provide a contingency for service hot water circulation system refurbishments as part of the **Mechanical Contingency Allowance** below.

(boilers - replacement: \$120,000; 2034; 30 year cycle)
(oil storage tanks - replacement: \$8,000; 2020; 20 year cycle)
(heating system controls – overhaul: \$6,000; 2020; 20 year cycle)



VENTILATION

A RenewAir® heat recovery unit (HRU) is located in the attic space and is connected to sunroom and/or corridor ventilation. (Drawings indicate exhaust grills for 100CFM air flow out of corridors and supply to common areas only; fan units and/or HRUs were not located on drawings.)

The condominium units are ventilated by HRUs and kitchen, bathroom and dryer exhaust fans: these are the responsibility of the respective owners.

Emergency ventilation of the garage by an exhaust fans and motorized intake louvre dampers which are controlled by carbon monoxide sensors.

Assessment:

One heat recovery unit and all ducting are considered to be common elements components. Heat recovery units are expected to have an indefinite useful life with periodic maintenance and inspection. Ducts are considered to have an indefinite useful life, with inspection and cleaning addressed as maintenance items.

Emergency ventilation is in good condition except carbon monoxide (CO) monitoring sensors require replacement.

Recommendations:

1. replace CO monitors and related controls in the short-term
2. provide a contingency for fan, damper and controls refurbishments as part of the **Mechanical Contingency Allowance** below

(emergency ventilation – replace CO sensors: \$6,000; 2020; 20 year cycle)

SPRINKLER SYSTEM

The building is protected by a wet pipe sprinkler system supplied from 6" underground water main which enters through the floor of the Sprinkler/Water Room.

Assessment: The system is inspected routinely and is reported to be in good condition. The system has an indefinite useful life, with occasional repairs anticipated and included in the **Mechanical Contingency Allowance** below.

MECHANICAL CONTINGENCY

A contingency allowance is recommended for less predictable major repairs to plumbing, heating, ventilation and sprinkler systems. The allowance is included below in **Section 10, General – Contingency Allowance**



9. Electrical Systems

POWER SUPPLY AND DISTRIBUTION

Power supply is underground to the padmount transformer on the property, then as 208/120V 3-phase 4-wire underground to a 600A switch in the electrical room.

The unit and house meters are located in the electrical room. Distribution wiring to and within each unit is the condominium's responsibility.

Assessment: No issue was reported or observed. The system is assessed to have a remaining useful life beyond the evaluation period. Any repairs required over the evaluation period may be included in the **Electrical Allowance** below.

Electrical equipment in each unit, including the unit switch and circuit breaker panel, and heating, lighting and other electrical fixtures, are the responsibility of each unit owner.

LIGHTING

Corridor and lobby lighting includes wall-mounted sconces, pot lights and ceiling-mounted fixtures. The garage and stairwells have fluorescent tube fixtures. Exterior Lighting includes security lights at balconies, entrance lighting, and parking area and landscape lighting.

Assessment: The interior lighting is in good condition overall. Remaining useful life is indefinite; however, corridor lighting replacements may be carried out to refresh finishes, at the discretion of the condominium.

Emergency lighting and exit lights are in good condition overall. The exterior lighting was not assessed in detail.

Recommendations: budget for the replacement of corridor lighting with a future replacement of common area finishes; budget for emergency and exterior lighting in the **Electrical Allowance** below.

(interior lighting – replacements: \$12,000; 2035; 30 year cycle)

ELECTRICAL/ELECTRONIC EQUIPMENT

This item includes a fire panel and an intercom system at the vestibule, and a security camera system.

Assessment: The systems were not assessed in detail. Upgrades are recommended to the security system. Fire protection panels and intercoms have an expected life of 30 years due to obsolescence.

Recommendation: budget for replacement of the security system in the short-term; carry allowances for the future replacement of the fire panel and intercom.



(security system – additions, replacements: \$8,000; 2021; 20 year cycle)
(fire protection controls – allowance: \$6,000; 2035; 30 year cycle)
(intercom – replacement allowance: \$4,000; 2035; 30 year cycle)

ELECTRICAL CONTINGENCY

An allowance is recommended for repairs and replacements to exterior lighting, power supply and wiring and equipment and distribution wiring. The allowance is included below in **Section 10, General – Contingency Allowance.**

10. General

CONTINGENCY ALLOWANCE

The contingencies noted above are assessed as follows:

Section	Description	Contingency (\$)	Cycle (years)	Annual Budget
1	Site	5,000	5	1,000
2	Structure	5,000	10	500
3	Roofing	5,000	10	500
4	Exterior Walls (masonry)	5,000	10	500
8	Mechanical	4,000	10	400
9	Electrical (site lighting)	12,000	20	600
TOTAL				\$ 3,500

(general – contingency allowance: \$3,500; annually)

EXPENSES – YEAR TO DATE

(Not applicable)

PROFESSIONAL FEES

Reserve fund study and update costs, engineering and project management are budgeted as general costs.

(engineering – reports: \$3,000; 2020; five year cycle)



PROJECTED EXPENDITURES

TABLE A – SCHEDULE OF COMPONENTS AND CAPITAL REQUIREMENTS (PRESENT COST)

Appendix Table A presents a summary of components their capital requirements over the 25-year evaluation period.

Work item quantities are estimated by:

- LS lump sum
- Unit number of condominium units affected
- Item number of items included
- LF linear feet
- SF square foot

The table indicates the estimated present cost and year for the action, and the expected useful life or frequency of the cost.

The table also indicates the estimated total cost for each item over the evaluation period. This column provides an indication of the relative significance of each item in the long-term.

As shown in **Table A**, the most significant costs over the evaluation period are window replacements, siding refurbishment, roof replacements, boiler replacement and balcony door replacements.

Cost Estimates

Unless otherwise noted, the costs are estimated as the current value regardless of when the activity is to be required.

All amounts include 15% Harmonized Sales Tax.

Estimate of Timing

The estimated timing of items of work are based on the assessed remaining useful life of the item. Remaining useful life is determined by visual assessment of the physical condition of the item, an assessment of the rate of deterioration, and assessment of the condition at which the item will require replacement or refurbishment. Estimates for the frequency of repetition of the item are based on published standards for expected useful life, industry experience, an assessment of the service condition at the site, and consultation with condominium and property managers.



TABLE B – PROJECTED EXPENDITURES

Appendix Table B presents the assessed cost for each item for each year of the evaluation period.

The table includes the effect of inflation.

Inflation

Future costs are calculated as the current cost factored by the inflation rate, compounded over the associated number of years.

An inflation rate of 1.56% is estimated from a review of the average yearly inflation rate (Consumer Price Index – All Items) for Nova Scotia over the past ten years, as tabulated below.

Year	Change in Consumer Price Index ¹
2009	-0.20
2010	2.16
2011	3.81
2012	1.96
2013	1.28
2014	1.66
2015	0.39
2016	1.24
2017	1.15
2018	2.20
average	1.56

An inflation rate of 1.50 % is used for the financial analysis.

¹ Source: NS Finance <http://www.novascotia.ca/finance/statistics/topic.asp?fto=21u>



RESERVE FUND

RESERVE FUND STATUS

The financial year of the Condominium is Jan. 1st – Dec. 31st.

The referenced financial statements indicate a reserve fund balance of \$24,964 at the start of the current financial year. Contributions to the reserve fund in 2019 are budgeted to be \$45,000.

RESERVE FUND INTEREST RATE

Capital held in the reserve fund will earn interest.

An average rate of interest of 0.91% may be derived using the ten-year average of the bank rate and treasury bills issued by the Bank of Canada, as tabulated below.

Year	Bank rate (last Wed. of the month) ²	Treasury bill auction (av. yields – 3 month) ³
2009	0.65	0.32
2010	0.58	0.58
2011	1.25	0.91
2012	1.25	0.95
2013	1.25	0.97
2014	1.25	0.91
2015	0.88	0.50
2016	0.75	0.50
2017	0.96	0.71
2018	1.69	1.40
average	1.05	0.87

Based on actual investments - and not all restricted funds being invested - an interest rate of 1.0% is used in the analysis.

The interest on money held in the reserve fund is estimated as interest on the starting balance over the full year plus interest for six months on the contributions less the expenditures in the year.

² Source: Bank of Canada <http://www.bankofcanada.ca/rates/interest-rates/canadian-interest-rates/>

³ Source: Bank of Canada <http://www.bankofcanada.ca/rates/interest-rates/t-bill-yields/>



TABLE C – PROJECTED CASH FLOW

Appendix Table C presents the recommended budget for expenditures and contributions.

The total projected expenditures for each year are as detailed in **Table B – Forecast Expenditures** and include the effects of inflation.

In the scenario presented in **Table C**, interest earned stays in the reserve fund.

The projected balance at year-end is the sum of the starting balance, contributions and interest, less expenses. The balance at the start of the year is the balance at the end of the preceding year. The table includes interest on funds at the rate noted above.

As shown in **Table C**, the recommended contribution in 2019 is \$45,000, as budgeted. **Table C** indicates contributions increase by 10% annually for nine years. Thereafter, contributions are escalated in relation to inflation.

The contributions are anticipated to provide a stable level of funding for the long-term upkeep of the condominium's common elements, subject to the recommendations of future updates to the study.

TABLE C ANALYSIS – UNCERTAINTIES

The most significant uncertainties which affect the precision of **Table C** include:

- The timing of refurbishments and replacements
- The rate of inflation
- The scope and cost of refurbishments and replacements

These factors have a considerable influence on long-term projections and may only be resolved by periodic review of the study. Interest rate has a significant, but lesser impact on precision.

TABLES D AND E – OPTIONAL PROJECTED CASH FLOW

The Regulations require alternative cash flow options be presented. **Tables D** and **E**, respectively, present scenarios in which interest is removed for operations, and contributions are reduced by the interest reported in the previous year. In both cases, contributions have to be larger to achieve long-term funds at the same level as shown in **Table C**. The funding described in **Table C** is recommended as the simplest means of financial planning for the Condominium and its Unit Owners.

TABLE F: MASTER RESERVE FUND SPREAD SHEET

As required by the Regulations, the Master Reserve Fund Spread Sheet indicates the contribution that would be required to fund reserves for each component's future work individually. The table calculates a total funding requirement for all components in each year and may be used for comparison with the recommended annual contribution.



RESERVE FUND STATUS CERTIFICATE

SUMMARY REPORT

A reserve fund study of Halifax County Condominium Corporation No. 276 "277 Rutledge Street", was conducted by Bluenose Engineering in 2019, at the request of Canmar Services.

The Condominium includes 36 residential apartment units and below-grade parking in a four-storey building, completed in 2005. The building includes concrete foundations and framing, pre-engineered wood truss roof framing, asphalt shingle roofing, and brick veneer and siding exterior wall finishes. Interior common areas include a below-grade parking garage, lobbies, corridors and stairwells, a fitness room, meeting room, guest suite, sunroom and deck and storage and service rooms.

The site and building are in good condition overall.

The reserve fund study makes projections for future repairs or replacements: these are summarized by component in **Appendix Table A**. The projected expenditures are presented by year in **Table B** for each year of the evaluation period.

The financial year of the Condominium is Jan. 1st – Dec. 31st.

The referenced financial statements indicate a reserve fund balance of \$24,964 at the start of the current financial year. Contributions to the reserve fund in 2019 are budgeted to be \$45,000.

RECOMMENDATIONS

A schedule of recommended refurbishments is provided in **Table A**.

The recommended contribution in 2019 is \$45,000, as budgeted. Recommended contributions in future years are identified in **Table C**. Alternative scenarios are shown in **Tables D** and **E**.

OPINION

Based on the observations and analysis made in the preparation of this Reserve Fund Study, it is expected the funding recommended in **Table C**, or included in optional **Tables D** or **E** of this report, will be adequate to offset the expenditures for the major repair or replacement of the components included in the condominium's common elements.

Signed: **J Fletcher, P.Eng.**
Date: **November 26th, 2019**

BLUENOSE ENGINEERING

Unit 160 Box 374, 3650 Hammonds Plains Road,
Upper Tantallon, NS. B3Z 4R3



APPENDIX – COST TABLES

TABLE A: SCHEDULE OF COMPONENTS AND CAPITAL REQUIREMENTS

TABLE B: FORECAST EXPENDITURES

TABLE C: PROJECTED CASH FLOW (INTEREST STAYS IN FUND)

TABLE D: OPTIONAL PROJECTED CASH FLOW (INTEREST REMOVED FOR OPERATIONS)

TABLE E: OPTIONAL PROJECTED CASH FLOW (CONTRIBUTIONS ARE REDUCED BY INTEREST)

TABLE F: MASTER RESERVE FUND SPREAD SHEET



TABLE A

Schedule of Components and Capital Requirements

No.	Item Description - Action	Cost				Timing			Cost -25 years (\$)
		unit	number	unit cost	item cost	Year Required	RUL ¹ (years)	EUL ² (years)	
1	Site								
1.1	asphalt pavement - replacement	SF	12,000	7.00	84,000	2025	6	30	84,000
2	Building Structures								
2.1	balcony railings – refurbish and paint	LS	1	36,000	36,000	2022	3	15	72,000
3	Roofs								
3.1	roof – replacement allowance	SF	18,000	6.50	117,000	2031	12	30	117,000
3.2	balcony decking - replacement	SF	400	25.00	10,000	2040	21	25	10,000
4	Exterior Walls								
4.1	exterior siding – refurbish west wall	LS	1	36,000	36,000	2020	1	10	36,000
4.2	exterior siding – replace west wall	LS	1	200,000	200,000	2027	8	40	200,000
5	Exterior Doors and Windows								
5.1	exterior common entry doors – allowance	LS	1	5,000	5,000	2023	4	5	25,000
5.2	balcony doors – replacement allowance	Item	36	3,000	108,000	2030	11	30	108,000
5.3	unit windows – phased replacement	Item	60	2,400	144,000	2029	10	5	432,000
5.4	sunroom fixed glazing – partial replacement	Item	4	3,200	12,800	2021	2	30	12,800
6	Building Interiors								
6.1	interior doors - contingency allowance	LS	1	1,200	1,200	2020	1	1	30,000
6.2	interior finishes - replace carpet	SF	5,000	8.00	40,000	2025	6	20	40,000
6.3	interior finishes – walls and ceilings	SF	20,000	0.90	18,000	2025	6	10	36,000
7	Interior Fixtures and Equipment								
7.1	elevator – replace controls	LS	1	42,000	42,000	2036	17	30	42,000
7.2	elevator – mechanical refurbishment	LS	1	40,000	40,000	2036	17	30	40,000
7.3	entry door operators – install	LS	1	7,000	7,000	2023	4	25	7,000
7.4	fixtures and furnishing – allowance	LS	1	1,200	1,200	2020	1	1	30,000
8	Mechanical								
8.1	domestic hot water tanks - replacement	Item	2	9,000	18,000	2029	10	25	18,000
8.2	boilers – replacement	item	2	60,000	120,000	2034	15	30	120,000
8.3	oil storage tanks - replace	item	4	2,000	8,000	2020	1	25	8,000
8.4	heating system controls - overhaul	LS	1	6,000	6,000	2020	1	20	12,000
8.5	emergency ventn. – replace CO sensors	item	5	1,200	6,000	2020	1	20	12,000
9	Electrical								
9.1	interior lighting – replacements	LS	1	12,000	12,000	2035	16	30	12,000
9.2	security system – additions, replacements	LS	1	8,000	8,000	2021	2	20	16,000
9.3	fire protection controls – allowance	LS	1	6,000	6,000	2035	16	30	6,000
9.4	intercom – replacement allowance	LS	1	4,000	4,000	2035	16	30	4,000
10	General								
10.1	general – contingency allowance	LS	1	3,500	3,500	2020	1	1	87,500
10.2	reserve fund – reports	LS	1	3,000	3,000	2020	1	5	15,000
TOTAL:									1,632,300

Notes:

- 1 'Remaining Useful Life' (RUL) is time remaining before the action is anticipated to be required
- 2 'Expected Useful Life' (EUL) is the duration for which the action is considered effective, i.e., life cycle

TABLE B

Forecast Expenditures

inflation rate:

1.50%

sheet 1

No.	Item Description - Action	Cost Total	Capital Cost (\$; inflated)					
			2019	2020	2021	2022	2023	
1	Site							
1.1	asphalt pavement - replacement	91,849	-	-	-	-	-	
2	Building Structures							
2.1	balcony railings – refurbish and paint	84,709	-	-	-	37,644	-	
3	Roofs							
3.1	roof – replacement allowance	139,887	-	-	-	-	-	
3.2	balcony decking - replacement	13,671	-	-	-	-	-	
4	Exterior Walls							
4.1	exterior siding – refurbish west wall	36,540	-	36,540	-	-	-	
4.2	exterior siding – replace west wall	225,299	-	-	-	-	-	
5	Exterior Doors and Windows							
5.1	exterior common entry doors – allowance	30,965	-	-	-	-	5,307	
5.2	balcony doors – replacement allowance	127,218	-	-	-	-	-	
5.3	unit windows – phased replacement	541,098	-	-	-	-	-	
5.4	sunroom fixed glazing – partial replacemen	13,187	-	-	13,187	-	-	
6	Building Interiors							
6.1	interior doors - contingency allowance	36,076	1,200	1,218	1,236	1,255	1,274	
6.2	interior finishes - replace carpet	43,738	-	-	-	-	-	
6.3	interior finishes – walls and ceilings	42,524	-	-	-	-	-	
7	Interior Fixtures and Equipment							
7.1	elevator – replace controls	54,097	-	-	-	-	-	
7.2	elevator – mechanical refurbishment	51,521	-	-	-	-	-	
7.3	entry door operators – install	7,430	-	-	-	-	7,430	
7.4	fixtures and furnishing – allowance	36,076	1,200	1,218	1,236	1,255	1,274	
8	Mechanical							
8.1	domestic hot water tanks - replacement	20,890	-	-	-	-	-	
8.2	boilers – replacement	150,028	-	-	-	-	-	
8.3	oil storage tanks - replace	8,120	-	8,120	-	-	-	
8.4	heating system controls - overhaul	14,292	-	6,090	-	-	-	
8.5	emergency ventn. – replace CO sensors	14,292	-	6,090	-	-	-	
9	Electrical							
9.1	interior lighting – replacements	15,228	-	-	-	-	-	
9.2	security system – additions, replacements	19,342	-	-	8,242	-	-	
9.3	fire protection controls – allowance	7,614	-	-	-	-	-	
9.4	intercom – replacement allowance	5,076	-	-	-	-	-	
10	General							
10.1	general – contingency allowance	105,221	3,500	3,553	3,606	3,660	3,715	
10.2	reserve fund – reports	17,767	-	3,045	-	-	-	
Total Annual Expenditure:		1,953,753	5,900	65,874	27,507	43,814	18,998	

TABLE B

Forecast Expenditures

sheet 2

No.	Item Description - Action	Cost Total	Capital Cost (\$; inflated)					
			2024	2025	2026	2027	2028	
1	Site							
1.1	asphalt pavement - replacement	91,849	-	91,849	-	-	-	-
2	Building Structures							
2.1	balcony railings – refurbish and paint	84,709	-	-	-	-	-	-
3	Roofs							
3.1	roof – replacement allowance	139,887	-	-	-	-	-	-
3.2	balcony decking - replacement	13,671	-	-	-	-	-	-
4	Exterior Walls							
4.1	exterior siding – refurbish west wall	36,540	-	-	-	-	-	-
4.2	exterior siding – replace west wall	225,299	-	-	-	225,299	-	-
5	Exterior Doors and Windows							
5.1	exterior common entry doors – allowance	30,965	-	-	-	-	-	5,717
5.2	balcony doors – replacement allowance	127,218	-	-	-	-	-	-
5.3	unit windows – phased replacement	541,098	-	-	-	-	-	-
5.4	sunroom fixed glazing – partial replacemen	13,187	-	-	-	-	-	-
6	Building Interiors							
6.1	interior doors - contingency allowance	36,076	1,293	1,312	1,332	1,352	1,372	
6.2	interior finishes - replace carpet	43,738	-	43,738	-	-	-	-
6.3	interior finishes – walls and ceilings	42,524	-	19,682	-	-	-	-
7	Interior Fixtures and Equipment							
7.1	elevator – replace controls	54,097	-	-	-	-	-	-
7.2	elevator – mechanical refurbishment	51,521	-	-	-	-	-	-
7.3	entry door operators – install	7,430	-	-	-	-	-	-
7.4	fixtures and furnishing – allowance	36,076	1,293	1,312	1,332	1,352	1,372	
8	Mechanical							
8.1	domestic hot water tanks - replacement	20,890	-	-	-	-	-	-
8.2	boilers – replacement	150,028	-	-	-	-	-	-
8.3	oil storage tanks - replace	8,120	-	-	-	-	-	-
8.4	heating system controls - overhaul	14,292	-	-	-	-	-	-
8.5	emergency ventn. – replace CO sensors	14,292	-	-	-	-	-	-
9	Electrical							
9.1	interior lighting – replacements	15,228	-	-	-	-	-	-
9.2	security system – additions, replacements	19,342	-	-	-	-	-	-
9.3	fire protection controls – allowance	7,614	-	-	-	-	-	-
9.4	intercom – replacement allowance	5,076	-	-	-	-	-	-
10	General							
10.1	general – contingency allowance	105,221	3,770	3,827	3,884	3,943	4,002	
10.2	reserve fund – reports	17,767	-	3,280	-	-	-	-
	Total Annual Expenditure:	1,953,753	6,356	165,001	6,548	231,945	12,463	

TABLE B

Forecast Expenditures

sheet 3

No.	Item Description - Action	Cost Total	Capital Cost (\$; inflated)					
			2029	2030	2031	2032	2033	
1	Site							
1.1	asphalt pavement - replacement	91,849	-	-	-	-	-	
2	Building Structures							
2.1	balcony railings – refurbish and paint	84,709	-	-	-	-	-	
3	Roofs							
3.1	roof – replacement allowance	139,887	-	-	139,887	-	-	
3.2	balcony decking - replacement	13,671	-	-	-	-	-	
4	Exterior Walls							
4.1	exterior siding – refurbish west wall	36,540	-	-	-	-	-	
4.2	exterior siding – replace west wall	225,299	-	-	-	-	-	
5	Exterior Doors and Windows							
5.1	exterior common entry doors – allowance	30,965	-	-	-	-	6,159	
5.2	balcony doors – replacement allowance	127,218	-	127,218	-	-	-	
5.3	unit windows – phased replacement	541,098	167,118	-	-	-	-	
5.4	sunroom fixed glazing – partial replacemen	13,187	-	-	-	-	-	
6	Building Interiors							
6.1	interior doors - contingency allowance	36,076	1,393	1,414	1,435	1,456	1,478	
6.2	interior finishes - replace carpet	43,738	-	-	-	-	-	
6.3	interior finishes – walls and ceilings	42,524	-	-	-	-	-	
7	Interior Fixtures and Equipment							
7.1	elevator – replace controls	54,097	-	-	-	-	-	
7.2	elevator – mechanical refurbishment	51,521	-	-	-	-	-	
7.3	entry door operators – install	7,430	-	-	-	-	-	
7.4	fixtures and furnishing – allowance	36,076	1,393	1,414	1,435	1,456	1,478	
8	Mechanical							
8.1	domestic hot water tanks - replacement	20,890	20,890	-	-	-	-	
8.2	boilers – replacement	150,028	-	-	-	-	-	
8.3	oil storage tanks - replace	8,120	-	-	-	-	-	
8.4	heating system controls - overhaul	14,292	-	-	-	-	-	
8.5	emergency ventn. – replace CO sensors	14,292	-	-	-	-	-	
9	Electrical							
9.1	interior lighting – replacements	15,228	-	-	-	-	-	
9.2	security system – additions, replacements	19,342	-	-	-	-	-	
9.3	fire protection controls – allowance	7,614	-	-	-	-	-	
9.4	intercom – replacement allowance	5,076	-	-	-	-	-	
10	General							
10.1	general – contingency allowance	105,221	4,062	4,123	4,185	4,247	4,311	
10.2	reserve fund – reports	17,767	-	3,534	-	-	-	
Total Annual Expenditure:		1,953,753	194,855	137,702	146,941	7,160	13,426	

TABLE B

Forecast Expenditures

sheet 4

No.	Item Description - Action	Cost Total	Capital Cost (\$; inflated)					
			2034	2035	2036	2037	2038	
1	Site							
1.1	asphalt pavement - replacement	91,849	-	-	-	-	-	
2	Building Structures							
2.1	balcony railings – refurbish and paint	84,709	-	-	-	47,064	-	
3	Roofs							
3.1	roof – replacement allowance	139,887	-	-	-	-	-	
3.2	balcony decking - replacement	13,671	-	-	-	-	-	
4	Exterior Walls							
4.1	exterior siding – refurbish west wall	36,540	-	-	-	-	-	
4.2	exterior siding – replace west wall	225,299	-	-	-	-	-	
5	Exterior Doors and Windows							
5.1	exterior common entry doors – allowance	30,965	-	-	-	-	6,635	
5.2	balcony doors – replacement allowance	127,218	-	-	-	-	-	
5.3	unit windows – phased replacement	541,098	180,033	-	-	-	-	
5.4	sunroom fixed glazing – partial replacemen	13,187	-	-	-	-	-	
6	Building Interiors							
6.1	interior doors - contingency allowance	36,076	1,500	1,523	1,546	1,569	1,592	
6.2	interior finishes - replace carpet	43,738	-	-	-	-	-	
6.3	interior finishes – walls and ceilings	42,524	-	22,842	-	-	-	
7	Interior Fixtures and Equipment							
7.1	elevator – replace controls	54,097	-	-	54,097	-	-	
7.2	elevator – mechanical refurbishment	51,521	-	-	51,521	-	-	
7.3	entry door operators – install	7,430	-	-	-	-	-	
7.4	fixtures and furnishing – allowance	36,076	1,500	1,523	1,546	1,569	1,592	
8	Mechanical							
8.1	domestic hot water tanks - replacement	20,890	-	-	-	-	-	
8.2	boilers – replacement	150,028	150,028	-	-	-	-	
8.3	oil storage tanks - replace	8,120	-	-	-	-	-	
8.4	heating system controls - overhaul	14,292	-	-	-	-	-	
8.5	emergency ventn. – replace CO sensors	14,292	-	-	-	-	-	
9	Electrical							
9.1	interior lighting – replacements	15,228	-	15,228	-	-	-	
9.2	security system – additions, replacements	19,342	-	-	-	-	-	
9.3	fire protection controls – allowance	7,614	-	7,614	-	-	-	
9.4	intercom – replacement allowance	5,076	-	5,076	-	-	-	
10	General							
10.1	general – contingency allowance	105,221	4,376	4,441	4,508	4,576	4,644	
10.2	reserve fund – reports	17,767	-	3,807	-	-	-	
Total Annual Expenditure:		1,953,753	337,438	62,053	113,217	54,778	14,464	

TABLE B

Forecast Expenditures

sheet 5

No.	Item Description - Action	Cost Total	Capital Cost (\$; inflated)					
			2039	2040	2041	2042	2043	
1	Site							
1.1	asphalt pavement - replacement	91,849	-	-	-	-	-	-
2	Building Structures							
2.1	balcony railings – refurbish and paint	84,709	-	-	-	-	-	-
3	Roofs							
3.1	roof – replacement allowance	139,887	-	-	-	-	-	-
3.2	balcony decking - replacement	13,671	-	13,671	-	-	-	-
4	Exterior Walls							
4.1	exterior siding – refurbish west wall	36,540	-	-	-	-	-	-
4.2	exterior siding – replace west wall	225,299	-	-	-	-	-	-
5	Exterior Doors and Windows							
5.1	exterior common entry doors – allowance	30,965	-	-	-	-	-	7,148
5.2	balcony doors – replacement allowance	127,218	-	-	-	-	-	-
5.3	unit windows – phased replacement	541,098	193,947	-	-	-	-	-
5.4	sunroom fixed glazing – partial replacemen	13,187	-	-	-	-	-	-
6	Building Interiors							
6.1	interior doors - contingency allowance	36,076	1,616	1,640	1,665	1,690	1,715	
6.2	interior finishes - replace carpet	43,738	-	-	-	-	-	-
6.3	interior finishes – walls and ceilings	42,524	-	-	-	-	-	-
7	Interior Fixtures and Equipment							
7.1	elevator – replace controls	54,097	-	-	-	-	-	-
7.2	elevator – mechanical refurbishment	51,521	-	-	-	-	-	-
7.3	entry door operators – install	7,430	-	-	-	-	-	-
7.4	fixtures and furnishing – allowance	36,076	1,616	1,640	1,665	1,690	1,715	
8	Mechanical							
8.1	domestic hot water tanks - replacement	20,890	-	-	-	-	-	-
8.2	boilers – replacement	150,028	-	-	-	-	-	-
8.3	oil storage tanks - replace	8,120	-	-	-	-	-	-
8.4	heating system controls - overhaul	14,292	-	8,202	-	-	-	-
8.5	emergency ventn. – replace CO sensors	14,292	-	8,202	-	-	-	-
9	Electrical							
9.1	interior lighting – replacements	15,228	-	-	-	-	-	-
9.2	security system – additions, replacements	19,342	-	-	11,101	-	-	-
9.3	fire protection controls – allowance	7,614	-	-	-	-	-	-
9.4	intercom – replacement allowance	5,076	-	-	-	-	-	-
10	General							
10.1	general – contingency allowance	105,221	4,714	4,785	4,856	4,929	5,003	
10.2	reserve fund – reports	17,767	-	4,101	-	-	-	
Total Annual Expenditure:		1,953,753	201,894	42,242	19,287	8,309	15,582	

TABLE C

Projected Cash Flow

- interest stays in Reserve Fund

inflation rate: 1.50%
 interest rate: 1.00%
 escalation of contributions: (varies)

Year	Expenses (inflated)	Contributions		Interest	Balance	
		amount	% change		year start	year end
1 2019	\$5,900	\$45,000		\$445	\$24,964	\$64,509
2 2020	\$65,874	\$49,500	10.00%	\$563	\$64,509	\$48,699
3 2021	\$27,507	\$54,450	10.00%	\$622	\$48,699	\$76,264
4 2022	\$43,814	\$59,895	10.00%	\$843	\$76,264	\$93,188
5 2023	\$18,998	\$65,885	10.00%	\$1,166	\$93,188	\$141,240
6 2024	\$6,356	\$72,473	10.00%	\$1,743	\$141,240	\$209,100
7 2025	\$165,001	\$79,720	10.00%	\$1,665	\$209,100	\$125,484
8 2026	\$6,548	\$87,692	10.00%	\$1,661	\$125,484	\$208,289
9 2027	\$231,945	\$96,461	10.00%	\$1,405	\$208,289	\$74,211
10 2028	\$12,463	\$106,108	10.00%	\$1,210	\$74,211	\$169,066
11 2029	\$194,855	\$107,699	1.50%	\$1,255	\$169,066	\$83,166
12 2030	\$137,702	\$109,315	1.50%	\$690	\$83,166	\$55,468
13 2031	\$146,941	\$110,954	1.50%	\$375	\$55,468	\$19,856
14 2032	\$7,160	\$112,619	1.50%	\$726	\$19,856	\$126,040
15 2033	\$13,426	\$114,308	1.50%	\$1,765	\$126,040	\$228,687
16 2034	\$337,438	\$116,023	1.50%	\$1,180	\$228,687	\$8,452
17 2035	\$62,053	\$117,763	1.50%	\$363	\$8,452	\$64,525
18 2036	\$113,217	\$119,529	1.50%	\$677	\$64,525	\$71,514
19 2037	\$54,778	\$121,322	1.50%	\$1,048	\$71,514	\$139,107
20 2038	\$14,464	\$123,142	1.50%	\$1,934	\$139,107	\$249,719
21 2039	\$201,894	\$124,989	1.50%	\$2,113	\$249,719	\$174,928
22 2040	\$42,242	\$126,864	1.50%	\$2,172	\$174,928	\$261,722
23 2041	\$19,287	\$128,767	1.50%	\$3,165	\$261,722	\$374,367
24 2042	\$8,309	\$130,699	1.50%	\$4,356	\$374,367	\$501,112
25 2043	\$15,582	\$132,659	1.50%	\$5,597	\$501,112	\$623,786
Total:	\$1,953,753	\$2,513,838		\$38,737		

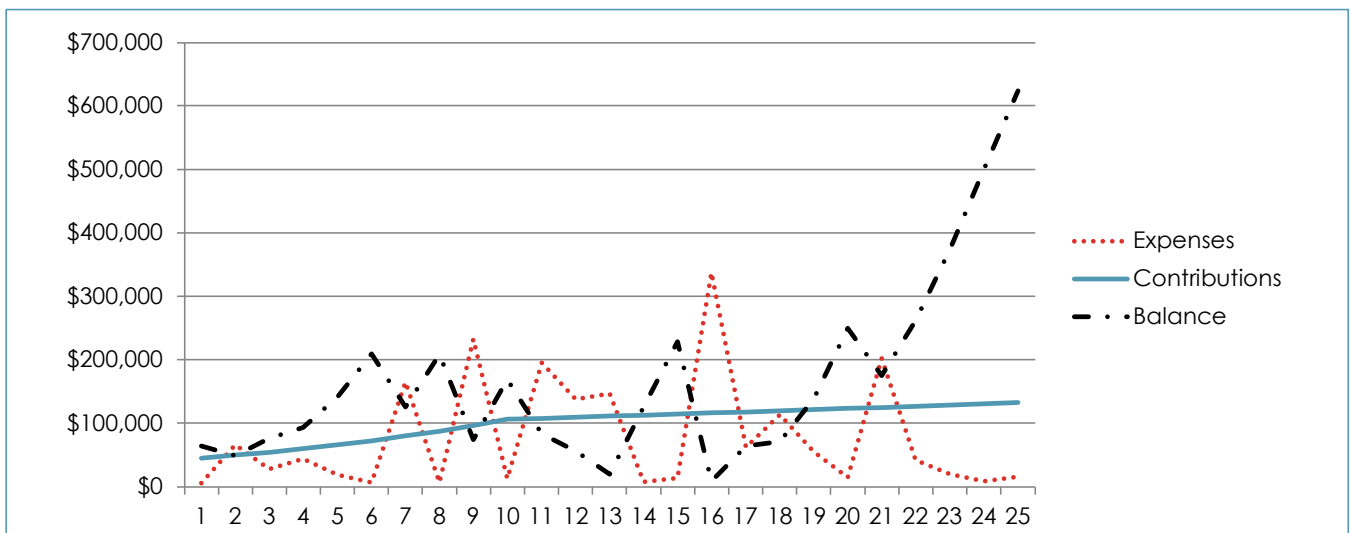


TABLE D

Projected Cash Flow

inflation rate: 1.50%
 interest rate: 1.00%
 escalation of contributions: (varies)

(Optional): interest removed for Operations

Year	Expenses (inflated)	Contributions		Interest	Balance	
		amount	% change		year start	year end
1 2019	\$5,900	\$45,000		\$445	\$24,964	\$64,064
2 2020	\$65,874	\$49,500	10.00%	\$559	\$64,064	\$47,691
3 2021	\$27,507	\$54,450	10.00%	\$612	\$47,691	\$74,633
4 2022	\$43,814	\$59,895	10.00%	\$827	\$74,633	\$90,715
5 2023	\$18,998	\$65,885	10.00%	\$1,142	\$90,715	\$137,601
6 2024	\$6,356	\$72,473	10.00%	\$1,707	\$137,601	\$203,718
7 2025	\$165,001	\$79,720	10.00%	\$1,611	\$203,718	\$118,437
8 2026	\$6,548	\$87,692	10.00%	\$1,590	\$118,437	\$199,581
9 2027	\$231,945	\$96,461	10.00%	\$1,318	\$199,581	\$64,098
10 2028	\$12,463	\$106,108	10.00%	\$1,109	\$64,098	\$157,743
11 2029	\$194,855	\$111,413	5.00%	\$1,160	\$157,743	\$74,301
12 2030	\$137,702	\$113,084	1.50%	\$620	\$74,301	\$49,683
13 2031	\$146,941	\$114,780	1.50%	\$336	\$49,683	\$17,522
14 2032	\$7,160	\$116,502	1.50%	\$722	\$17,522	\$126,864
15 2033	\$13,426	\$118,250	1.50%	\$1,793	\$126,864	\$231,688
16 2034	\$337,438	\$120,023	1.50%	\$1,230	\$231,688	\$14,274
17 2035	\$62,053	\$121,824	1.50%	\$442	\$14,274	\$74,044
18 2036	\$113,217	\$123,651	1.50%	\$793	\$74,044	\$84,478
19 2037	\$54,778	\$125,506	1.50%	\$1,198	\$84,478	\$155,207
20 2038	\$14,464	\$127,389	1.50%	\$2,117	\$155,207	\$268,132
21 2039	\$201,894	\$129,299	1.50%	\$2,318	\$268,132	\$195,537
22 2040	\$42,242	\$131,239	1.50%	\$2,400	\$195,537	\$284,534
23 2041	\$19,287	\$133,207	1.50%	\$3,415	\$284,534	\$398,454
24 2042	\$8,309	\$135,206	1.50%	\$4,619	\$398,454	\$525,351
25 2043	\$15,582	\$137,234	1.50%	\$5,862	\$525,351	\$647,003
Total:	\$1,953,753	\$2,575,792		\$39,943		

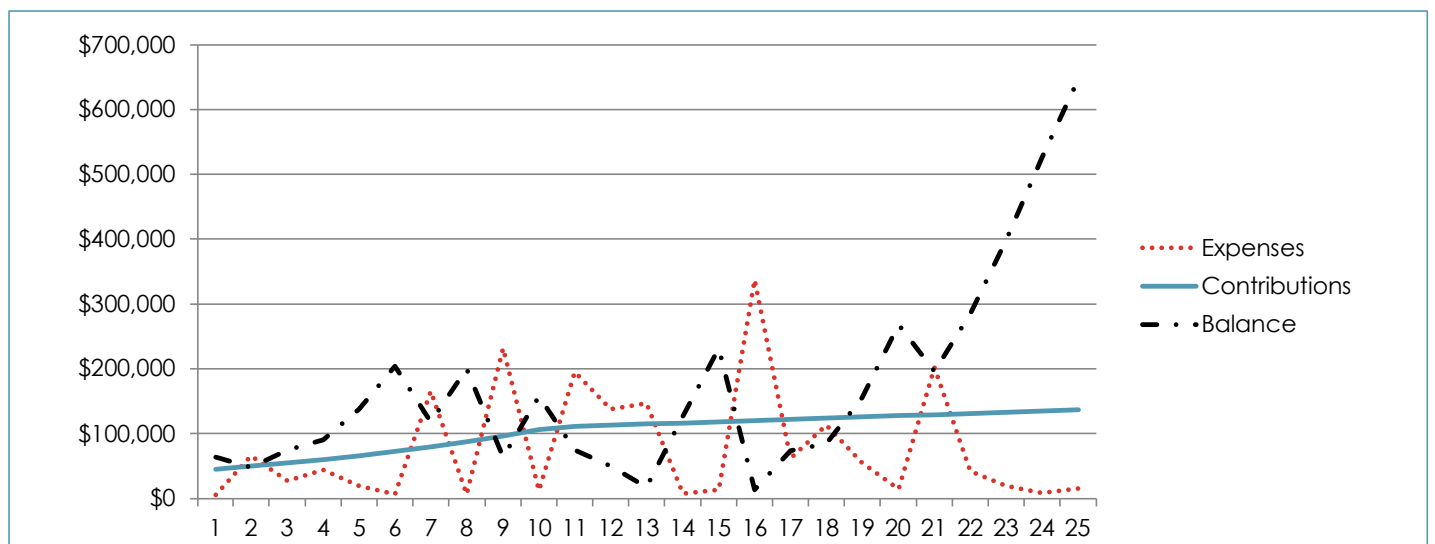


TABLE E

Projected Cash Flow

inflation rate: 1.50%
 interest rate: 1.00%
 escalation of contributions: (varies)

(Optional): contributions are reduced by interest

Year	Expenses (inflated)	Contributions		Interest	Balance	
		amount	% change		year start	year end
1 2019	\$5,900	\$45,000		\$445	\$24,964	\$64,509
2 2020	\$65,874	\$49,055	9.01%	\$561	\$64,509	\$48,251
3 2021	\$27,507	\$53,889	9.85%	\$614	\$48,251	\$75,248
4 2022	\$43,814	\$59,281	10.00%	\$830	\$75,248	\$91,544
5 2023	\$18,998	\$65,055	9.74%	\$1,146	\$91,544	\$138,746
6 2024	\$6,356	\$71,327	9.64%	\$1,712	\$138,746	\$205,430
7 2025	\$165,001	\$78,008	9.37%	\$1,619	\$205,430	\$120,057
8 2026	\$6,548	\$86,073	10.34%	\$1,598	\$120,057	\$201,180
9 2027	\$231,945	\$94,863	10.21%	\$1,326	\$201,180	\$65,425
10 2028	\$12,463	\$104,781	10.45%	\$1,116	\$65,425	\$158,859
11 2029	\$194,855	\$110,297	5.26%	\$1,166	\$158,859	\$75,467
12 2030	\$137,702	\$111,918	1.47%	\$626	\$75,467	\$50,309
13 2031	\$146,941	\$114,155	2.00%	\$339	\$50,309	\$17,861
14 2032	\$7,160	\$116,163	1.76%	\$724	\$17,861	\$127,588
15 2033	\$13,426	\$117,526	1.17%	\$1,796	\$127,588	\$233,484
16 2034	\$337,438	\$118,227	0.60%	\$1,239	\$233,484	\$15,513
17 2035	\$62,053	\$120,585	1.99%	\$448	\$15,513	\$74,492
18 2036	\$113,217	\$123,203	2.17%	\$795	\$74,492	\$85,273
19 2037	\$54,778	\$124,711	1.22%	\$1,202	\$85,273	\$156,409
20 2038	\$14,464	\$126,186	1.18%	\$2,123	\$156,409	\$270,254
21 2039	\$201,894	\$127,177	0.78%	\$2,329	\$270,254	\$197,866
22 2040	\$42,242	\$128,910	1.36%	\$2,412	\$197,866	\$286,946
23 2041	\$19,287	\$130,795	1.46%	\$3,427	\$286,946	\$401,881
24 2042	\$8,309	\$131,779	0.75%	\$4,636	\$401,881	\$529,987
25 2043	\$15,582	\$132,597	0.62%	\$5,885	\$529,987	\$652,888
Total:	\$1,953,753	\$2,541,562		\$40,114		

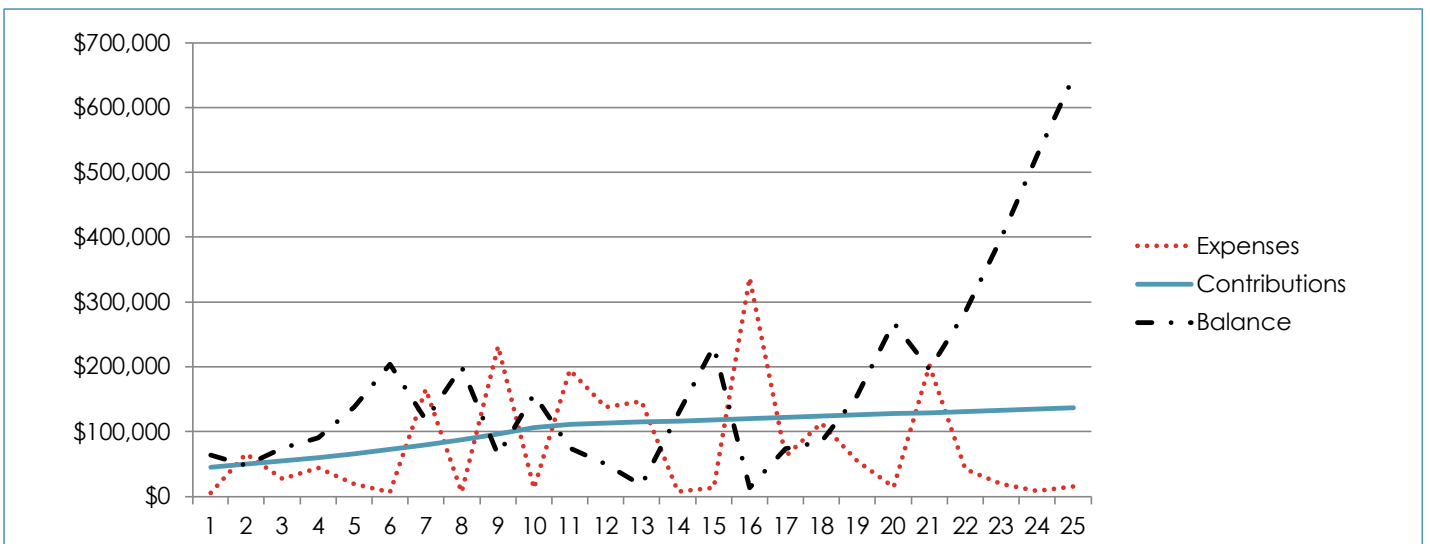


TABLE F

Master Reserve Fund Spreadsheet

sheet 1

No.	Item Description - Action	2019	2020	2021	2022	2023	2024	2025
1	Site							
1.1	asphalt pavement - replacement	-	-	-	-	-	-	84,000
	- funding:	12,000	12,000	12,000	12,000	12,000	12,000	12,000
2	Building Structures							
2.1	balcony railings – refurbish and paint	-	-	-	36,000	-	-	-
	- funding:	9,000	9,000	9,000	9,000	2,400	2,400	2,400
3	Roofs							
3.1	roof – replacement allowance	-	-	-	-	-	-	-
	- funding:	9,000	9,000	9,000	9,000	9,000	9,000	9,000
3.2	balcony decking - replacement	-	-	-	-	-	-	-
	- funding:	455	455	455	455	455	455	455
4	Exterior Walls							
4.1	exterior siding – refurbish west wall	-	36,000	-	-	-	-	-
	- funding:	18,000	18,000	3,600	3,600	3,600	3,600	3,600
4.2	exterior siding – replace west wall	-	-	-	-	-	-	-
	- funding:	22,222	22,222	22,222	22,222	22,222	22,222	22,222
5	Exterior Doors and Windows							
5.1	exterior common entry doors – allowance	-	-	-	-	5,000	-	-
	- funding:	1,000	1,000	1,000	1,000	1,000	1,000	1,000
5.2	balcony doors – replacement allowance	-	-	-	-	-	-	-
	- funding:	9,000	9,000	9,000	9,000	9,000	9,000	9,000
5.3	unit windows – phased replacement	-	-	-	-	-	-	-
	- funding:	13,091	13,091	13,091	13,091	13,091	13,091	13,091
5.4	sunroom fixed glazing – partial replacement	-	-	12,800	-	-	-	-
	- funding:	4,267	4,267	4,267	427	427	427	427
6	Building Interiors							
6.1	interior doors - contingency allowance	1,200	1,200	1,200	1,200	1,200	1,200	1,200
	- funding:	1,200	1,200	1,200	1,200	1,200	1,200	1,200
6.2	interior finishes - replace carpet	-	-	-	-	-	-	40,000
	- funding:	5,714	5,714	5,714	5,714	5,714	5,714	5,714
6.3	interior finishes – walls and ceilings	-	-	-	-	-	-	18,000
	- funding:	2,571	2,571	2,571	2,571	2,571	2,571	2,571
7	Interior Fixtures and Equipment							
7.1	elevator – replace controls	-	-	-	-	-	-	-
	- funding:	2,333	2,333	2,333	2,333	2,333	2,333	2,333
7.2	elevator – mechanical refurbishment	-	-	-	-	-	-	-
	- funding:	2,222	2,222	2,222	2,222	2,222	2,222	2,222
7.3	entry door operators – install	-	-	-	-	7,000	-	-
	- funding:	1,400	1,400	1,400	1,400	1,400	280	280
7.4	fixtures and furnishing – allowance	1,200	1,200	1,200	1,200	1,200	1,200	1,200
	- funding:	1,200	1,200	1,200	1,200	1,200	1,200	1,200
8	Mechanical							
8.1	domestic hot water tanks - replacement	-	-	-	-	-	-	-
	- funding:	1,636	1,636	1,636	1,636	1,636	1,636	1,636
8.2	boilers – replacement	-	-	-	-	-	-	-
	- funding:	7,500	7,500	7,500	7,500	7,500	7,500	7,500
8.3	oil storage tanks - replace	-	8,000	-	-	-	-	-
	- funding:	4,000	4,000	320	320	320	320	320
8.4	heating system controls - overhaul	-	6,000	-	-	-	-	-
	- funding:	3,000	3,000	300	300	300	300	300
8.5	emergency ventn. – replace CO sensors	-	6,000	-	-	-	-	-
	- funding:	3,000	3,000	300	300	300	300	300
9	Electrical							
9.1	interior lighting – replacements	-	-	-	-	-	-	-
	- funding:	706	706	706	706	706	706	706
9.2	security system – additions, replacements	-	-	8,000	-	-	-	-
	- funding:	2,667	2,667	2,667	400	400	400	400
9.3	fire protection controls – allowance	-	-	-	-	-	-	-
	- funding:	353	353	353	353	353	353	353
9.4	intercom – replacement allowance	-	-	-	-	-	-	-
	- funding:	235	235	235	235	235	235	235
10	General							
10.1	general – contingency allowance	3,500	3,500	3,500	3,500	3,500	3,500	3,500
	- funding:	3,500	3,500	3,500	3,500	3,500	3,500	3,500
10.2	reserve fund – reports	-	3,000	-	-	-	-	3,000
	- funding:	-	-	600	600	600	600	600
Total Annual Expenditure:		5,900	64,900	26,700	41,900	17,900	5,900	150,900
<i>Calculated Total Funding Requirement:</i>		<i>141,273</i>	<i>141,273</i>	<i>118,393</i>	<i>112,286</i>	<i>105,686</i>	<i>104,566</i>	<i>104,566</i>
Basic Annual Contribution (Table C):		45,000	49,500	54,450	59,895	65,885	72,473	79,720
Balance, Start of Year:		24,964	64,064	48,664	76,414	94,409	142,394	208,966
Balance, End of Year:		64,064	48,664	76,414	94,409	142,394	208,966	137,787

TABLE F

Master Reserve Fund Spreadsheet

sheet 2

No.	Item Description - Action	2026	2027	2028	2029	2030	2031	2032
1	Site							
1.1	asphalt pavement - replacement	-	-	-	-	-	-	-
	- funding:	2,800	2,800	2,800	2,800	2,800	2,800	2,800
2	Building Structures							
2.1	balcony railings – refurbish and paint	-	-	-	-	-	-	-
	- funding:	2,400	2,400	2,400	2,400	2,400	2,400	2,400
3	Roofs							
3.1	roof – replacement allowance	-	-	-	-	-	117,000	-
	- funding:	9,000	9,000	9,000	9,000	9,000	9,000	3,900
3.2	balcony decking - replacement	-	-	-	-	-	-	-
	- funding:	455	455	455	455	455	455	455
4	Exterior Walls							
4.1	exterior siding – refurbish west wall	-	-	-	-	-	-	-
	- funding:	3,600	3,600	3,600	3,600	3,600	3,600	3,600
4.2	exterior siding – replace west wall	-	200,000	-	-	-	-	-
	- funding:	22,222	22,222	5,000	5,000	5,000	5,000	5,000
5	Exterior Doors and Windows							
5.1	exterior common entry doors – allowance	-	-	5,000	-	-	-	-
	- funding:	1,000	1,000	1,000	1,000	1,000	1,000	1,000
5.2	balcony doors – replacement allowance	-	-	-	-	108,000	-	-
	- funding:	9,000	9,000	9,000	9,000	9,000	3,600	3,600
5.3	unit windows – phased replacement	-	-	-	144,000	-	-	-
	- funding:	13,091	13,091	13,091	13,091	28,800	28,800	28,800
5.4	sunroom fixed glazing – partial replacement	-	-	-	-	-	-	-
	- funding:	427	427	427	427	427	427	427
6	Building Interiors							
6.1	interior doors - contingency allowance	1,200	1,200	1,200	1,200	1,200	1,200	1,200
	- funding:	1,200	1,200	1,200	1,200	1,200	1,200	1,200
6.2	interior finishes - replace carpet	-	-	-	-	-	-	-
	- funding:	2,000	2,000	2,000	2,000	2,000	2,000	2,000
6.3	interior finishes – walls and ceilings	-	-	-	-	-	-	-
	- funding:	1,800	1,800	1,800	1,800	1,800	1,800	1,800
7	Interior Fixtures and Equipment							
7.1	elevator – replace controls	-	-	-	-	-	-	-
	- funding:	2,333	2,333	2,333	2,333	2,333	2,333	2,333
7.2	elevator – mechanical refurbishment	-	-	-	-	-	-	-
	- funding:	2,222	2,222	2,222	2,222	2,222	2,222	2,222
7.3	entry door operators – install	-	-	-	-	-	-	-
	- funding:	280	280	280	280	280	280	280
7.4	fixtures and furnishing – allowance	1,200	1,200	1,200	1,200	1,200	1,200	1,200
	- funding:	1,200	1,200	1,200	1,200	1,200	1,200	1,200
8	Mechanical							
8.1	domestic hot water tanks - replacement	-	-	-	18,000	-	-	-
	- funding:	1,636	1,636	1,636	1,636	720	720	720
8.2	boilers – replacement	-	-	-	-	-	-	-
	- funding:	7,500	7,500	7,500	7,500	7,500	7,500	7,500
8.3	oil storage tanks - replace	-	-	-	-	-	-	-
	- funding:	320	320	320	320	320	320	320
8.4	heating system controls - overhaul	-	-	-	-	-	-	-
	- funding:	300	300	300	300	300	300	300
8.5	emergency ventn. – replace CO sensors	-	-	-	-	-	-	-
	- funding:	300	300	300	300	300	300	300
9	Electrical							
9.1	interior lighting – replacements	-	-	-	-	-	-	-
	- funding:	706	706	706	706	706	706	706
9.2	security system – additions, replacements	-	-	-	-	-	-	-
	- funding:	400	400	400	400	400	400	400
9.3	fire protection controls – allowance	-	-	-	-	-	-	-
	- funding:	353	353	353	353	353	353	353
9.4	intercom – replacement allowance	-	-	-	-	-	-	-
	- funding:	235	235	235	235	235	235	235
10	General							
10.1	general – contingency allowance	3,500	3,500	3,500	3,500	3,500	3,500	3,500
	- funding:	3,500	3,500	3,500	3,500	3,500	3,500	3,500
10.2	reserve fund – reports	-	-	-	-	3,000	-	-
	- funding:	600	600	600	600	600	600	600
Total Annual Expenditure:		5,900	205,900	10,900	167,900	116,900	122,900	5,900
<i>Calculated Total Funding Requirement:</i>		<i>90,880</i>	<i>90,880</i>	<i>73,658</i>	<i>73,658</i>	<i>88,451</i>	<i>83,051</i>	<i>77,951</i>
Basic Annual Contribution (Table C):		87,692	96,461	106,108	107,699	109,315	110,954	112,619
Balance, Start of Year:		137,787	219,579	110,140	205,348	145,147	137,562	125,617
Balance, End of Year:		219,579	110,140	205,348	145,147	137,562	125,617	232,335

TABLE F

Master Reserve Fund Spreadsheet

sheet 3

No.	Item Description - Action	2033	2034	2035	2036	2037	2038	2039
1	Site							
1.1	asphalt pavement - replacement	-	-	-	-	-	-	-
	- funding:	2,800	2,800	2,800	2,800	2,800	2,800	2,800
2	Building Structures							
2.1	balcony railings – refurbish and paint	-	-	-	-	36,000	-	-
	- funding:	2,400	2,400	2,400	2,400	2,400	2,400	2,400
3	Roofs							
3.1	roof – replacement allowance	-	-	-	-	-	-	-
	- funding:	3,900	3,900	3,900	3,900	3,900	3,900	3,900
3.2	balcony decking - replacement	-	-	-	-	-	-	-
	- funding:	455	455	455	455	455	455	455
4	Exterior Walls							
4.1	exterior siding – refurbish west wall	-	-	-	-	-	-	-
	- funding:	3,600	3,600	3,600	3,600	3,600	3,600	3,600
4.2	exterior siding – replace west wall	-	-	-	-	-	-	-
	- funding:	5,000	5,000	5,000	5,000	5,000	5,000	5,000
5	Exterior Doors and Windows							
5.1	exterior common entry doors – allowance	5,000	-	-	-	-	5,000	-
	- funding:	1,000	1,000	1,000	1,000	1,000	1,000	1,000
5.2	balcony doors – replacement allowance	-	-	-	-	-	-	-
	- funding:	3,600	3,600	3,600	3,600	3,600	3,600	3,600
5.3	unit windows – phased replacement	-	144,000	-	-	-	-	144,000
	- funding:	28,800	28,800	28,800	28,800	28,800	28,800	28,800
5.4	sunroom fixed glazing – partial replacement	-	-	-	-	-	-	-
	- funding:	427	427	427	427	427	427	427
6	Building Interiors							
6.1	interior doors - contingency allowance	1,200	1,200	1,200	1,200	1,200	1,200	1,200
	- funding:	1,200	1,200	1,200	1,200	1,200	1,200	1,200
6.2	interior finishes - replace carpet	-	-	-	-	-	-	-
	- funding:	2,000	2,000	2,000	2,000	2,000	2,000	2,000
6.3	interior finishes – walls and ceilings	-	-	18,000	-	-	-	-
	- funding:	1,800	1,800	1,800	1,800	1,800	1,800	1,800
7	Interior Fixtures and Equipment							
7.1	elevator – replace controls	-	-	-	42,000	-	-	-
	- funding:	2,333	2,333	2,333	2,333	1,400	1,400	1,400
7.2	elevator – mechanical refurbishment	-	-	-	40,000	-	-	-
	- funding:	2,222	2,222	2,222	2,222	1,333	1,333	1,333
7.3	entry door operators – install	-	-	-	-	-	-	-
	- funding:	280	280	280	280	280	280	280
7.4	fixtures and furnishing – allowance	1,200	1,200	1,200	1,200	1,200	1,200	1,200
	- funding:	1,200	1,200	1,200	1,200	1,200	1,200	1,200
8	Mechanical							
8.1	domestic hot water tanks - replacement	-	-	-	-	-	-	-
	- funding:	720	720	720	720	720	720	720
8.2	boilers – replacement	-	120,000	-	-	-	-	-
	- funding:	7,500	7,500	4,000	4,000	4,000	4,000	4,000
8.3	oil storage tanks - replace	-	-	-	-	-	-	-
	- funding:	320	320	320	320	320	320	320
8.4	heating system controls - overhaul	-	-	-	-	-	-	-
	- funding:	300	300	300	300	300	300	300
8.5	emergency ventn. – replace CO sensors	-	-	-	-	-	-	-
	- funding:	300	300	300	300	300	300	300
9	Electrical							
9.1	interior lighting – replacements	-	-	12,000	-	-	-	-
	- funding:	706	706	706	400	400	400	400
9.2	security system – additions, replacements	-	-	-	-	-	-	-
	- funding:	400	400	400	400	400	400	400
9.3	fire protection controls – allowance	-	-	6,000	-	-	-	-
	- funding:	353	353	353	200	200	200	200
9.4	intercom – replacement allowance	-	-	4,000	-	-	-	-
	- funding:	235	235	235	133	133	133	133
10	General							
10.1	general – contingency allowance	3,500	3,500	3,500	3,500	3,500	3,500	3,500
	- funding:	3,500	3,500	3,500	3,500	3,500	3,500	3,500
10.2	reserve fund – reports	-	-	3,000	-	-	-	-
	- funding:	600	600	600	600	600	600	600
Total Annual Expenditure:		10,900	269,900	48,900	87,900	41,900	10,900	149,900
<i>Calculated Total Funding Requirement:</i>		<i>77,951</i>	<i>77,951</i>	<i>74,451</i>	<i>73,890</i>	<i>72,068</i>	<i>72,068</i>	<i>72,068</i>
Basic Annual Contribution (Table C):		114,308	116,023	117,763	119,529	121,322	123,142	124,989
Balance, Start of Year:		232,335	335,743	181,866	250,729	282,359	361,781	474,023
Balance, End of Year:		335,743	181,866	250,729	282,359	361,781	474,023	449,113

TABLE F

Master Reserve Fund Spreadsheet

sheet 4

No.	Item Description - Action	2040	2041	2042	2043	totals:	
						expenses	funding
1	Site						
1.1	asphalt pavement - replacement	-	-	-	-	84,000	
	- funding:	2,800	2,800	2,800	2,800		134,400
2	Building Structures						
2.1	balcony railings – refurbish and paint	-	-	-	-	72,000	
	- funding:	2,400	2,400	2,400	2,400		86,400
3	Roofs						
3.1	roof – replacement allowance	-	-	-	-	117,000	
	- funding:	3,900	3,900	3,900	3,900		163,800
3.2	balcony decking - replacement	10,000	-	-	-	10,000	
	- funding:	455	400	400	400		11,200
4	Exterior Walls						
4.1	exterior siding – refurbish west wall	-	-	-	-	36,000	
	- funding:	3,600	3,600	3,600	3,600		118,800
4.2	exterior siding – replace west wall	-	-	-	-	200,000	
	- funding:	5,000	5,000	5,000	5,000		280,000
5	Exterior Doors and Windows						
5.1	exterior common entry doors – allowance	-	-	-	5,000	25,000	
	- funding:	1,000	1,000	1,000	1,000		25,000
5.2	balcony doors – replacement allowance	-	-	-	-	108,000	
	- funding:	3,600	3,600	3,600	3,600		154,800
5.3	unit windows – phased replacement	-	-	-	-	432,000	
	- funding:	28,800	28,800	28,800	28,800		547,200
5.4	sunroom fixed glazing – partial replacement	-	-	-	-	12,800	
	- funding:	427	427	427	427		22,187
6	Building Interiors						
6.1	interior doors - contingency allowance	1,200	1,200	1,200	1,200	30,000	
	- funding:	1,200	1,200	1,200	1,200		30,000
6.2	interior finishes - replace carpet	-	-	-	-	40,000	
	- funding:	2,000	2,000	2,000	2,000		76,000
6.3	interior finishes – walls and ceilings	-	-	-	-	36,000	
	- funding:	1,800	1,800	1,800	1,800		50,400
7	Interior Fixtures and Equipment						
7.1	elevator – replace controls	-	-	-	-	42,000	
	- funding:	1,400	1,400	1,400	1,400		51,800
7.2	elevator – mechanical refurbishment	-	-	-	-	40,000	
	- funding:	1,333	1,333	1,333	1,333		49,333
7.3	entry door operators – install	-	-	-	-	7,000	
	- funding:	280	280	280	280		12,600
7.4	fixtures and furnishing – allowance	1,200	1,200	1,200	1,200	30,000	
	- funding:	1,200	1,200	1,200	1,200		30,000
8	Mechanical						
8.1	domestic hot water tanks - replacement	-	-	-	-	18,000	
	- funding:	720	720	720	720		28,080
8.2	boilers – replacement	-	-	-	-	120,000	
	- funding:	4,000	4,000	4,000	4,000		156,000
8.3	oil storage tanks - replace	-	-	-	-	8,000	
	- funding:	320	320	320	320		15,360
8.4	heating system controls - overhaul	6,000	-	-	-	12,000	
	- funding:	300	300	300	300		12,900
8.5	emergency ventn. – replace CO sensors	6,000	-	-	-	12,000	
	- funding:	300	300	300	300		12,900
9	Electrical						
9.1	interior lighting – replacements	-	-	-	-	12,000	
	- funding:	400	400	400	400		15,200
9.2	security system – additions, replacements	-	8,000	-	-	16,000	
	- funding:	400	400	400	400		16,800
9.3	fire protection controls – allowance	-	-	-	-	6,000	
	- funding:	200	200	200	200		7,600
9.4	intercom – replacement allowance	-	-	-	-	4,000	
	- funding:	133	133	133	133		5,067
10	General						
10.1	general – contingency allowance	3,500	3,500	3,500	3,500	87,500	
	- funding:	3,500	3,500	3,500	3,500		87,500
10.2	reserve fund – reports	3,000	-	-	-	15,000	
	- funding:	600	600	600	600		13,800
Total Annual Expenditure:		30,900	13,900	5,900	10,900	1,632,300	
Calculated Total Funding Requirement:		72,068	72,013	72,013	72,013		2,215,127
Basic Annual Contribution (Table C):		126,864	128,767	130,699	132,659		2,513,838
Balance, Start of Year:		449,113	545,077	659,944	784,743		
Balance, End of Year:		545,077	659,944	784,743	906,502		