

**Halifax County Condominium
Corporation (HCCC) #148,
Reserve Fund Study Update**

FINAL REPORT

Crestwood Two
118 – 122 Rutledge Street
Bedford, Nova Scotia



Prepared for:
Halifax County Condominium
Corporation No. 148

Prepared by:
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File No. 133430940



March 20, 2017

HALIFAX COUNTY CONDOMINIUM CORPORATION (HCCC) #148, RESERVE FUND STUDY UPDATE

RESERVE FUND REQUIREMENTS
 March 20, 2017

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HALIFAX COUNTY CONDOMINIUM CORPORATION (HCCC) #148, RESERVE FUND STUDY UPDATE

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March 20, 2017

Executive Summary

Stantec Consulting Ltd. (Stantec) was retained by Cemanco Properties Limited c/o Halifax County Condominium Corporation #148 (HCCC#148) to complete a Reserve Fund Study of the condominium complex located at 118-122 Rutledge Street, Bedford, Nova Scotia.

Property Summary

The condominium complex consists of three (3) attached, three (3) storey structures. Each of the structures has an underground parking garage servicing that section. The structures are of typical layout with four (4) residential condominiums per floor. The complex has a total of 36 condominium units and was constructed circa 1985.

The building is founded on concrete foundation walls which are believed to be supported by concrete strip and pad footings. The parking garages each have a concrete slab on grade. The main floor of the building is a suspended concrete slab. There are concrete block walls surrounding the electrical, mechanical and telephone rooms in each of the underground parking garages. The remainder of the complex is wood framed construction.

The roof is constructed of wood trusses with a plywood deck. The roof decking is covered with asphalt shingles. The exterior wall cladding consists of vinyl siding. All the original windows have been replaced and now generally consist of vinyl framed insulating double glazing units with a casement style operable sash. The front entry doors in the building consist of storefront style doors with single pane glazing set in metal frames.

CO sensors activate the parking garage exhaust fans. The entrance vestibules to the building from each parking garage are pressurized by supply fans to help prevent garage air from entering the building. Air is exhausted separately from each of the condominiums through washroom exhausts, range hoods, dryer vents and operable windows.

The condominiums are heated with electric baseboards (tenant's responsibility) while the common areas (vestibules and stairwells) are heated with electric fan coil units.

Lighting of the corridors and stairwells is provided by ceiling fixtures with screw in CFL bulbs. The lighting for the parking garage and utility rooms is provided by ceiling mounted fixtures with T-12 fluorescent bulbs.

The building is equipped with a dry pipe fire sprinkler system located in the parking garage. The fire sprinkler room is in the middle structure (120 Rutledge St.). Additional fire and life safety equipment is installed in various areas of the building and consists of fire extinguishers, manual pull stations, smoke alarms, emergency Exit signage, and emergency lighting.

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There are two (2) interior stairwells for each section of the building providing access to the each of the three (3) floors and the parking garage of the building. The attic space is accessed through a ceiling hatch in the corridor on the 3rd floor of each structure.

Replacement and Repair Costs

Tables indicating opinions of probable cost for capital replacement reserve costs are included in this report. A minimum cost threshold of \$1,000 has been used in reporting all items that are not code or safety related. The cost tables which are included as part of this report are titled as follows:

- Table A - Common Element Estimated Remaining Life and Adjusted Replacement Cost
- Table B - Repair / Replacement Cost Summary

Table A provides an approximate listing of building elements and site components at the Site, their approximate age and remaining useful life based on observed conditions and information gathered during the assessment. Capital replacement reserve costs are indicated based on the anticipated action required for each component over the next 25 years. The required actions are based on the condition of the components observed during the assessment, or their approximate age relative to their Expected Usable Life (EUL).

Table B provides an overview of timing associated with the required action of each component over the next twenty (25) years, while considering the effects of project overhead costs, taxes and inflation.

Reserve Fund Status

The Nova Scotia Condominium Act requires all existing and new condominium corporations consisting of ten (10) or more units to have a reserve fund study undertaken. Each study is to be updated at a minimum of once every five (5) years and re-evaluated every then (10) years.

To meet the anticipated costs of future repair and replacement of the common element components, annual contributions to the Reserve Fund will be required. We have presented three cash flow tables for consideration by the Board of Directors of HCCC#148. In each of these cash flow tables, we have assumed that the interest is earned at a rate of 0.83% (based on the five (5) year average of Bank of Canada Bank rate), that the interest is tax free and is reinvested in the fund, and that the annual inflation rate is 1.39% (based on the average yearly inflation rates for Nova Scotia over the past five (5) years as recorded by Statistics Canada).

The Reserve Fund Summary, a summary of anticipated work that will be required over the next 25 years and Cash Flow Tables are attached to the Executive Summary. In our opinion, the recommendation of this Reserve Fund Study meets the intent of the current legislation.

Limiting Conditions

For limiting conditions associated with this report, please refer to Section 2.0 and Section 7.0 and 8.0 of the report.

**RESERVE FUND SUMMARY
SCHEDULE 1
ANTICIPATED WORK**

corporation: HCCC#148 study year: 2017		Year of Construction or Repair	Remaining Life Expectancy	Anticipated Year for Next Replacement	Adjusted 2017 Replacement Cost
Item	Common Element				
5.1	Site				
5.1.1	Topography and Storm Water Drainage	1985	25	2042	\$ -
5.1.2	Flatwork	1985	3	2020	\$ 1,000
5.1.2	Flatwork	1985	8	2025	\$ 5,000
5.1.3	Driveway and Parking Areas	1985	0	2017	\$ 2,500
5.1.3	Driveway and Parking Areas	1985	5	2022	\$ 15,000
5.1.3	Driveway and Parking Areas	1985	10	2027	\$ 2,500
5.1.4	Landscaping	2003	7	2024	\$ 3,500
5.2	Building Structure				
5.2.1	Foundation	1985	25	2042	\$ -
5.2.2	Structural Framing	1985	25	2042	\$ -
5.2.3	Exterior Cladding	2017	35	2052	\$ 160,000
5.2.3	Exterior Cladding	2017	15	2032	\$ 5,000
5.2.3	Windows	2002	10	2027	\$ 30,000
5.2.4	Windows	1985	5	2022	\$ 5,000
5.2.4	Exterior Entrance Doors	1985	5	2022	\$ 6,000
5.2.5	Exterior Entrance Doors - Overhead Doors	1985	5	2022	\$ 10,000
5.2.5	Exterior Entrance Doors - Patio Doors	2010	19	2036	\$ 40,000
5.2.5	Exterior Building Sealants	2017	10	2027	\$ 15,000
5.2.6	Sloped Asphalt Shingle Roof	2005	8	2025	\$ 65,000
5.2.7	Sloped Asphalt Shingle Roof	2017	20	2037	\$ 10,000
5.2.8	Roof Drainage	2017	20	2037	\$ 7,500
5.2.9	Balconies	2017	10	2027	\$ 12,000
5.2.10	Foundation and Structural Framing - Contingency Allowance	1985	3	2020	\$ 10,000
5.3	Common Interior				
5.3.1	Entrance Foyer, Hallways and Stairwells	2006	3	2020	\$ 5,000
5.3.1	Entrance Foyer, Hallways and Stairwells	2006	4	2021	\$ 5,000
5.3.1	Entrance Foyer, Hallways and Stairwells	2006	5	2022	\$ 5,000
5.3.1	Entrance Foyer, Hallways and Stairwells	2000	3	2020	\$ 5,000
5.3.1	Entrance Foyer, Hallways and Stairwells	2000	4	2021	\$ 5,000
5.3.1	Entrance Foyer, Hallways and Stairwells	2006	5	2022	\$ 5,000
5.3.2	Parking Garage Walls	1985	20	2037	\$ -
5.3.3	Interior Doors	1985	18	2035	\$ 15,000
5.3.3	Interior Doors	1985	8	2025	\$ 4,000
5.4	Mechanical Systems				
5.4.1	Heating/Ventilation	2015	20	2037	\$ 3,000
5.4.1	Heating/Ventilation	1985	5	2022	\$ 5,000
5.4.1	Heating/Ventilation	2009	10	2027	\$ 3,000
5.4.2	Sanitary System	1985	25	2042	\$ -
5.4.3	Domestic Water System	1985	25	2042	\$ -
5.4.4	Central Vacuum System	1985	0	2017	\$ -
5.4.5	Mechanical Systems - Contingency Allowance	1985	3	2020	\$ 10,000
5.5	Electrical Systems				
5.5.1	Power Supply and Distribution	1985	10	2027	\$ 15,000
5.5.2	Common Area, Corridor and Exterior Lighting	1985	3	2020	\$ 4,500
5.5.2	Common Area, Corridor and Exterior Lighting	2017	30	2047	\$ 2,000
5.5.3	Intercom System	2015	23	2040	\$ 8,000
5.5.4	Telephone and Cable Systems	1985	25	2042	\$ -
5.5.5	Electrical Systems - Contingency Allowance	1985	3	2020	\$ 5,000
5.6	Fire and Life Safety				
5.6.1	Fire Protection	1985	25	2042	\$ -
5.6.2	Fire Detection and Life Safety Devices	1985	3	2020	\$ 15,000
5.6.2	Fire Detection and Life Safety Devices	2015	28	2045	\$ 5,000

corporation: **HCCC#148**

Cash Flow Table #1: Annual contributions at fixed rate(s) throughout the term.

- including effects of interest and inflation; interest remains in the Reserve Fund.

FISCAL YEAR	OPENING RESERVE FUND BALANCE	ESTIMATED EXPENSES UNINFLATED	ESTIMATED EXPENSES INFLATED	RECOMMENDED ANNUAL CONTRIBUTION	INTEREST EARNED	CLOSING RESERVE FUND BALANCE
2017	\$ 77,000	\$ 2,500	\$ 2,500	\$ 40,000	\$ 795	\$ 115,295
2018	\$ 115,295	\$ -	\$ -	\$ 40,000	\$ 1,123	\$ 156,418
2019	\$ 156,418	\$ -	\$ -	\$ 40,000	\$ 1,464	\$ 197,882
2020	\$ 197,882	\$ 55,500	\$ 57,847	\$ 40,000	\$ 1,568	\$ 181,604
2021	\$ 181,604	\$ 10,000	\$ 10,568	\$ 40,000	\$ 1,629	\$ 212,665
2022	\$ 212,665	\$ 51,000	\$ 54,644	\$ 40,000	\$ 1,704	\$ 199,725
2023	\$ 199,725	\$ -	\$ -	\$ 40,000	\$ 1,824	\$ 241,549
2024	\$ 241,549	\$ 3,500	\$ 3,855	\$ 40,000	\$ 2,155	\$ 279,849
2025	\$ 279,849	\$ 99,000	\$ 110,560	\$ 40,000	\$ 2,030	\$ 211,319
2026	\$ 211,319	\$ -	\$ -	\$ 40,000	\$ 1,920	\$ 253,239
2027	\$ 253,239	\$ 77,500	\$ 88,972	\$ 40,000	\$ 1,899	\$ 206,166
2028	\$ 206,166	\$ -	\$ -	\$ 40,000	\$ 1,877	\$ 248,043
2029	\$ 248,043	\$ 30,000	\$ 35,405	\$ 40,000	\$ 2,078	\$ 254,716
2030	\$ 254,716	\$ 36,000	\$ 43,076	\$ 40,000	\$ 2,101	\$ 247,284
2031	\$ 253,741	\$ 40,000	\$ 48,528	\$ 40,000	\$ 2,071	\$ 267,887
2032	\$ 247,284	\$ 17,500	\$ 21,526	\$ 40,000	\$ 2,129	\$ 272,706
2033	\$ 267,887	\$ 30,000	\$ 37,415	\$ 40,000	\$ 2,234	\$ 315,136
2034	\$ 272,706	\$ -	\$ -	\$ 40,000	\$ 2,429	\$ 266,512
2035	\$ 315,136	\$ 71,000	\$ 91,027	\$ 40,000	\$ 2,404	\$ 256,679
2036	\$ 266,512	\$ 40,000	\$ 51,996	\$ 40,000	\$ 2,162	\$ 179,867
2037	\$ 256,679	\$ 90,000	\$ 118,616	\$ 40,000	\$ 1,804	\$ 221,526
2038	\$ 179,867	\$ -	\$ -	\$ 40,000	\$ 1,659	\$ 263,530
2039	\$ 221,526	\$ -	\$ -	\$ 40,000	\$ 2,005	\$ 245,191
2040	\$ 263,530	\$ 44,000	\$ 60,442	\$ 40,000	\$ 2,102	\$ 273,406
2041	\$ 245,191	\$ 10,000	\$ 13,928	\$ 40,000	\$ 2,143	
TOTALS		\$ 707,500	\$ 850,905	\$ 1,000,000	\$ 47,311	

PROJECT NO. **133430940**

DATE **Feb-17**

TERM - YEARS **25**

START YEAR **2017**

OPENING BALANCE **\$ 77,000**

INTEREST RATE **0.83%**

INFLATION RATE **1.39%**

ANNUAL CONTRIBUTION \$ 40,000

CONTRIBUTION

INFLATION RATE 0.00%

NOTES:

1. No inflation in construction costs have been assumed until the beginning of year 2.
2. Interest calculations are based on average account balances for each year.
3. Recommended annual contribution level is based on the requirement for maintaining a Reserve Fund Balance that is always positive.

corporation: HCCC#148

Cash Flow Table #2: Annual Contributions increasing at the estimated rate of inflation.

- including effects of interest and inflation; interest remains in the Reserve Fund.

FISCAL YEAR	OPENING RESERVE FUND BALANCE	ESTIMATED EXPENSES UNINFLATED	ESTIMATED EXPENSES INFLATED	RECOMMENDED ANNUAL CONTRIBUTION	INTEREST EARNED	CLOSING RESERVE FUND BALANCE
2017	\$ 77,000	\$ 2,500	\$ 2,500	\$ 30,500	\$ 500	\$ 105,500
2018	\$ 105,500	\$ -	\$ -	\$ 31,348	\$ 1,006	\$ 137,854
2019	\$ 137,854	\$ -	\$ -	\$ 32,219	\$ 1,278	\$ 171,351
2020	\$ 171,351	\$ 55,500	\$ 57,847	\$ 33,115	\$ 1,320	\$ 147,939
2021	\$ 147,939	\$ 10,000	\$ 10,568	\$ 34,036	\$ 1,325	\$ 172,732
2022	\$ 172,732	\$ 51,000	\$ 54,644	\$ 34,982	\$ 1,352	\$ 154,422
2023	\$ 154,422	\$ -	\$ -	\$ 35,954	\$ 1,431	\$ 191,807
2024	\$ 191,807	\$ 3,500	\$ 3,855	\$ 36,954	\$ 1,729	\$ 226,635
2025	\$ 226,635	\$ 99,000	\$ 110,560	\$ 37,981	\$ 1,580	\$ 155,637
2026	\$ 155,637	\$ -	\$ -	\$ 39,037	\$ 1,454	\$ 196,128
2027	\$ 196,128	\$ 77,500	\$ 88,972	\$ 40,122	\$ 1,425	\$ 148,703
2028	\$ 148,703	\$ -	\$ -	\$ 41,238	\$ 1,405	\$ 191,346
2029	\$ 191,346	\$ 30,000	\$ 35,405	\$ 42,384	\$ 1,617	\$ 199,943
2030	\$ 199,943	\$ 36,000	\$ 43,076	\$ 43,562	\$ 1,662	\$ 202,090
2031	\$ 202,090	\$ 40,000	\$ 48,528	\$ 44,773	\$ 1,662	\$ 199,997
2032	\$ 199,997	\$ 17,500	\$ 21,526	\$ 46,018	\$ 1,762	\$ 226,251
2033	\$ 226,251	\$ 30,000	\$ 37,415	\$ 47,297	\$ 1,919	\$ 238,053
2034	\$ 238,053	\$ -	\$ -	\$ 48,612	\$ 2,178	\$ 288,843
2035	\$ 288,843	\$ 71,000	\$ 91,027	\$ 49,964	\$ 2,227	\$ 250,006
2036	\$ 250,006	\$ 40,000	\$ 51,996	\$ 51,353	\$ 2,072	\$ 251,436
2037	\$ 251,436	\$ 90,000	\$ 118,616	\$ 52,780	\$ 1,814	\$ 187,413
2038	\$ 187,413	\$ -	\$ -	\$ 54,248	\$ 1,781	\$ 243,441
2039	\$ 243,441	\$ -	\$ -	\$ 55,756	\$ 2,252	\$ 301,449
2040	\$ 301,449	\$ 44,000	\$ 60,442	\$ 57,306	\$ 2,489	\$ 300,802
2041	\$ 300,802	\$ 10,000	\$ 13,928	\$ 58,899	\$ 2,683	\$ 348,456
TOTALS		\$ 707,500	\$ 850,905	\$ 1,080,439	\$ 41,922	

PROJECT NO. 133430940

DATE Feb-17

TERM - YEARS 25

START YEAR 2017

OPENING BALANCE \$ 77,000

INTEREST RATE 0.83%

INFLATION RATE 1.39%

STARTING CONTRIBUTION \$ 30,500

CONTRIBUTION INFLATION RATE 2.78%

NOTES:

1. No inflation in construction costs have been assumed until the beginning of year 2.
2. Interest calculations are based on average account balances for each year.
3. Recommended annual contribution level is based on the requirement for maintaining a Reserve Fund Balance that is always positive.

corporation: **HCCC#148**

Cash Flow Table #3: Annual Contributions initial high inflation rate, decreasing after 10 years.

- including effects of interest and inflation; interest remains in the Reserve Fund.

FISCAL YEAR	OPENING RESERVE FUND BALANCE	ESTIMATED EXPENSES UNINFLATED	ESTIMATED EXPENSES INFLATED	RECOMMENDED ANNUAL CONTRIBUTION	INTEREST EARNED	CLOSING RESERVE FUND BALANCE
2017	\$ 77,000	\$ 2,500	\$ 2,500	\$ 30,000	\$ 500	\$ 105,000
2018	\$ 105,000	\$ -	\$ -	\$ 30,984	\$ 1,000	\$ 136,984
2019	\$ 136,984	\$ -	\$ -	\$ 32,000	\$ 1,270	\$ 170,254
2020	\$ 170,254	\$ 55,500	\$ 57,847	\$ 33,050	\$ 1,310	\$ 146,768
2021	\$ 146,768	\$ 10,000	\$ 10,568	\$ 34,134	\$ 1,316	\$ 171,650
2022	\$ 171,650	\$ 51,000	\$ 54,644	\$ 35,254	\$ 1,344	\$ 153,603
2023	\$ 153,603	\$ -	\$ -	\$ 36,410	\$ 1,426	\$ 191,439
2024	\$ 191,439	\$ 3,500	\$ 3,855	\$ 37,604	\$ 1,729	\$ 226,917
2025	\$ 226,917	\$ 99,000	\$ 110,560	\$ 38,837	\$ 1,586	\$ 156,781
2026	\$ 156,781	\$ -	\$ -	\$ 40,111	\$ 1,468	\$ 198,360
2027	\$ 198,360	\$ 77,500	\$ 88,972	\$ 40,669	\$ 1,446	\$ 151,503
2028	\$ 151,503	\$ -	\$ -	\$ 41,234	\$ 1,429	\$ 194,165
2029	\$ 194,165	\$ 30,000	\$ 35,405	\$ 41,807	\$ 1,638	\$ 202,206
2030	\$ 202,206	\$ 36,000	\$ 43,076	\$ 42,388	\$ 1,675	\$ 203,194
2031	\$ 203,194	\$ 40,000	\$ 48,528	\$ 42,978	\$ 1,663	\$ 199,307
2032	\$ 199,307	\$ 17,500	\$ 21,526	\$ 43,575	\$ 1,746	\$ 223,102
2033	\$ 223,102	\$ 30,000	\$ 37,415	\$ 44,181	\$ 1,880	\$ 231,747
2034	\$ 231,747	\$ -	\$ -	\$ 44,795	\$ 2,109	\$ 278,652
2035	\$ 278,652	\$ 71,000	\$ 91,027	\$ 45,418	\$ 2,124	\$ 235,166
2036	\$ 235,166	\$ 40,000	\$ 51,996	\$ 46,049	\$ 1,927	\$ 231,146
2037	\$ 231,146	\$ 90,000	\$ 118,616	\$ 46,689	\$ 1,620	\$ 160,838
2038	\$ 160,838	\$ -	\$ -	\$ 47,338	\$ 1,531	\$ 209,708
2039	\$ 209,708	\$ -	\$ -	\$ 47,996	\$ 1,940	\$ 259,643
2040	\$ 259,643	\$ 44,000	\$ 60,442	\$ 48,663	\$ 2,106	\$ 249,970
2041	\$ 249,970	\$ 10,000	\$ 13,928	\$ 49,339	\$ 2,222	\$ 287,604
TOTALS		\$ 707,500	\$ 850,905	\$ 1,021,503	\$ 40,005	

PROJECT NO. **133430940**

DATE **Feb-17**

TERM - YEARS **25**

START YEAR **2017**

OPENING BALANCE **\$ 77,000**

INTEREST RATE **0.83%**

INFLATION RATE **1.39%**

STARTING CONTRIBUTION \$ 30,000

CONTRIBUTION INFLATION RATE 3.28%

NOTES:

1. No inflation in construction costs have been assumed until the beginning of year 2.
2. Interest calculations are based on average account balances for each year.
3. Recommended annual contribution level is based on the requirement for maintaining a Reserve Fund Balance that is always positive.

HALIFAX COUNTY CONDOMINIUM CORPORATION (HCCC) #148, RESERVE FUND STUDY UPDATE

RESERVE FUND REQUIREMENTS
March 20, 2017

1.0 RESERVE FUND REQUIREMENTS

1.1 CONDOMINIUM ACT

The Nova Scotia Condominium Act requires all existing and new condominium corporations consisting of ten (10) or more units to have a reserve fund study undertaken. The reserve fund study is an integral part of the condominium corporation's registration process.

The reserve fund study is defined by the provincial statutes as "a study undertaken to determine a funding plan that adequately offsets expenditures for major repair or replacement of components". The component is defined as an individual item:

- that is the responsibility of the corporation, and
- for which major repair or replacement costs are anticipated to be incurred during its useful life, and
- for which costs of repair or replacement will not be covered as part of the annual operating or maintenance budget.

Any fund set up for the purposes outlined above is deemed to be a Reserve Fund. No part of a Reserve Fund shall be used except for the purposes for which the fund was established. The Reserve Fund constitutes an asset of the corporation and shall not be distributed to any owner except upon termination of the government of the property pursuant to the Act.

The Act requires that a comprehensive reserve fund study be undertaken every ten (10) years and that updates are performed at five (5) year intervals or at any time that there is significant change to the assets of the corporation.

The Act states that a comprehensive reserve-fund study must consist of:

- A statement of assumptions regarding inflation, interest, maintenance and affordability that were made in making the report.
- A funding plan based on a physical analysis and financial analysis that shows the amount of annual contribution required to be paid into the reserve fund to adequately offset expenditures for the major repair or replacement of the components
- The opinion of the person preparing the study that the fund should be adequate to offset the expenditures for the major repair or replacement of the components if the corporation makes contributions as recommended in the study.

HALIFAX COUNTY CONDOMINIUM CORPORATION (HCCC) #148, RESERVE FUND STUDY UPDATE

PURPOSE AND SCOPE OF WORK
March 20, 2017

2.0 PURPOSE AND SCOPE OF WORK

Stantec Consulting Ltd. (Stantec) was retained by Cemanco Properties Limited c/o Halifax County Condominium Corporation #148 (HCCC#148) to complete a Reserve Fund Study of the condominium complex located at 118-122 Rutledge Street, Bedford, Nova Scotia.

The primary purpose of this reserve fund study is to provide a general overview of the present condition of the site, determine opinions of probable cost to remedy any identified physical deficiencies over an evaluation period of 25 years and provide opinions for a funding plan that will adequately offset anticipated expenditures for major repair or replacement of common components, which will be the responsibility of the proposed condominium corporation.

The property condition assessment carried out by Stantec on the site is generally based on the ASTM E2018-08 Standard Guide for Property Condition Assessments: Baseline Property Condition Assessment Process and consisted of the following:

- Interviews;
- Walk-through site visit;
- Preparation of cost tables; and,
- Preparation of reserve fund report.

It should be noted that compliance with ASTM E 2018-08 does not warranty or guarantee code compliance with any governmental entity, trade standard, or the insurance industry, and this effort should not be considered an in depth code review.

ASTM defines a physical deficiency as a conspicuous defect or significant deferred maintenance of a site's material systems, components, or equipment as observed during the site assessor's visual, walk-through site visit. Included within this definition are material systems, components, or equipment that are approaching, have reached, or have exceeded their typical expected useful life (EUL) or whose remaining useful life (RUL) should not be relied upon in view of actual or effective age, abuse, excessive wear and tear, exposure to the elements, lack of proper or routine maintenance, etc. This definition specifically excludes deficiencies that may be remedied with routine maintenance, miscellaneous minor repairs, normal operating maintenance, etc., and excludes conditions that generally do not constitute a material physical deficiency of the site.

The review of the site was based on a visual review of the visible and accessible components of the property and building structure. Site elements including building structure, exterior cladding and glazing systems, roofing systems, interior finishes, mechanical systems, electrical systems, and life safety/fire protection systems were visually assessed to check their condition and to identify if any physical deficiencies were present. The assessment does not include an intrusive investigation of wall assemblies, ceiling cavities, or any other enclosures. No physical tests are

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PURPOSE AND SCOPE OF WORK

March 20, 2017

conducted and no samples of building materials are collected to substantiate observations made.

The non-specialist review of the mechanical systems, electrical systems, and fire / life safety systems at the property included discussions with the site contact and review of any available maintenance records. A visual assessment of the fire/life safety, mechanical and electrical systems is conducted to determine the type of systems present, age, and aesthetic condition. No physical tests are conducted on the fire/life safety, mechanical and electrical operating systems.

A detailed evaluation of the property development's compliance with national and provincial Building Codes and/or Fire Codes is not part of the scope of this assessment. It is assumed that the existing buildings and property were reviewed and approved by local authorities at the time of construction.

Replacement and repair costs are generally based on unit rates published by Means Publishing and/or Marshall & Swift Valuation Service, combined with local experience gained by Stantec. The quantities associated with each item have been estimated during a visual walk-through site assessment and do not represent exact measurements or quantities. At the time of repair or replacement, specific "scope of work" statements and quotations should be determined and the budgetary items revised to reflect actual expenditures.

A cost threshold of \$1,000 has generally been used in reporting deficiencies observed at the site.

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RESERVE FUND STUDY TEAM
March 20, 2017

3.0 RESERVE FUND STUDY TEAM

The site visit was conducted by Shaemus Mullaney of Stantec on February 7, 2017. Mr. Mullaney was accompanied by Eric Caines of Cemanco Properties Limited for the duration of the assessment. At the time of the site visit, the weather was sunny with an ambient temperature of -12°C.

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HALIFAX COUNTY CONDOMINIUM CORPORATION (HCCC) #148, RESERVE FUND STUDY UPDATE

PROPERTY DESCRIPTION
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4.0 PROPERTY DESCRIPTION

The condominium complex consists of three (3) attached, three (3) storey structures. Each of the structures has an underground parking garage servicing that section. The structures are of typical layout with four (4) residential condominiums per floor. The complex has a total of 36 condominium units and was constructed circa 1985.

The building is founded on concrete foundation walls which are believed to be supported by concrete strip and pad footings. The parking garages each have a concrete slab on grade. The main floor of the building is a suspended concrete slab. There are concrete block walls surrounding the electrical, mechanical and telephone rooms in each of the underground parking garages. The remainder of the complex is wood framed construction.

The roof is constructed of wood trusses with a plywood deck. The roof decking is covered with asphalt shingles. The exterior wall cladding consists of vinyl siding. All the original windows have been replaced and now generally consist of vinyl framed insulating double glazing units with a casement style operable sash. The front entry doors in the building consist of storefront style doors with single pane glazing set in metal frames.

CO sensors activate the parking garage exhaust fans. The entrance vestibules to the building from each parking garage are pressurized by supply fans to help prevent garage air from entering the building. Air is exhausted separately from each of the condominiums through washroom exhausts, range hoods, dryer vents and operable windows.

The condominiums are heated with electric baseboards (tenant's responsibility) while the common areas (vestibules and stairwells) are heated with electric fan coil units.

Lighting of the corridors and stairwells is provided by ceiling fixtures with screw in CFL bulbs. The lighting for the parking garage and utility rooms is provided by ceiling mounted fixtures with T-12 fluorescent bulbs.

The building is equipped with a dry pipe fire sprinkler system located in the parking garage. The fire sprinkler room is in the middle structure (120 Rutledge St.). Additional fire and life safety equipment is installed in various areas of the building and consists of fire extinguishers, manual pull stations, smoke alarms, emergency Exit signage, and emergency lighting.

There are two (2) interior stairwells for each section of the building providing access to the each of the three (3) floors and the parking garage of the building. The attic space is accessed through a ceiling hatch in the corridor on the 3rd floor of each structure.

HALIFAX COUNTY CONDOMINIUM CORPORATION (HCCC) #148, RESERVE FUND STUDY UPDATE

SUMMARY OF FINDINGS
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5.0 SUMMARY OF FINDINGS

The following is a summary of findings resulting from the visual assessment performed at 118-122 Rutledge Street and from our discussions on February 7, 2016 with Mr. Eric Caines, V.P. Operations for Cemanco Properties Ltd.

Normal life expectancy or expected useful life (EUL) estimates are based on manufacturers' literature and industry standards. The elements' remaining useful life (RUL) has been based on the assessment findings. The summary of findings listed below has been tabulated in Table A – Common Element Estimated Remaining Life and Adjusted Replacement Cost, as found in Appendix A.

5.1 SITE

5.1.1 Topography and Storm Water Drainage

The property generally slopes towards the South East (Bedford Basin) of the property. The asphalt laneway located on the north side of the building is sloped to the south west. The laneway has one catch basin at the midpoint while the remainder appears to be sloped towards a single catch basin in the cul-de-sac in front of the neighboring property.

Storm water from the roof of the building is collected in eavestroughs, drained via downspouts and then into the municipal storm water system. At the time of the site visit it was noted that several of the downspouts were missing, however during the site visit, construction on the building envelope was ongoing and the missing downspouts would be addressed near the completion of the project.

At the time of the site visit there was no obvious standing water on site. However, since much of the property was snow covered, the observed area was limited to the paved portion of the property.

Based on the observed and reported conditions, no major action regarding topography or site drainage is anticipated over the course of the evaluation period.

5.1.2 Flatwork

There is a concrete slab located at the main entrance of each of the three (3) building sections. The slabs appeared to be from the original construction but are still in good condition. There are no visible signs of trip hazards resulting from the spalling or cracking of the concrete.

Asphalt pathways connect the slabs at the entrances to the laneway. The paths appeared to be from the original construction but are still in good condition. There are no visible signs of tripping hazards resulting from the settling or cracking of the asphalt.

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Based on the observed condition at the time of the site visit periodic localized repairs of the slabs and walkways are anticipated during the evaluation period. Periodic repair allowances are included in the Reserve Fund Tables every five (5) years apart for the year in which the flatwork is replaced.

In addition to periodic repairs, the slabs and walkways are anticipated to require replacement as they will have exceeded their expected useful life within the evaluated period. An allowance to replace the concrete slabs and walkways is included in the Reserve Fund Tables in 2025.

The following replacement allowance has been included in the Reserve Fund Tables:

Year	Action	Budget Allowance
2020, 2025, 2030, 2035, 2040	Interim Concrete Slab Repairs	\$ 1,000
2025	Concrete Slab and Walkway Replacement	\$ 5,000

5.1.3 Driveways and Parking Areas

Asphalt paving consists of the laneway which provides access to the north of the property from Rutledge Street. There is a 10 stall, surface parking lot to the east the building which is accessed via the laneway from Rutledge Street. Asphalt curbing surrounds the majority of the observed parking areas and driveways.

The edges of the asphalt lane and parking were snow covered at the time of the site visit. The central areas of the asphalt, which were clear of snow, appeared to be in good condition. Several types of cracking were observed such as alligator, longitudinal (parallel to the flow of traffic) and transverse (perpendicular to the flow of traffic).

There is no indication of the exact age of the asphalt, but based on appearance, it is believed that that asphalt is near or approaching its typical EUL. The normal EUL for asphalt with light residential traffic is 15 to 20 years. It is anticipated that crack filling will be required in the near future. An allowance of \$2,500 is included in the Reserve Fund for asphalt crack filling in 2017. Based on EUL and observed conditions, it is also anticipated that the laneway will require resurfacing within the next 5 years. An allowance has been included in Year five (5) of the Reserve Fund Tables to cover the resurfacing. Additionally, starting in 2027 and repeating every five (5) years, allowances have been included for periodic asphalt maintenance.

The following repair/replacement allowances have been included in the Reserve Fund Tables:

Year	Action	Budget Allowance
2017	Localized Asphalt Repairs	\$ 2,500
2022	Asphalt Resurfacing	\$ 15,000
2027 (every 5 years thereafter)	Asphalt Maintenance	\$ 2,500

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Note: It is anticipated that the parking stall lines will be replaced at the time of the asphalt overlay and have been included in the above-noted cost.

5.1.4 Landscaping

Landscaping consists of various trees and shrubs along the north side of the building. It was reported that significant landscaping work has been completed, however most of the landscaping was snow covered and therefore unobservable. Replacement and upkeep of the landscaping is assumed to be completed as part of regular Operations and Maintenance (O&M).

There is a timber retaining wall consisting of pressure treated members located adjacent to the condominium complex. The wall is in overall good condition with no obvious signs of outward bowing. A timber retaining wall typically has an EUL of 15 to 20 years. Based on the EUL and observed conditions, an allowance is provided in the Reserve Fund Tables for replacement of the retaining wall in 2024.

In the previous Reserve Fund Study it included the chain link fence that boards the south side of the property. Based on discussions during the site visit it was determined that that chain link fence is not associated with the property. The previous allocated funds have been removed from the Reserve Fund Study.

Year	Action	Budget Allowance
2024	Replace Retaining Wall	\$ 3,500

5.2 BUILDING STRUCTURE

5.2.1 Foundation

The building foundation was mainly hidden by back fill and exterior/interior finishes but is believed to consist of concrete strip and pad footings supporting concrete foundation walls and interior concrete columns.

Interior faces of a portion of the building's concrete foundation walls are exposed in the basement parking garage. The exterior face of the concrete foundation walls are also partially exposed depending on the grade level. Where observed, there was no significant cracking, settlement, or heaving of building elements that would suggest a potential foundation problem.

The concrete foundation is assumed to have an "indefinite" life expectancy when compared to the relative life of other components of the building. Based on the observed conditions of the concrete foundation, no remedial action is recommended at this time and no significant action is anticipated over the evaluation period. From time to time localized repairs may be required due to localized deterioration or vandalism. It is anticipated that any costs associated with the foundation will be covered by the structural contingency allowance outlined in section 5.2.10.

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5.2.2 Structural Framing

The main floors (over parking garages) of the three (3) building sections consist of suspended concrete floor slabs. The structural framing for the above grade storeys general consists of wooden framing except for the stairwells which are constructed of concrete blocks. The roof is constructed using a wooden truss system. Each condominium has a balcony consisting of a wooden deck supported by the building structure and by wooden 6x6 corner posts. The balconies are further discussed in Section 5.2.9.

The assessment of the structural elements of the building was limited due to concealment of the structure by exterior and interior architectural finishes. Where the structural components were not visible, the building finishes were reviewed for the presence of cracks or other distress that might indicate deficiencies in the underlying structure. No distress was observed in the areas reviewed at the time of the site visit.

As with the foundation, the building superstructure is assumed to have "indefinite" life expectancy when compared to the relative life of other building components. From time to time localized repairs may be required due to localized deterioration.

Any repairs beyond those which are typically performed under routine operations and maintenance of the building structure are to be covered by the Structural Contingency Allowance described in Section 5.2.10.

5.2.3 Exterior Cladding

During the site visit ongoing construction was taking place to remove all wooden clapboard siding and replaced with vinyl siding. In addition to the vinyl siding, 1" Styrofoam panels were installed to the exterior building to increase the insulation of the building. The overall R-value by additional 1" Styrofoam insulation would increase by an approximate R4. The EUL of vinyl siding is typically thirty-five (35) years. Based on observed and reported conditions no major action is anticipated during the evaluation period. Any minor repairs and cleaning should be considered in the yearly O&M budget, but we have allocated repair cost in year 2032.

Year	Action	Budget Allowance
2032	Vinyl Siding Repairs	\$ 5,000

5.2.4 Windows

The windows are vinyl framed insulating double glazing units with a casement style operable sash. The windows are equipped with standard crank style operators and locking hardware. In addition to the casement windows, half-moon picture windows are present above the main entrances to the building. These windows are constructed of double glazing units set in metal

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frames. Where visible from the ground level, the windows were observed to be in good condition overall.

The typical EUL for the vinyl windows is 25 to 30 years. Based on the observed condition of the windows, no major action is anticipated at this time. However, based on the EUL of the windows, it is recommended that a phased replacement program for the casement style windows be implemented starting in Year 10 of the evaluation period. As such, an allowance of \$30,000 has been provided in Year 10 as well as allowances of \$30,000 every two (2) years thereafter. The allowances are based on replacing approximately 15% of the windows every two (2).

The half-moon picture windows will also likely require replacement during the evaluation period. An allowance for the replacement of these windows is included in Year five (5) of the Reserve Fund Tables.

The following replacement allowances have been included in the Reserve Fund Tables:

Year	Action	Budget Allowance
2027 (every 2 years thereafter)	Phased Window Replacement	\$ 30,000 (total of \$180,000)
2022	Replace Half-Moon Picture Windows	\$ 5,000

5.2.5 Exterior Entrance Doors

Each of the three (3) sections of the building have front and rear entrances. The front entrance doors consist of two (2) single steel insulated doors. Each of these doors has a full length lite in the centre of the door. The rear entrance doors are similar to the front doors, but the lite in the door is only half the door height. Exterior steel doors typically have an EUL 30 to 35 years. The doors are currently in fair condition and they are anticipated to surpasses their EUL. Based on the observed conditions and the EUL, it is anticipated that the original (1985) exterior doors will require replacement in the next five (5) years.

Vehicular access to each of the parking garages is provided by an automatic overhead garage door. The garage doors and openers are in good condition and are anticipated to require replacement during the evaluation period. The EUL of similar garage doors is approximately 15 years. Allowances for replacement of garage doors have been included in Years five (5) and fifteen (15) in the Reserve Fund Tables.

Each condo balcony is accessed through a pair of sliding patio doors. The patio door panels consist of an insulated glazing units set in vinyl frames. Sliding patio doors typically have a EUL of 25 years. Based on an EUL of 25 years it is also anticipated that the remainder patio doors will require a lifecycle replacement near the end of the evaluation period.

The following replacement allowances have been included in the Reserve Fund Tables:

Year	Action	Budget Allowance
2022	Replace Entrance Doors	\$ 6,000

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2020 and 2035	Replace Overhead Garage Doors (2 Doors)	\$ 10,000
2036	Replace 26 Sliding Patio Doors	\$ 40,000

5.2.6 Exterior Building Sealants

Sealant around openings for windows, doors, and other penetrations were being replaced during the building envelope construction. Sealants appeared to be installed in appropriate locations and were in good condition. Allowances have been provided in the Reserve Fund Tables for replacement of sealants every 10 years.

The following replacement allowance has been included in the Reserve Fund Tables:

Year	Action	Budget Allowance
2027 (every 10 years thereafter)	Sealant Replacement	\$ 15,000

5.2.7 Sloped Asphalt Shingled Roof

The main roofing system is asphalt shingles. The roof appeared to be in generally good condition. No visible roof leaks or other problems were reported by the site contact. The roof over the garage at ground level were being replaced. It was reported three (3) roofs were remaining. During the roof replacement vents were being added. The life expectancy of an asphalt shingled roof is typically 15 to 20 years dependent on materials, site conditions and workmanship. An allowance of \$ 60,000 is therefore included in the Reserve Fund Tables for replacement of the main roofing and perimeter flashing details and an allowance of \$ 10,000 included for the small multiple garage roofs. In addition, an annual roof inspection should be included in the O&M budget to ensure the integrity of the roof system and confirm maintenance requirements.

The following replacement allowance has been included in the Reserve Fund Tables:

Year	Action	Budget Allowance
2023	Main Roof - Asphalt Shingle Replacement	\$ 65,000
2037	Garage Roof - Asphalt Shingle Replacement	\$10,000

5.2.8 Roof Drainage

Roof drainage is accomplished by a metal eavestrough and downspout system. No major issues with the eavestrough were reported or observed at the time of the site visit. However, there were several locations where the downspouts were missing due to construction. The contractor stated that the missing downspouts will be address before the end of the project.

Metal eavestrough has an EUL of 20 years. Based on the EUL, the eavestrough and downspouts are anticipated to require replacement during the evaluation period. Based on the observed

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condition and estimated remaining useful life, an allowance has been included in the Reserve Fund Tables in year 2037 for the replacement of the roof drainage system.

The following replacement allowance has been included in the Reserve Fund Tables:

Year	Action	Budget Allowance
2024	Replace Roof Drainage System	\$ 7,500

5.2.9 Balconies

Each balcony consists of a wooden deck supported on two (2)sides by the walls of the building and by timber posts at the end corners of the overhang. A wooden railing with painted steel spindles surrounds the open two sides of the balcony.

During the site visit, replacement of the decking boards, capping of the timber post and replacement of timber spindles with steel spindles were proceeding. It was reported that any timber post at ground level that show signs of damage due to rot were replaced.

The EUL of wooden balconies and railings is up to 30 years with adequate maintenance. Based on the observed condition of the balconies it is recommended that the wood be refinished or sealed on a 10 year cycle to increase the useful life of the wood. Based on observed and reported conditions no major action is anticipated during the course of the evaluation period.

Allowances have been made in the Reserve Fund Tables for periodic refinishing of the balconies.

Any localized repairs or damage to the wooden structure of the balconies are anticipated to be funded from the Foundation and Structural Framing – Contingency Allowance 5.2.10.

The following repair allowance has been included in the Reserve Fund Tables:

Year	Action	Budget Allowance
2027 (every 8 years thereafter)	Refinish/Seal Wooden Balconies	\$ 12,000

5.2.10 Foundation and Structural Framing – Contingency Allowance

To address unforeseen repairs due to unexpected localized damage to the building foundation, structure and balconies, we recommend carrying a building structure contingency allowance.

The following replacement allowance has been included in the Reserve Fund Tables:

Year	Action	Budget Allowance
2020 (every 5 years thereafter)	Building Structure Contingency Repair Allowances	\$ 10,000

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5.3 COMMON INTERIORS

5.3.1 Entrance Foyer, Hallways and Stairwells

Common areas in the building include the entrance vestibule, hallways and stairwells.

The walls and ceilings of the common areas are finished with painted gypsum board. The ceiling and wall finishes appeared to be in good condition at the time of the site visit with only minor localized wear of painted surfaces observed. Interior painted finishes typically have a EUL of 10 to 12 years.

It is anticipated that only one (1) section of the building will be painted per year after the construction to the building envelope has been completed. Starting in 2020, allowances of \$5,000 for repainting each section every 10 years are included in the Reserve Fund Tables.

The floors and stairs in the hallways and stairwells are carpeted. The carpet is observed to be in good condition. Indoor carpeting typically has an EUL of 10 years depending on the quality of the carpet and the amount of traffic.

It is anticipated that the carpeting will require replacement within the next five (5) years. A three (3) phased approach is expected for replacing the corridor carpeting. Allowances are included in the Reserve Fund Tables starting in 2020 for the phased recarpeting.

The following repair/replacement allowances have been included in the Reserve Fund Tables:

Year	Action	Budget Allowance
2020 (every 10 years thereafter)	Common Area Repainting – Section 1	\$ 5,000
2021 (every 10 years thereafter)	Common Area Repainting – Section 2	\$ 5,000
2022 (every 10 years thereafter)	Common Area Repainting – Section 3	\$ 5,000
2020 (every 10 years thereafter)	Common Area Recarpeting – Section 1	\$ 5,000
2021 (every 10 years thereafter)	Common Area Recarpeting – Section 2	\$ 5,000
2022 (every 10 years thereafter)	Common Area Recarpeting – Section 3	\$ 5,000

The costs associated with the interior finishes are aesthetic in nature and therefore discretionary and may be completed earlier or later at the discretion of the Board.

5.3.2 Parking Garage Walls

The walls and floors in the parking garages are unfinished concrete or concrete block. At the time of the site visit the walls and floors appeared to be in good condition with no reported issues. Based on the observed and reported conditions no major action is anticipated to the walls and floors of the parking garage during the evaluation period.

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To maintain the aesthetics of the building, regular painting of the parking garage walls and services rooms should be considered. This work would be classified as a building upgrade and has therefore not been included in the Reserve Fund Tables.

5.3.3 Interior Doors

There are painted metal fire doors that access the stairwells from the corridor on each floor. These doors are equipped with automatic closers. At the time of the site visit, the doors appeared to be original to the building and are in fair to good condition. Interior steel doors typically have an EUL 60 years if not exposed to exterior elements. Based on the EUL it is anticipated that these fire doors will require replacement in five (5) to seven (7) years.

In addition to the doors from the corridors, each parking garage has two painted hollow metal doors which provide access to the building stairwells. These doors appear to be original the building but are still in fair condition. Similar steel doors typically have an EUL 30 to 35 years. It is anticipated that these doors will require replacement in five (5) to seven (7) years within the evaluated period.

There are painted metal doors that access the mechanical, electrical and fire pump rooms in the parking garage of each building section. These doors appear to be original the building but are still in good condition. Similar steel doors typically have a EUL 40 years. Based on the location and limited use of these doors it is anticipated that they will exceed the typical EUL. An allowance has been included in the Reserve Fund Tables in 2030 to cover the cost of replacing these doors.

It is anticipated that the interior doors will require periodic repainting during the evaluation period. Localized minor repairs, including repainting, may be undertaken as required with routine operations and maintenance.

The following replacement allowances have been included in the Reserve Fund Tables:

Year	Action	Budget Allowance
2035	Replace Stairwell Fire Doors	\$ 15,000
2025	Replace Service Room Doors	\$ 4,000

5.4 MECHANICAL SYSTEMS

5.4.1 Heating/Ventilation

Each unit is responsible for their own heating. As a result, HCCC#148's responsibility is limited to heating only the common areas. Heating for the common areas, the main lobby, storage room and vestibules are provided by small electric fan coil units. New electric fan coils were observed to be installed in all the vestibule with a new thermostat. The electric fan coil units in the stairwell appear to be at least ten (10) years old were not replaced as they were in good condition. The thermostats were replaced on all the stairwell electric fan coil units. Also observed the electric baseboards in the common areas were replaced. The expected useful life of electric unit

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heaters with regular maintenance is thirty (30) years. No problems were reported or observed with the electric heaters at the time of the site visit. Based on observed and reported conditions it is anticipated that the heaters will require replacement during the evaluation period. An allowance of \$3,000 for replacing unit heaters is included in 2037 of the Reserve Fund Tables.

Ventilation to the each of the parking garages is provided by axial exhaust fans. Wall mounted CO sensors control these exhaust fans. A contractor regularly calibrates the CO sensors concurrently with the inspection of the fire protection system. At the time of the site visit there were no reported issues with exhaust fans. Similar exhaust fans have an EUL of 20 years. Base on the EUL and the observed and reported condition, a life cycle replacement/ refurbishment will be required within the evaluation period. Allowances are included in Year five (5) of the Reserve Fund Study to cover the costs associated with replacing/refurbishing the fans.

Pressurization air is provided to the vestibules leaving the parking garage to prevent exhaust fumes from entering the building. These fans typically have a EUL of 20 years. It is anticipated that these fans will require a life cycle replacement around Year 10 of the evaluation period. An allowance has been included in the Reserve Fund Tables to cover the replacement of these fans.

The following repair/replacement allowances have been included in the Reserve Fund Tables:

Year	Action	Budget Allowance
2037	Replace Electric Unit Heaters	\$ 3,000
2022	Refurbish/Replace Parking Exhaust Fans	\$ 5,000
2027	Refurbish/Replace Pressurization Fans	\$ 3,000

5.4.2 Sanitary System

The building is connected to the municipal sanitary system. No major issues were reported with the installation or the operation of the sanitary system, except for the preventative and routine maintenance, it is not anticipated that any significant work will be required for the sanitary system over the next 25 years. The sanitary system is assumed to have the same expected useful life as the building structure. The costs associated with unanticipated work for the sanitary system will be covered by the Mechanical Contingency as described in Section 5.4.5.

5.4.3 Domestic Water System

The domestic water supply is provided to the site by the municipal system. No major issues were reported with the installation or operation of the water supply system, except for routine maintenance, it is not anticipated that any significant work will be required for the domestic water supply system over the next 25 years. The costs associated with unanticipated work for the domestic water system will be covered by the Mechanical Contingency as described in Section 5.4.5.

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Each condominium unit has a dedicated domestic water heater which is the responsibility of the condominium owner. Since the water heaters are not maintained by the HCC#148 they have not been included in the Reserve Fund Study.

5.4.4 Central Vacuum System

Each of the sections of the building is equipped with a central vacuum system. The central vacuum system appears to be original to the building construction. It was reported during the site visit the central vacuum has not worked for nearly 20 years. On further discussion there is no plans in the future to replace these units. The allowance previously allocated to the Reserve Fund Study have been removed. No further funds dealing with the central vacuum system will be allocated to the Reverse Fund Study. WE recommend the central vacuum system be decommissioned and removed.

5.4.5 Mechanical Systems – Contingency Allowance

To address unforeseen repairs due to unexpected localized damage or failure of the mechanical systems, it is recommended to include a contingency allowance in the Reserve Fund Tables. We have increased the contingency from \$5,000 every ten (10) years to \$10,000 every five (5) years because major systems are over 30 years old.

The following contingency allowance has been included in the Reserve Fund Tables:

Year	Action	Budget Allowance
2020 (every 5 years thereafter)	Mechanical Contingency	\$ 10,000

5.5 ELECTRICAL SYSTEMS

5.5.1 Power Supply and Distribution

Nova Scotia Power provide primary electrical service. At the time of the site visit the electrical room could not be accessed. Based on the previous report completed in 2012, it states "...the electrical service to the building was rated as 420 Amp, 120/208V/ 3 phase/4wire. The main disconnect switch is in building 120 and is rated at 600V and 1200A. The main panel feeds a splitter and a bank of meters, which in turn provides service to each unit. The main panel appears to be in good condition with no observed or reported deficiencies. "

Electrical panels typically have an expected useful life of 30 years with routine maintenance and repair. Based on the observed and reported conditions, a life cycle replacement of the main electrical components is anticipated during the evaluation period.

Stantec recommends that infrared thermographic scans of the electrical equipment be completed, at a minimum, every three (3) years as part of routine maintenance. Minor repairs should be addressed as required through routine maintenance or under the contingency allowance described in Section 5.5.4.

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The following replacement allowance has been included in the Reserve Fund Tables:

Year	Action	Budget Allowance
2027	Replace Main Service Panel	\$ 15,000

5.5.2 Common Area, Corridor, and Exterior Lighting

The corridor lighting is provided by ceiling mounted fixtures with compact fluorescent lighting (CFL) fixtures. The EUL of a lighting fixture is typically up to 35 years depending on the quality of the fixture. Apart from routine maintenance, it is not anticipated that the corridor lighting will require significant expenditure over the course of the evaluation period.

The lighting in the parking garage is provided by ceiling mounted fluorescent lighting fixtures with T-12 bulbs. These fixtures appear to be original to the building and are anticipated to require a life cycle replacement during the course of the evaluation period. An allowance is included in the Reserve Fund Table in 2020 to replace the parking garage lighting fixtures.

Building mounted exterior lighting consists of either wall-mounted HID fixtures or wall-mounted CFL fixtures which are used to light the entrances of the building. The exterior fixtures have been or in the process of being replaced during current building envelope construction. Based on an EUL of 30 years replacement of the exterior fixtures will not be required during the course of the evaluation period.

The following replacement allowances have been included in the Reserve Fund Tables:

Year	Action	Budget Allowance
2020	Replace Parking Garage Lighting	\$ 4,500

5.5.3 Intercom System

Each main entrance is equipped with an interphone/ intercom system which allows condominium owners to identify potential visitors before they are provided access. The system connects directly to the unit owners' telephones.

It was reported during the site visit that within the last two (2) years all the interphone/intercom systems have been replaced. An interphone system has an EUL of approximately 25 years. An allowance for replacement of the intercom panel during the evaluation period has been included in the Reserve Fund Tables. Minor repairs should be addressed as required with routine maintenance or under the contingency allowance described in Section 5.5.4.

The following replacement allowance has been included in the Reserve Fund Tables:

Year	Action	Budget Allowance
2040	Replace Main Entrance Intercom Panel	\$ 8,000

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SUMMARY OF FINDINGS
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5.5.4 Telephone and Cable Systems

The corresponding local service providers provide both the telephone and cable services. The main hub for both services is in the servicer room located in section 120 parking garage. During the site visit both services appeared to have standard installations with no obvious deficiencies. There were no reported issues with either of the telephone or cable systems. It is not anticipated that the either of the telephone or the cable systems will require significant action over the course of the evaluation period. Unforeseen expenditures beyond that covered by the annual O&M budget are anticipated to be covered by Section 5.5.5 Electrical Systems – Contingency Allowance.

5.5.5 Electrical Systems – Contingency Allowance

To address unforeseen repairs due to unexpected localized damage or failure of the electrical systems, it is recommended to carry a contingency allowance starting in 2020 and continuing every five years thereafter.

The following contingency allowance has been included in the Reserve Fund Tables:

Year	Action	Budget Allowance
2020 (every 5 years thereafter)	Electrical Contingency	\$ 5,000

5.6 FIRE AND LIFE SAFETY

5.6.1 Fire Protection

The building has a dry fire sprinkler system with the central sprinkler system room located in building 120. The fire sprinkler system appeared to be in good condition. A contractor routinely inspects the fire sprinkler system. No issues were observed or reported with the fire sprinkler system.

In addition to the fire sprinkler system there are fire extinguishers located in the corridors of the building. The extinguishers appeared to be in appropriate places and are in good condition. A contractor also routinely inspects the fire extinguishers along with the fire detection system.

Apart from routine maintenance, no significant expenditure is anticipated over the next 25 years.

5.6.2 Fire Detection and Life Safety Devices

Fire detection devices consist of smoke and heat detectors which are in each of the common corridor and stairwells, manual pull stations and vibrating bells which are all monitored by a Fire Alarm Panel situated in the building lobby.

HALIFAX COUNTY CONDOMINIUM CORPORATION (HCCC) #148, RESERVE FUND STUDY UPDATE

SUMMARY OF FINDINGS

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The fire detection devices were observed to be in good condition and no problems were reported at the time of the site visit. The fire detection system should be inspected, tested, and certified on an annual basis by a certified contractor. Since we anticipate that this work can be completed at a nominal cost, under the operations and maintenance budget, we have not included a separate reserve.

The common areas of the building are equipped with wall mounted emergency lighting and Exit lights. It was reported during the site visit that all emergency lighting system or Exit lights, excluding the garage, were replaced with LED. An allowance in 2022 is included in the Reserve Fund Tables to cover the cost of replacement of emergency lighting and Exit lighting.

Life safety equipment should also be tested regularly to ensure it remains functional. This should be completed in conjunction with the annual inspection, testing, and certification of the fire detection systems.

We have not provided a reserve cost for fire detection component/system testing since this work would be generally be completed under the operational budget. The EUL of a typical fire alarm control panel is approximately 25 to 30 years and replacement usually becomes necessary as parts become obsolete and difficult to obtain. A reserve for the fire alarm panel replacement is included in year 2020 as the alarm panel is believed to be from the original construction in 1985. It is also recommended that the fire detection devices are replaced when the fire alarm panel is replaced.

The following replacement allowance has been included in the Reserve Fund Tables:

Year	Action	Budget Allowance
2020	Replacement of Fire Alarm Panel and Fire Detection Devices	\$15,000

HALIFAX COUNTY CONDOMINIUM CORPORATION (HCCC) #148, RESERVE FUND STUDY UPDATE

RESERVE FUND INFORMATION
March 20, 2017

6.0 RESERVE FUND INFORMATION

6.1 ASSUMPTIONS

6.1.1 Expected Useful Life

The assumptions regarding expected useful life (EUL) are based on information provided in manufacturers' literature and standard industry publications.

6.1.2 Remaining Useful Life

The assumptions regarding remaining useful life (RUL) are based on EUL's, our observations of the elements, and our experience with similar materials and systems.

6.1.3 Repair and Replacement Costs

Replacement costs are based on unit rates published by RSMeans Publishing, combined with local experience by Stantec Consulting Ltd. The quantities associated with each item have been determined during a visual site review and do not represent exact measurements or quantities. At the time of replacement, "scope of work" statements and quotations should be determined and the budgetary items revised to reflect the actual expenditures.

Some components of the building have been assumed to have "indefinite" life expectancy as compared to the relative life of other components. From time to time, localized repairs may be required due to deterioration or vandalism; therefore, in certain cases, only a contingency amount has been recommended for these components in the determination of the reserve fund.

For the purpose of this Reserve Fund Study, we have used an evaluation period of 25 years.

HALIFAX COUNTY CONDOMINIUM CORPORATION (HCCC) #148, RESERVE FUND STUDY UPDATE

RESERVE FUND INFORMATION
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6.1.4 Annual Inflation Rate

The assumed inflation rate has been determined using the average yearly inflation rates for Nova Scotia over the past five (5) years as recorded by Statistics Canada as follows:

Table 1 Annual Inflation Rate

Year	Inflation Rate
2012	1.93 %
2013	0.99 %
2014	1.55 %
2015	1.20 %
2016	1.27 %
Five Year Average	1.39 %

6.1.5 Annual Interest Rate

The assumed interest rate for funds re-invested has been determined based on the five (5) year average of Bank of Canada bank rates:

Table 2 Annual Interest Rate

Year	Bank Rate
2012	1.00 %
2013	1.00 %
2014	1.00 %
2015	0.65 %
2016	0.50 %
Five Year Average	0.83 %

HALIFAX COUNTY CONDOMINIUM CORPORATION (HCCC) #148, RESERVE FUND STUDY UPDATE

RESERVE FUND INFORMATION
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6.2 REPORTING TABLES

The results of our assessments and recommendations are summarized in Tables A & B which are found in Appendix A. The tables are explained as follows:

6.2.1 Table A – Common Element Estimated Remaining Life and Adjusted Replacement Cost

This Table is a summary of the elements reviewed, indicates the anticipated year for repair or replacement and provides the adjusted opinion of probable replacement cost in present (2017) dollars.

The Reserve Fund Summary Schedule 1 – Anticipated Work, found in the Executive Summary, is a summary of Table A.

6.2.2 Table B – Repair/Replacement Cost Summary

This table indicates the anticipated year and the opinions of probable cost for replacement / repair work in present (2017) dollars, summarizes total annual costs and provides future annual costs with the consideration of inflation.

This table can be used as a preliminary schedule to anticipate future annual repairs and replacements. This summary has been projected for the 25-year valuation period and may be used as a basis for future updates.

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RESERVE FUND INFORMATION
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6.3 CASH FLOW TABLES

To meet the anticipated costs of future repair and replacement of the common element components, annual contributions to the Reserve Fund will be required. We have presented three (3) Cash Flow Tables for consideration by the Board of Directors of this Condominium complex. In each of these Cash Flow Tables, we have assumed that the interest is earned at a rate of 0.83 % (based on the five (5) year average of Bank of Canada Bank rate), that the interest is tax free and is reinvested in the fund, and that annual inflation rate is 1.39 % (based on the average yearly inflation rates for Nova Scotia over the past five (5) years as recorded by Statistics Canada).

The Cash Flow Tables are presented in Appendix B.

The level of contribution outlined in each Cash Flow Table is adequate to cover the costs of repair and replacement of the common elements over the next 25 years. The interim update that is required in three (3) years will determine if any change to the cash flow table approved by the board of directors is required.

Cash Flow Table #1 – Annual contributions at fixed rate throughout the term

Annual contribution of \$40,000 is made to the Reserve Fund during the 25-year study period. The Reserve Fund balance is calculated considering the effects of interest and inflated cost of the anticipated expenses. Interest remains in the Reserve Fund.

Cash Flow Table #2 – Annual Contributions increasing annually at one rate of inflation for the 25 year evaluation period

This scenario considers annual contributions of \$30,500 with a 2.78% (or 2 x 1.39% - 5 year calculated inflation rate) annual increase to maintain a positive balance in the Reserve Fund throughout the valuation period. The Reserve Fund balance is calculated considering the effects of interest and inflated cost of the anticipated expenses. Interest remains in the Reserve Fund.

Cash Flow Table #3 – Annual Contributions increasing annually, higher initial contribution inflation rate, decreasing after 10 years

Annual contributions of \$30,000 increase annually at a higher rate (3.28% - 2 x 5 year calculated inflation rate + 0.5%) for the initial 10 years of the evaluation period. In Year 11, annual rate of contribution inflation is decreased to 1.39% to reflect the average inflation rate. The Reserve Fund balance is calculated considering the effects of interest and inflated cost of the anticipated expenses. Interest remains in the Reserve Fund.

6.4 RESERVE FUND STATUS

The audited Reserve Fund balance is reported to be \$77,000 on December 31st, 2016 for the subject condominium.

Annual contributions to the Reserve Fund are required to meet the anticipated costs of future repair and replacement of building components. In addition to Tables A and B, as described above, three Cash Flow Tables are presented in this report for consideration by the board.

HALIFAX COUNTY CONDOMINIUM CORPORATION (HCCC) #148, RESERVE FUND STUDY UPDATE

RESERVE FUND INFORMATION

March 20, 2017

The level of contribution outlined in each Cash Flow Table is adequate to cover the costs of repair and replacement of building elements over the next 25 years. We recommend that the contribution levels be reviewed annually so that adjustments can be made to reflect actual costs of work, changes to timing and cost of work expected for the coming year, and the effects of actual interest and inflation rates.

HALIFAX COUNTY CONDOMINIUM CORPORATION (HCCC) #148, RESERVE FUND STUDY UPDATE

INVESTIGATION SUMMARY
March 20, 2017

7.0 INVESTIGATION SUMMARY

7.1 SITE REVIEW

A visual review of the site was conducted by Shaemus Mullaney, CET on February 07, 2017.

7.2 INTERVIEWS

The following personnel were interviewed:

- Mr. Eric Caines, V.P. Operations, Cemanco Properties Ltd.
- Mr. Dave Duggen, Property Superintendent, Cemanco Properties Ltd.
- Mr. Richard Dicks, Contractor, R.L. Dicks Siding Solutions

7.3 DOCUMENTS REVIEWED

The following documents were reviewed:

- Reserve Fund Study – January 2012, as prepared by Stantec Consulting Ltd.

Information provided to is during the site visit:

- Crestwood Two H.C.C.C. #148 – General Ledger Report
- Siding Project Assessment
- Contract Draft – R.L

HALIFAX COUNTY CONDOMINIUM CORPORATION (HCCC) #148, RESERVE FUND STUDY UPDATE

CLOSURE AND LIMITING CONDITIONS
March 20, 2017

8.0 CLOSURE AND LIMITING CONDITIONS

This report has been prepared for the exclusive and sole use of Halifax County Condominium Corporation #148 (HCCC#148). The report may not be relied upon by any other person or entity without the express written consent of Stantec Consulting Ltd. (Stantec) and HCCC#148.

Any reliance on this report by a third party, any decisions that a third party makes based on this report, or any use at all of this report by a third party is the responsibility of such third parties. Stantec accepts no responsibility for damages, if any, suffered by any third party because of decisions made, or actions taken, based on this report.

The assessment of the building/site components was performed using methods and procedures that are consistent with standard commercial and customary practice as outlined in ASTM Standard E 2018-08 for PCA assessments. As per this ASTM Standard, the assessment of the building/site components was based on a visual walk-through site visit which captured the overall condition of the site at that point in time only.

No legal surveys, soil tests, environmental assessments, geotechnical assessments, detailed barrier-free compliance assessments, seismic assessments, detailed engineering calculations, or quantity surveying compilations have been made. No responsibility, therefore, is assumed concerning these matters. Stantec did not design or construct the building(s) or related structures and therefore will not be held responsible for the impact of any design or construction defects, whether described in this report. No guarantee or warranty, expressed or implied, with respect to the property, building components, building systems, property systems, or any other physical aspect of the property is made.

The recommendations and our opinions of probable costs associated with these recommendations, as presented in this report, are based on visual, walk-through non-invasive observations of the parts of the building(s) which were readily accessible during our visual review. Conditions may exist that are not as per the general condition of the system being observed and reported in this report. Opinions of probable costs presented in this report are also based on information received during interviews. In certain instances, Stantec has had to assume that the information provided is accurate and cannot be held responsible for incorrect information received during the interview process. Should additional information become available with respect to the condition of the building and/or site elements, Stantec requests that this information be brought to our attention so that we may reassess the conclusions presented herein.

The opinions of probable costs are intended for global budgeting purposes only. The scope of work and the actual costs of the work recommended can only be determined after a detailed examination of the site element in question, understanding of the site restrictions, understanding of the effects on the ongoing operations of the site/building, definition of the construction schedule, and preparation of tender documents. We expressly waive any responsibilities for the effects of any action taken because of these endeavors unless we are specifically advised of prior to, and participate in the action, at which time, our responsibility will be negotiated.

HALIFAX COUNTY CONDOMINIUM CORPORATION (HCCC) #148, RESERVE FUND STUDY UPDATE

CLOSURE AND LIMITING CONDITIONS
March 20, 2017

Our opinions and recommendations presented in this report have been rendered in accordance with generally accepted professional standards and are not to be construed as a warranty or guarantee regarding existing or future physical conditions at the Site or regarding compliance of Site systems/components and procedures/operations with the various regulating codes, standards, regulations, ordinances, etc.

This Reserve Fund Study was prepared by Shaemus Mullaney and reviewed by Charline Cormier and QA/QC by Keith Estey. The site assessment was conducted by Shaemus Mullaney.

Respectfully submitted,

STANTEC CONSULTING LTD.



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HALIFAX COUNTY CONDOMINIUM CORPORATION (HCCC) #148, RESERVE FUND STUDY UPDATE

CLOSURE AND LIMITING CONDITIONS
September 8, 2016

Appendix A Reserve Fund Summary Tables

Appendix B Cash Flow Tables

APPENDIX A
RESERVE FUND SUMMARY TABLES

TABLE A - COMMON ELEMENT ESTIMATED REMAINING LIFE AND ADJUSTED REPLACEMENT COST

corporation: HCCC#148 study year: 2017		Year of Construction or Repair	Normal Life Expectancy Until Action Required (years)	Current Age (years)	Remaining Life Based on Inspection (years)	Anticipated Year for Next Action	Action	Unit	Unit Cost 2017 Dollars	Quantity	Replacement Event Cost 2017 Dollars	Number of Events in 25-y period	Total Cost Est. (25 years)
5.1	Site												
5.1.1	Topography and Storm Water Drainage	1985	25	32	25	2042	Section 5.2.8		\$ -	1	\$ -	0	\$ -
5.1.2	Flatwork	1985	5	32	3	2020	Interim Concrete Slab Repairs	Lump Sum	\$ 1,000	1	\$ 1,000	4	\$ 4,000
5.1.2	Flatwork	1985	25	32	8	2025	Concrete Slab and Walkway Replacement	Lump Sum	\$ 5,000	1	\$ 5,000	1	\$ 5,000
5.1.3	Driveway and Parking Areas	1985	25	32	0	2017	Localized Asphalt Repairs	Lump Sum	\$ 2,500	1	\$ 2,500	1	\$ 2,500
5.1.3	Driveway and Parking Areas	1985	25	32	5	2022	Asphalt Resurfacing	Lump Sum	\$ 15,000	1	\$ 15,000	1	\$ 15,000
5.1.3	Driveway and Parking Areas	1985	5	32	10	2027	Asphalt Maintenance	Lump Sum	\$ 2,500	1	\$ 2,500	3	\$ 7,500
5.1.4	Landscaping	2003	20	14	7	2024	Replace Retaining Wall	Lump Sum	\$ 3,500	1	\$ 3,500	1	\$ 3,500
5.2	Building Structure												
5.2.1	Foundation	1985	25	32	25	2042	Section 5.2.10		\$ -	1	\$ -	0	\$ -
5.2.2	Structural Framing	1985	25	32	25	2042	Section 5.2.10		\$ -	1	\$ -	0	\$ -
5.2.3	Exterior Cladding	2017	35	0	35	2052	Replace Vinyl Siding	Lump Sum	\$ 160,000	1	\$ 160,000	0	\$ -
5.2.3	Exterior Cladding	2017	15	0	15	2032	Repairs to Vinyl Siding	Lump Sum	\$ 5,000	1	\$ 5,000	1	\$ 5,000
5.2.3	Windows	2002	2	15	10	2027	Phased Window Replacement	Lump Sum	\$ 30,000	1	\$ 30,000	6	\$ 180,000
5.2.4	Windows	1985	25	32	5	2022	Replace Half-Moon Picture Windows	Lump Sum	\$ 5,000	1	\$ 5,000	1	\$ 5,000
5.2.4	Exterior Entrance Doors	1985	30	32	5	2022	Replace Entrance Doors	Lump Sum	\$ 6,000	1	\$ 6,000	1	\$ 6,000
5.2.5	Exterior Entrance Doors - Overhead Doors	1985	15	32	5	2022	Replace Overhead Garage Doors	Lump Sum	\$ 10,000	1	\$ 10,000	2	\$ 20,000
5.2.5	Exterior Entrance Doors - Patio Doors	2010	25	7	19	2036	Replace 26 Sliding Patio Doors	Lump Sum	\$ 40,000	1	\$ 40,000	1	\$ 40,000
5.2.5	Exterior Building Sealants	2017	10	0	10	2027	Sealant Replacement	Lump Sum	\$ 15,000	1	\$ 15,000	2	\$ 30,000
5.2.6	Sloped Asphalt Shingle Roof	2005	20	12	8	2025	Main Roof - Asphalt Shingle Replacement	Lump Sum	\$ 65,000	1	\$ 65,000	1	\$ 65,000
5.2.7	Sloped Asphalt Shingle Roof	2017	20	0	20	2037	Garage Roof - Asphalt Shingle Replacement	Lump Sum	\$ 10,000	1	\$ 10,000	1	\$ 10,000
5.2.8	Roof Drainage	2017	20	0	20	2037	Replace Roof Drainage System	Lump Sum	\$ 7,500	1	\$ 7,500	1	\$ 7,500
5.2.9	Balconies	2017	10	0	10	2027	Refinish/Seal Wooden Balconies	Lump Sum	\$ 12,000	1	\$ 12,000	2	\$ 24,000
5.2.10	Foundation and Structural Framing - Contingency Allowance	1985	5	32	3	2020	Building Structure Contingency Repair Allowances	Lump Sum	\$ 10,000	1	\$ 10,000	5	\$ 50,000
5.3	Common Interior												
5.3.1	Entrance Foyer, Hallways and Stairwells	2006	10	11	3	2020	Common Area Repainting - Section 1	Lump Sum	\$ 5,000	1	\$ 5,000	3	\$ 15,000
5.3.1	Entrance Foyer, Hallways and Stairwells	2006	10	11	4	2021	Common Area Repainting - Section 2	Lump Sum	\$ 5,000	1	\$ 5,000	3	\$ 15,000
5.3.1	Entrance Foyer, Hallways and Stairwells	2006	10	11	5	2022	Common Area Repainting - Section 3	Lump Sum	\$ 5,000	1	\$ 5,000	2	\$ 10,000
5.3.1	Entrance Foyer, Hallways and Stairwells	2000	10	17	3	2020	Common Area Recarpeting - Section 1	Lump Sum	\$ 5,000	1	\$ 5,000	3	\$ 15,000
5.3.1	Entrance Foyer, Hallways and Stairwells	2000	10	17	4	2021	Common Area Recarpeting - Section 2	Lump Sum	\$ 5,000	1	\$ 5,000	3	\$ 15,000
5.3.1	Entrance Foyer, Hallways and Stairwells	2006	10	11	5	2022	Common Area Recarpeting - Section 3	Lump Sum	\$ 5,000	1	\$ 5,000	2	\$ 10,000
5.3.2	Parking Garage Walls	1985	25	32	20	2037	Annual O&M		\$ -		\$ -	1	\$ -
5.3.3	Interior Doors	1985	50	32	18	2035	Replace Stairwell Fire Doors	Lump Sum	\$ 15,000	1	\$ 15,000	1	\$ 15,000
5.3.3	Interior Doors	1985	35	32	8	2025	Replace Service Room Doors	Lump Sum	\$ 4,000	1	\$ 4,000	1	\$ 4,000
5.4	Mechanical Systems												
5.4.1	Heating/Ventilation	2015	15	2	20	2037	Replace Electric Unit Heaters	Lump Sum	\$ 3,000	1	\$ 3,000	1	\$ 3,000
5.4.1	Heating/Ventilation	1985	20	32	5	2022	Refurbish/Replace Parking Exhaust Fans	Lump Sum	\$ 5,000	1	\$ 5,000	1	\$ 5,000
5.4.1	Heating/Ventilation	2009	20	8	10	2027	Refurbish/Replace Pressurization Fans	Lump Sum	\$ 3,000	1	\$ 3,000	1	\$ 3,000
5.4.2	Sanitary System	1985	25	32	25	2042	Section 5.4.5		\$ -		\$ -	0	\$ -
5.4.3	Domestic Water System	1985	25	32	25	2042	Section 5.4.5		\$ -		\$ -	0	\$ -
5.4.4	Central Vacuum System	1985	30	32	0	2017	Central Vac. Power Units	Lump Sum	\$ -		\$ -	1	\$ -
5.4.5	Mechanical Systems - Contingency Allowance	1985	5	32	3	2020	Mechanical Contingency	Lump Sum	\$ 10,000	1	\$ 10,000	5	\$ 50,000
5.5	Electrical Systems												
5.5.1	Power Supply and Distribution	1985	30	32	10	2027	Replace Main Service Panel	Lump Sum	\$ 15,000	1	\$ 15,000	1	\$ 15,000
5.5.2	Common Area, Corridor and Exterior Lighting	1985	35	32	3	2020	Replace Parking Garage Lighting	Lump Sum	\$ 4,500	1	\$ 4,500	1	\$ 4,500
5.5.2	Common Area, Corridor and Exterior Lighting	2017	30	0	30	2047	Replace Exterior Lighting	Lump Sum	\$ 2,000	1	\$ 2,000	0	\$ -
5.5.3	Intercom System	2015	25	2	23	2040	Replace Main Entrance Intercom Panel	Lump Sum	\$ 8,000	1	\$ 8,000	1	\$ 8,000
5.5.4	Telephone and Cable Systems	1985	25	32	25	2042	Section 5.5.5		\$ -		\$ -	0	\$ -
5.5.5	Electrical Systems - Contingency Allowance	1985	5	32	3	2020	Electrical Contingency	Lump Sum	\$ 5,000	1	\$ 5,000	5	\$ 25,000
5.6	Fire and Life Safety												
5.6.1	Fire Protection	1985	25	32	25	2042	Annual O&M	Lump Sum	\$ -		\$ -	0	\$ -
5.6.2	Fire Detection and Life Safety Devices	1985	30	32	3	2020	Replacement of Fire Alarm Panel and Detection Devices	Lump Sum	\$ 15,000	1	\$ 15,000	1	\$ 15,000
5.6.2	Fire Detection and Life Safety Devices	2015	30	2	28	2045	Replacement Emergency and Exit Lighting	Lump Sum	\$ 5,000	1	\$ 5,000	0	\$ -
Col 1	Col 2	Col 3	Col 4	Col 5	Col 6	Col 7	Col 8	Col 9	Col 10	Col 11	Col 12	total est. :	\$ 707,500

corporation: study year:	HCCC#148 2017	Year of Construction or Repair	Remaining Life Expectancy	Anticipated Year for Next Action	Adjusted 2017 Cost	REPAIR / REPLACEMENT COST 2012 DOLLARS										
						1	2	3	4	5	6	7	8	9	10	11
						2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
	Common element															
5.1	Site															
5.1.1	Topography and Storm Water Drainage	1985	25	2042	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.1.2	Flatwork	1985	3	2020	\$ 1,000	\$ -	\$ -	\$ -	\$ 1,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.1.2	Flatwork	1985	8	2025	\$ 5,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5,000	\$ -	\$ -
5.1.3	Driveway and Parking Areas	1985	0	2017	\$ 2,500	\$ 2,500	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.1.3	Driveway and Parking Areas	1985	5	2022	\$ 15,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 15,000	\$ -	\$ -	\$ -	\$ -	\$ -
5.1.3	Driveway and Parking Areas	1985	10	2027	\$ 2,500	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,500
5.1.4	Landscaping	2003	7	2024	\$ 3,500	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,500	\$ -	\$ -	\$ -
5.2	Building Structure															
5.2.1	Foundation	1985	25	2042	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2.2	Structural Framing	1985	25	2042	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2.3	Exterior Cladding	2017	35	2052	\$ 160,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2.3	Exterior Cladding	2017	15	2032	\$ 5,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2.3	Windows	2002	10	2027	\$ 30,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 30,000
5.2.4	Windows	1985	5	2022	\$ 5,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5,000	\$ -	\$ -	\$ -	\$ -	\$ -
5.2.4	Exterior Entrance Doors	1985	5	2022	\$ 6,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 6,000	\$ -	\$ -	\$ -	\$ -	\$ -
5.2.5	Exterior Entrance Doors - Overhead Doors	1985	5	2022	\$ 10,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 10,000	\$ -	\$ -	\$ -	\$ -	\$ -
5.2.5	Exterior Entrance Doors	1985	0	2017	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2.5	Exterior Entrance Doors - Patio Doors	2010	19	2036	\$ 40,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2.5	Exterior Building Sealants	2017	10	2027	\$ 15,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 15,000
5.2.6	Sloped Asphalt Shingle Roof	2005	8	2025	\$ 65,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 65,000	\$ -	\$ -	\$ -
5.2.7	Sloped Asphalt Shingle Roof	2017	20	2037	\$ 10,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2.8	Roof Drainage	2017	20	2037	\$ 7,500	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2.9	Balconies	2017	10	2027	\$ 12,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 12,000
5.2.10	Foundation and Structural Framing - Contingency Allowance	1985	3	2020	\$ 10,000	\$ -	\$ -	\$ -	\$ 10,000	\$ -	\$ -	\$ -	\$ -	\$ 10,000	\$ -	\$ -
5.3	Common Interior															
5.3.1	Entrance Foyer, Hallways and Stairwells	2006	3	2020	\$ 5,000	\$ -	\$ -	\$ -	\$ 5,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3.1	Entrance Foyer, Hallways and Stairwells	2006	4	2021	\$ 5,000	\$ -	\$ -	\$ -	\$ -	\$ 5,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3.1	Entrance Foyer, Hallways and Stairwells	2006	5	2022	\$ 5,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5,000	\$ -	\$ -	\$ -	\$ -	\$ -
5.3.1	Entrance Foyer, Hallways and Stairwells	2000	3	2020	\$ 5,000	\$ -	\$ -	\$ -	\$ 5,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3.1	Entrance Foyer, Hallways and Stairwells	2000	4	2021	\$ 5,000	\$ -	\$ -	\$ -	\$ -	\$ 5,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3.1	Entrance Foyer, Hallways and Stairwells	2006	5	2022	\$ 5,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5,000	\$ -	\$ -	\$ -	\$ -	\$ -
5.3.2	Parking Garage Walls	1985	20	2037	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3.3	Interior Doors	1985	18	2035	\$ 15,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3.3	Interior Doors	1985	8	2025	\$ 4,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 4,000	\$ -	\$ -	\$ -
5.4	Mechanical Systems															
5.4.1	Heating/Ventilation	2015	20	2037	\$ 3,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.4.1	Heating/Ventilation	1985	5	2022	\$ 5,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5,000	\$ -	\$ -	\$ -	\$ -	\$ -
5.4.1	Heating/Ventilation	2009	10	2027	\$ 3,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,000
5.4.2	Sanitary System	1985	25	2042	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.4.3	Domestic Water System	1985	25	2042	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.4.4	Central Vacuum System	1985	0	2017	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.4.5	Mechanical Systems - Contingency Allowance	1985	3	2020	\$ 10,000	\$ -	\$ -	\$ -	\$ 10,000	\$ -	\$ -	\$ -	\$ -	\$ 10,000	\$ -	\$ -
5.5	Electrical Systems															
5.5.1	Power Supply and Distribution	1985	10	2027	\$ 15,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 15,000
5.5.2	Common Area, Corridor and Exterior Lighting	1985	3	2020	\$ 4,500	\$ -	\$ -	\$ -	\$ 4,500	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.5.2	Common Area, Corridor and Exterior Lighting	2017	30	2047	\$ 2,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.5.3	Intercom System	2015	23	2040	\$ 8,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.5.4	Telephone and Cable Systems	1985	25	2042	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.5.5	Electrical Systems - Contingency Allowance	1985	3	2020	\$ 5,000	\$ -	\$ -	\$ -	\$ 5,000	\$ -	\$ -	\$ -	\$ -	\$ 5,000	\$ -	\$ -
5.6	Fire and Life Safety															
5.6.1	Fire Protection	1985	25	2042	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.6.2	Fire Detection and Life Safety Devices	1985	3	2020	\$ 15,000	\$ -	\$ -	\$ -	\$ 15,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.6.2	Fire Detection and Life Safety Devices	2015	28	2045	\$ 5,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	ANNUAL COST 2017 DOLLARS					\$ 2,500	\$ -	\$ -	\$ 55,500	\$ 10,000	\$ 51,000	\$ -	\$ 3,500	\$ 99,000	\$ -	\$ 77,500
	ANNUAL COST INFLATED					\$ 2,500	\$ -	\$ -	\$ 57,847	\$ 10,568	\$ 54,644	\$ -	\$ 3,855	\$ 110,560	\$ -	\$ 88,972
	INFLATION RATE	1.39%														
	START YEAR	2017														

corporation: study year:	HCCC#148 2017	Year of Construction or Repair	Remaining Life Expectancy	Anticipated Year for Next Action	Adjusted 2017 Cost	REPAIR / REPLACEMENT COST 2012 DOLLARS									
						12	13	14	15	16	17	18	19	20	21
						2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
5.1 Site															
5.1.1	Topography and Storm Water Drainage	1985	25	2042	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.1.2	Flatwork	1985	3	2020	\$ 1,000	\$ -	\$ -	\$ 1,000	\$ -	\$ -	\$ -	\$ -	\$ 1,000	\$ -	\$ -
5.1.2	Flatwork	1985	8	2025	\$ 5,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.1.3	Driveway and Parking Areas	1985	0	2017	\$ 2,500	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.1.3	Driveway and Parking Areas	1985	5	2022	\$ 15,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.1.3	Driveway and Parking Areas	1985	10	2027	\$ 2,500	\$ -	\$ -	\$ -	\$ -	\$ 2,500	\$ -	\$ -	\$ -	\$ -	\$ 2,500
5.1.4	Landscaping	2003	7	2024	\$ 3,500	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2 Building Structure															
5.2.1	Foundation	1985	25	2042	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2.2	Structural Framing	1985	25	2042	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2.3	Exterior Cladding	2017	35	2052	\$ 160,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2.3	Exterior Cladding	2017	15	2032	\$ 5,000	\$ -	\$ -	\$ -	\$ -	\$ 5,000	\$ -	\$ -	\$ -	\$ -	\$ -
5.2.3	Windows	2002	10	2027	\$ 30,000	\$ -	\$ 30,000	\$ -	\$ 30,000	\$ -	\$ 30,000	\$ -	\$ 30,000	\$ -	\$ 30,000
5.2.4	Windows	1985	5	2022	\$ 5,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2.4	Exterior Entrance Doors	1985	5	2022	\$ 6,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2.5	Exterior Entrance Doors - Overhead Doors	1985	5	2022	\$ 10,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 10,000
5.2.5	Exterior Entrance Doors	1985	0	2017	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2.5	Exterior Entrance Doors - Patio Doors	2010	19	2036	\$ 40,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 40,000	\$ -
5.2.5	Exterior Building Sealants	2017	10	2027	\$ 15,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 15,000
5.2.6	Sloped Asphalt Shingle Roof	2005	8	2025	\$ 65,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2.7	Sloped Asphalt Shingle Roof	2017	20	2037	\$ 10,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 10,000
5.2.8	Roof Drainage	2017	20	2037	\$ 7,500	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 7,500
5.2.9	Balconies	2017	10	2027	\$ 12,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 12,000
5.2.10	Foundation and Structural Framing - Contingency Allowance	1985	3	2020	\$ 10,000	\$ -	\$ -	\$ 10,000	\$ -	\$ -	\$ -	\$ -	\$ 10,000	\$ -	\$ -
5.3 Common Interior															
5.3.1	Entrance Foyer, Hallways and Stairwells	2006	3	2020	\$ 5,000	\$ -	\$ -	\$ 5,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3.1	Entrance Foyer, Hallways and Stairwells	2006	4	2021	\$ 5,000	\$ -	\$ -	\$ -	\$ 5,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3.1	Entrance Foyer, Hallways and Stairwells	2006	5	2022	\$ 5,000	\$ -	\$ -	\$ -	\$ -	\$ 5,000	\$ -	\$ -	\$ -	\$ -	\$ -
5.3.1	Entrance Foyer, Hallways and Stairwells	2000	3	2020	\$ 5,000	\$ -	\$ -	\$ 5,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3.1	Entrance Foyer, Hallways and Stairwells	2000	4	2021	\$ 5,000	\$ -	\$ -	\$ -	\$ 5,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3.1	Entrance Foyer, Hallways and Stairwells	2006	5	2022	\$ 5,000	\$ -	\$ -	\$ -	\$ -	\$ 5,000	\$ -	\$ -	\$ -	\$ -	\$ -
5.3.2	Parking Garage Walls	1985	20	2037	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3.3	Interior Doors	1985	18	2035	\$ 15,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 15,000	\$ -	\$ -
5.3.3	Interior Doors	1985	8	2025	\$ 4,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.4 Mechanical Systems															
5.4.1	Heating/Ventilation	2015	20	2037	\$ 3,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,000
5.4.1	Heating/Ventilation	1985	5	2022	\$ 5,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.4.1	Heating/Ventilation	2009	10	2027	\$ 3,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.4.2	Sanitary System	1985	25	2042	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.4.3	Domestic Water System	1985	25	2042	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.4.4	Central Vacuum System	1985	0	2017	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.4.5	Mechanical Systems - Contingency Allowance	1985	3	2020	\$ 10,000	\$ -	\$ -	\$ 10,000	\$ -	\$ -	\$ -	\$ -	\$ 10,000	\$ -	\$ -
5.5 Electrical Systems															
5.5.1	Power Supply and Distribution	1985	10	2027	\$ 15,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.5.2	Common Area, Corridor and Exterior Lighting	1985	3	2020	\$ 4,500	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.5.2	Common Area, Corridor and Exterior Lighting	2017	30	2047	\$ 2,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.5.3	Intercom System	2015	23	2040	\$ 8,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.5.4	Telephone and Cable Systems	1985	25	2042	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.5.5	Electrical Systems - Contingency Allowance	1985	3	2020	\$ 5,000	\$ -	\$ -	\$ 5,000	\$ -	\$ -	\$ -	\$ -	\$ 5,000	\$ -	\$ -
5.6 Fire and Life Safety															
5.6.1	Fire Protection	1985	25	2042	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.6.2	Fire Detection and Life Safety Devices	1985	3	2020	\$ 15,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.6.2	Fire Detection and Life Safety Devices	2015	28	2045	\$ 5,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
ANNUAL COST 2017 DOLLARS						\$ -	\$ 30,000	\$ 36,000	\$ 40,000	\$ 17,500	\$ 30,000	\$ -	\$ 71,000	\$ 40,000	\$ 90,000
ANNUAL COST INFLATED						\$ -	\$ 35,405	\$ 43,076	\$ 48,528	\$ 21,526	\$ 37,415	\$ -	\$ 91,027	\$ 51,996	\$ 118,616
INFLATION RATE		1.39%													
START YEAR		2017													

corporation: study year:	HCCC#148 2017	Year of Construction or Repair	Remaining Life Expectancy	Anticipated Year for Next Action	Adjusted 2017 Cost	REPAIR / REPLACEMENT COST 2012 DOLLARS				Total Cost Est. (25 years)
						22	23	24	25	
						2038	2039	2040	2041	
5.1 Site										
5.1.1	Topography and Storm Water Drainage	1985	25	2042	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.1.2	Flatwork	1985	3	2020	\$ 1,000	\$ -	\$ -	\$ 1,000	\$ -	\$ 4,000
5.1.2	Flatwork	1985	8	2025	\$ 5,000	\$ -	\$ -	\$ -	\$ -	\$ 5,000
5.1.3	Driveway and Parking Areas	1985	0	2017	\$ 2,500	\$ -	\$ -	\$ -	\$ -	\$ 2,500
5.1.3	Driveway and Parking Areas	1985	5	2022	\$ 15,000	\$ -	\$ -	\$ -	\$ -	\$ 15,000
5.1.3	Driveway and Parking Areas	1985	10	2027	\$ 2,500	\$ -	\$ -	\$ -	\$ -	\$ 7,500
5.1.4	Landscaping	2003	7	2024	\$ 3,500	\$ -	\$ -	\$ -	\$ -	\$ 3,500
5.2 Building Structure										
5.2.1	Foundation	1985	25	2042	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2.2	Structural Framing	1985	25	2042	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2.3	Exterior Cladding	2017	35	2052	\$ 160,000	\$ -	\$ -	\$ -	\$ -	\$ -
5.2.3	Exterior Cladding	2017	15	2032	\$ 5,000	\$ -	\$ -	\$ -	\$ -	\$ 5,000
5.2.3	Windows	2002	10	2027	\$ 30,000	\$ -	\$ -	\$ -	\$ -	\$ 180,000
5.2.4	Windows	1985	5	2022	\$ 5,000	\$ -	\$ -	\$ -	\$ -	\$ 5,000
5.2.4	Exterior Entrance Doors	1985	5	2022	\$ 6,000	\$ -	\$ -	\$ -	\$ -	\$ 6,000
5.2.5	Exterior Entrance Doors - Overhead Doors	1985	5	2022	\$ 10,000	\$ -	\$ -	\$ -	\$ -	\$ 20,000
5.2.5	Exterior Entrance Doors	1985	0	2017	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.2.5	Exterior Entrance Doors - Patio Doors	2010	19	2036	\$ 40,000	\$ -	\$ -	\$ -	\$ -	\$ 40,000
5.2.5	Exterior Building Sealants	2017	10	2027	\$ 15,000	\$ -	\$ -	\$ -	\$ -	\$ 30,000
5.2.6	Sloped Asphalt Shingle Roof	2005	8	2025	\$ 65,000	\$ -	\$ -	\$ -	\$ -	\$ 65,000
5.2.7	Sloped Asphalt Shingle Roof	2017	20	2037	\$ 10,000	\$ -	\$ -	\$ -	\$ -	\$ 10,000
5.2.8	Roof Drainage	2017	20	2037	\$ 7,500	\$ -	\$ -	\$ -	\$ -	\$ 7,500
5.2.9	Balconies	2017	10	2027	\$ 12,000	\$ -	\$ -	\$ -	\$ -	\$ 24,000
5.2.10	Foundation and Structural Framing - Contingency Allowance	1985	3	2020	\$ 10,000	\$ -	\$ -	\$ 10,000	\$ -	\$ 50,000
5.3 Common Interior										
5.3.1	Entrance Foyer, Hallways and Stairwells	2006	3	2020	\$ 5,000	\$ -	\$ -	\$ 5,000	\$ -	\$ 15,000
5.3.1	Entrance Foyer, Hallways and Stairwells	2006	4	2021	\$ 5,000	\$ -	\$ -	\$ -	\$ 5,000	\$ 15,000
5.3.1	Entrance Foyer, Hallways and Stairwells	2006	5	2022	\$ 5,000	\$ -	\$ -	\$ -	\$ -	\$ 10,000
5.3.1	Entrance Foyer, Hallways and Stairwells	2000	3	2020	\$ 5,000	\$ -	\$ -	\$ 5,000	\$ -	\$ 15,000
5.3.1	Entrance Foyer, Hallways and Stairwells	2000	4	2021	\$ 5,000	\$ -	\$ -	\$ -	\$ 5,000	\$ 15,000
5.3.1	Entrance Foyer, Hallways and Stairwells	2006	5	2022	\$ 5,000	\$ -	\$ -	\$ -	\$ -	\$ 10,000
5.3.2	Parking Garage Walls	1985	20	2037	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.3.3	Interior Doors	1985	18	2035	\$ 15,000	\$ -	\$ -	\$ -	\$ -	\$ 15,000
5.3.3	Interior Doors	1985	8	2025	\$ 4,000	\$ -	\$ -	\$ -	\$ -	\$ 4,000
5.4 Mechanical Systems										
5.4.1	Heating/Ventilation	2015	20	2037	\$ 3,000	\$ -	\$ -	\$ -	\$ -	\$ 3,000
5.4.1	Heating/Ventilation	1985	5	2022	\$ 5,000	\$ -	\$ -	\$ -	\$ -	\$ 5,000
5.4.1	Heating/Ventilation	2009	10	2027	\$ 3,000	\$ -	\$ -	\$ -	\$ -	\$ 3,000
5.4.2	Sanitary System	1985	25	2042	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.4.3	Domestic Water System	1985	25	2042	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.4.4	Central Vacuum System	1985	0	2017	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.4.5	Mechanical Systems - Contingency Allowance	1985	3	2020	\$ 10,000	\$ -	\$ -	\$ 10,000	\$ -	\$ 50,000
5.5 Electrical Systems										
5.5.1	Power Supply and Distribution	1985	10	2027	\$ 15,000	\$ -	\$ -	\$ -	\$ -	\$ 15,000
5.5.2	Common Area, Corridor and Exterior Lighting	1985	3	2020	\$ 4,500	\$ -	\$ -	\$ -	\$ -	\$ 4,500
5.5.2	Common Area, Corridor and Exterior Lighting	2017	30	2047	\$ 2,000	\$ -	\$ -	\$ -	\$ -	\$ -
5.5.3	Intercom System	2015	23	2040	\$ 8,000	\$ -	\$ -	\$ 8,000	\$ -	\$ 8,000
5.5.4	Telephone and Cable Systems	1985	25	2042	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.5.5	Electrical Systems - Contingency Allowance	1985	3	2020	\$ 5,000	\$ -	\$ -	\$ 5,000	\$ -	\$ 25,000
5.6 Fire and Life Safety										
5.6.1	Fire Protection	1985	25	2042	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5.6.2	Fire Detection and Life Safety Devices	1985	3	2020	\$ 15,000	\$ -	\$ -	\$ -	\$ -	\$ 15,000
5.6.2	Fire Detection and Life Safety Devices	2015	28	2045	\$ 5,000	\$ -	\$ -	\$ -	\$ -	\$ -
ANNUAL COST 2017 DOLLARS						\$ -	\$ -	\$ 44,000	\$ 10,000	\$ 707,500
ANNUAL COST INFLATED						\$ -	\$ -	\$ 60,442	\$ 13,928	
INFLATION RATE		1.39%								
START YEAR		2017								

APPENDIX B
CASH FLOW TABLE

**RESERVE FUND SUMMARY
SCHEDULE 1
ANTICIPATED WORK**

corporation: HCCC#148 study year: 2017		Year of Construction or Repair	Remaining Life Expectancy	Anticipated Year for Next Replacement	Adjusted 2017 Replacement Cost
Item	Common Element				
5.1	Site				
5.1.1	Topography and Storm Water Drainage	1985	25	2042	\$ -
5.1.2	Flatwork	1985	3	2020	\$ 1,000
5.1.2	Flatwork	1985	8	2025	\$ 5,000
5.1.3	Driveway and Parking Areas	1985	0	2017	\$ 2,500
5.1.3	Driveway and Parking Areas	1985	5	2022	\$ 15,000
5.1.3	Driveway and Parking Areas	1985	10	2027	\$ 2,500
5.1.4	Landscaping	2003	7	2024	\$ 3,500
5.2	Building Structure				
5.2.1	Foundation	1985	25	2042	\$ -
5.2.2	Structural Framing	1985	25	2042	\$ -
5.2.3	Exterior Cladding	2017	35	2052	\$ 160,000
5.2.3	Exterior Cladding	2017	15	2032	\$ 5,000
5.2.3	Windows	2002	10	2027	\$ 30,000
5.2.4	Windows	1985	5	2022	\$ 5,000
5.2.4	Exterior Entrance Doors	1985	5	2022	\$ 6,000
5.2.5	Exterior Entrance Doors - Overhead Doors	1985	5	2022	\$ 10,000
5.2.5	Exterior Entrance Doors - Patio Doors	2010	19	2036	\$ 40,000
5.2.5	Exterior Building Sealants	2017	10	2027	\$ 15,000
5.2.6	Sloped Asphalt Shingle Roof	2005	8	2025	\$ 65,000
5.2.7	Sloped Asphalt Shingle Roof	2017	20	2037	\$ 10,000
5.2.8	Roof Drainage	2017	20	2037	\$ 7,500
5.2.9	Balconies	2017	10	2027	\$ 12,000
5.2.10	Foundation and Structural Framing - Contingency Allowance	1985	3	2020	\$ 10,000
5.3	Common Interior				
5.3.1	Entrance Foyer, Hallways and Stairwells	2006	3	2020	\$ 5,000
5.3.1	Entrance Foyer, Hallways and Stairwells	2006	4	2021	\$ 5,000
5.3.1	Entrance Foyer, Hallways and Stairwells	2006	5	2022	\$ 5,000
5.3.1	Entrance Foyer, Hallways and Stairwells	2000	3	2020	\$ 5,000
5.3.1	Entrance Foyer, Hallways and Stairwells	2000	4	2021	\$ 5,000
5.3.1	Entrance Foyer, Hallways and Stairwells	2006	5	2022	\$ 5,000
5.3.2	Parking Garage Walls	1985	20	2037	\$ -
5.3.3	Interior Doors	1985	18	2035	\$ 15,000
5.3.3	Interior Doors	1985	8	2025	\$ 4,000
5.4	Mechanical Systems				
5.4.1	Heating/Ventilation	2015	20	2037	\$ 3,000
5.4.1	Heating/Ventilation	1985	5	2022	\$ 5,000
5.4.1	Heating/Ventilation	2009	10	2027	\$ 3,000
5.4.2	Sanitary System	1985	25	2042	\$ -
5.4.3	Domestic Water System	1985	25	2042	\$ -
5.4.4	Central Vacuum System	1985	0	2017	\$ -
5.4.5	Mechanical Systems - Contingency Allowance	1985	3	2020	\$ 10,000
5.5	Electrical Systems				
5.5.1	Power Supply and Distribution	1985	10	2027	\$ 15,000
5.5.2	Common Area, Corridor and Exterior Lighting	1985	3	2020	\$ 4,500
5.5.2	Common Area, Corridor and Exterior Lighting	2017	30	2047	\$ 2,000
5.5.3	Intercom System	2015	23	2040	\$ 8,000
5.5.4	Telephone and Cable Systems	1985	25	2042	\$ -
5.5.5	Electrical Systems - Contingency Allowance	1985	3	2020	\$ 5,000
5.6	Fire and Life Safety				
5.6.1	Fire Protection	1985	25	2042	\$ -
5.6.2	Fire Detection and Life Safety Devices	1985	3	2020	\$ 15,000
5.6.2	Fire Detection and Life Safety Devices	2015	28	2045	\$ 5,000

corporation: HCCC#148

Cash Flow Table #1: Annual contributions at fixed rate(s) throughout the term.

- including effects of interest and inflation; interest remains in the Reserve Fund.

FISCAL YEAR	OPENING RESERVE FUND BALANCE	ESTIMATED EXPENSES UNINFLATED	ESTIMATED EXPENSES INFLATED	RECOMMENDED ANNUAL CONTRIBUTION	INTEREST EARNED	CLOSING RESERVE FUND BALANCE
2017	\$ 77,000	\$ 2,500	\$ 2,500	\$ 40,000	\$ 795	\$ 115,295
2018	\$ 115,295	\$ -	\$ -	\$ 40,000	\$ 1,123	\$ 156,418
2019	\$ 156,418	\$ -	\$ -	\$ 40,000	\$ 1,464	\$ 197,882
2020	\$ 197,882	\$ 55,500	\$ 57,847	\$ 40,000	\$ 1,568	\$ 181,604
2021	\$ 181,604	\$ 10,000	\$ 10,568	\$ 40,000	\$ 1,629	\$ 212,665
2022	\$ 212,665	\$ 51,000	\$ 54,644	\$ 40,000	\$ 1,704	\$ 199,725
2023	\$ 199,725	\$ -	\$ -	\$ 40,000	\$ 1,824	\$ 241,549
2024	\$ 241,549	\$ 3,500	\$ 3,855	\$ 40,000	\$ 2,155	\$ 279,849
2025	\$ 279,849	\$ 99,000	\$ 110,560	\$ 40,000	\$ 2,030	\$ 211,319
2026	\$ 211,319	\$ -	\$ -	\$ 40,000	\$ 1,920	\$ 253,239
2027	\$ 253,239	\$ 77,500	\$ 88,972	\$ 40,000	\$ 1,899	\$ 206,166
2028	\$ 206,166	\$ -	\$ -	\$ 40,000	\$ 1,877	\$ 248,043
2029	\$ 248,043	\$ 30,000	\$ 35,405	\$ 40,000	\$ 2,078	\$ 254,716
2030	\$ 254,716	\$ 36,000	\$ 43,076	\$ 40,000	\$ 2,101	\$ 247,284
2031	\$ 253,741	\$ 40,000	\$ 48,528	\$ 40,000	\$ 2,071	\$ 267,887
2032	\$ 247,284	\$ 17,500	\$ 21,526	\$ 40,000	\$ 2,129	\$ 272,706
2033	\$ 267,887	\$ 30,000	\$ 37,415	\$ 40,000	\$ 2,234	\$ 315,136
2034	\$ 272,706	\$ -	\$ -	\$ 40,000	\$ 2,429	\$ 266,512
2035	\$ 315,136	\$ 71,000	\$ 91,027	\$ 40,000	\$ 2,404	\$ 256,679
2036	\$ 266,512	\$ 40,000	\$ 51,996	\$ 40,000	\$ 2,162	\$ 179,867
2037	\$ 256,679	\$ 90,000	\$ 118,616	\$ 40,000	\$ 1,804	\$ 221,526
2038	\$ 179,867	\$ -	\$ -	\$ 40,000	\$ 1,659	\$ 263,530
2039	\$ 221,526	\$ -	\$ -	\$ 40,000	\$ 2,005	\$ 245,191
2040	\$ 263,530	\$ 44,000	\$ 60,442	\$ 40,000	\$ 2,102	\$ 273,406
2041	\$ 245,191	\$ 10,000	\$ 13,928	\$ 40,000	\$ 2,143	
TOTALS		\$ 707,500	\$ 850,905	\$ 1,000,000	\$ 47,311	

PROJECT NO. 133430940

DATE Feb-17

TERM - YEARS 25

START YEAR 2017

OPENING BALANCE \$ 77,000

INTEREST RATE 0.83%

INFLATION RATE 1.39%

ANNUAL CONTRIBUTION \$ 40,000

CONTRIBUTION

INFLATION RATE 0.00%

NOTES:

1. No inflation in construction costs have been assumed until the beginning of year 2.
2. Interest calculations are based on average account balances for each year.
3. Recommended annual contribution level is based on the requirement for maintaining a Reserve Fund Balance that is always positive.

corporation: HCCC#148

Cash Flow Table #2: Annual Contributions increasing at the estimated rate of inflation.

- including effects of interest and inflation; interest remains in the Reserve Fund.

FISCAL YEAR	OPENING RESERVE FUND BALANCE	ESTIMATED EXPENSES UNINFLATED	ESTIMATED EXPENSES INFLATED	RECOMMENDED ANNUAL CONTRIBUTION	INTEREST EARNED	CLOSING RESERVE FUND BALANCE
2017	\$ 77,000	\$ 2,500	\$ 2,500	\$ 30,500	\$ 500	\$ 105,500
2018	\$ 105,500	\$ -	\$ -	\$ 31,348	\$ 1,006	\$ 137,854
2019	\$ 137,854	\$ -	\$ -	\$ 32,219	\$ 1,278	\$ 171,351
2020	\$ 171,351	\$ 55,500	\$ 57,847	\$ 33,115	\$ 1,320	\$ 147,939
2021	\$ 147,939	\$ 10,000	\$ 10,568	\$ 34,036	\$ 1,325	\$ 172,732
2022	\$ 172,732	\$ 51,000	\$ 54,644	\$ 34,982	\$ 1,352	\$ 154,422
2023	\$ 154,422	\$ -	\$ -	\$ 35,954	\$ 1,431	\$ 191,807
2024	\$ 191,807	\$ 3,500	\$ 3,855	\$ 36,954	\$ 1,729	\$ 226,635
2025	\$ 226,635	\$ 99,000	\$ 110,560	\$ 37,981	\$ 1,580	\$ 155,637
2026	\$ 155,637	\$ -	\$ -	\$ 39,037	\$ 1,454	\$ 196,128
2027	\$ 196,128	\$ 77,500	\$ 88,972	\$ 40,122	\$ 1,425	\$ 148,703
2028	\$ 148,703	\$ -	\$ -	\$ 41,238	\$ 1,405	\$ 191,346
2029	\$ 191,346	\$ 30,000	\$ 35,405	\$ 42,384	\$ 1,617	\$ 199,943
2030	\$ 199,943	\$ 36,000	\$ 43,076	\$ 43,562	\$ 1,662	\$ 202,090
2031	\$ 202,090	\$ 40,000	\$ 48,528	\$ 44,773	\$ 1,662	\$ 199,997
2032	\$ 199,997	\$ 17,500	\$ 21,526	\$ 46,018	\$ 1,762	\$ 226,251
2033	\$ 226,251	\$ 30,000	\$ 37,415	\$ 47,297	\$ 1,919	\$ 238,053
2034	\$ 238,053	\$ -	\$ -	\$ 48,612	\$ 2,178	\$ 288,843
2035	\$ 288,843	\$ 71,000	\$ 91,027	\$ 49,964	\$ 2,227	\$ 250,006
2036	\$ 250,006	\$ 40,000	\$ 51,996	\$ 51,353	\$ 2,072	\$ 251,436
2037	\$ 251,436	\$ 90,000	\$ 118,616	\$ 52,780	\$ 1,814	\$ 187,413
2038	\$ 187,413	\$ -	\$ -	\$ 54,248	\$ 1,781	\$ 243,441
2039	\$ 243,441	\$ -	\$ -	\$ 55,756	\$ 2,252	\$ 301,449
2040	\$ 301,449	\$ 44,000	\$ 60,442	\$ 57,306	\$ 2,489	\$ 300,802
2041	\$ 300,802	\$ 10,000	\$ 13,928	\$ 58,899	\$ 2,683	\$ 348,456
TOTALS		\$ 707,500	\$ 850,905	\$ 1,080,439	\$ 41,922	

PROJECT NO. 133430940

DATE Feb-17

TERM - YEARS 25

START YEAR 2017

OPENING BALANCE \$ 77,000

INTEREST RATE 0.83%

INFLATION RATE 1.39%

STARTING CONTRIBUTION \$ 30,500

CONTRIBUTION INFLATION RATE 2.78%

NOTES:

1. No inflation in construction costs have been assumed until the beginning of year 2.
2. Interest calculations are based on average account balances for each year.
3. Recommended annual contribution level is based on the requirement for maintaining a Reserve Fund Balance that is always positive.

corporation: **HCCC#148**

Cash Flow Table #3: Annual Contributions initial high inflation rate, decreasing after 10 years.

- including effects of interest and inflation; interest remains in the Reserve Fund.

FISCAL YEAR	OPENING RESERVE FUND BALANCE	ESTIMATED EXPENSES UNINFLATED	ESTIMATED EXPENSES INFLATED	RECOMMENDED ANNUAL CONTRIBUTION	INTEREST EARNED	CLOSING RESERVE FUND BALANCE
2017	\$ 77,000	\$ 2,500	\$ 2,500	\$ 30,000	\$ 500	\$ 105,000
2018	\$ 105,000	\$ -	\$ -	\$ 30,984	\$ 1,000	\$ 136,984
2019	\$ 136,984	\$ -	\$ -	\$ 32,000	\$ 1,270	\$ 170,254
2020	\$ 170,254	\$ 55,500	\$ 57,847	\$ 33,050	\$ 1,310	\$ 146,768
2021	\$ 146,768	\$ 10,000	\$ 10,568	\$ 34,134	\$ 1,316	\$ 171,650
2022	\$ 171,650	\$ 51,000	\$ 54,644	\$ 35,254	\$ 1,344	\$ 153,603
2023	\$ 153,603	\$ -	\$ -	\$ 36,410	\$ 1,426	\$ 191,439
2024	\$ 191,439	\$ 3,500	\$ 3,855	\$ 37,604	\$ 1,729	\$ 226,917
2025	\$ 226,917	\$ 99,000	\$ 110,560	\$ 38,837	\$ 1,586	\$ 156,781
2026	\$ 156,781	\$ -	\$ -	\$ 40,111	\$ 1,468	\$ 198,360
2027	\$ 198,360	\$ 77,500	\$ 88,972	\$ 40,669	\$ 1,446	\$ 151,503
2028	\$ 151,503	\$ -	\$ -	\$ 41,234	\$ 1,429	\$ 194,165
2029	\$ 194,165	\$ 30,000	\$ 35,405	\$ 41,807	\$ 1,638	\$ 202,206
2030	\$ 202,206	\$ 36,000	\$ 43,076	\$ 42,388	\$ 1,675	\$ 203,194
2031	\$ 203,194	\$ 40,000	\$ 48,528	\$ 42,978	\$ 1,663	\$ 199,307
2032	\$ 199,307	\$ 17,500	\$ 21,526	\$ 43,575	\$ 1,746	\$ 223,102
2033	\$ 223,102	\$ 30,000	\$ 37,415	\$ 44,181	\$ 1,880	\$ 231,747
2034	\$ 231,747	\$ -	\$ -	\$ 44,795	\$ 2,109	\$ 278,652
2035	\$ 278,652	\$ 71,000	\$ 91,027	\$ 45,418	\$ 2,124	\$ 235,166
2036	\$ 235,166	\$ 40,000	\$ 51,996	\$ 46,049	\$ 1,927	\$ 231,146
2037	\$ 231,146	\$ 90,000	\$ 118,616	\$ 46,689	\$ 1,620	\$ 160,838
2038	\$ 160,838	\$ -	\$ -	\$ 47,338	\$ 1,531	\$ 209,708
2039	\$ 209,708	\$ -	\$ -	\$ 47,996	\$ 1,940	\$ 259,643
2040	\$ 259,643	\$ 44,000	\$ 60,442	\$ 48,663	\$ 2,106	\$ 249,970
2041	\$ 249,970	\$ 10,000	\$ 13,928	\$ 49,339	\$ 2,222	\$ 287,604
TOTALS		\$ 707,500	\$ 850,905	\$ 1,021,503	\$ 40,005	

PROJECT NO. **133430940**

DATE **Feb-17**

TERM - YEARS **25**

START YEAR **2017**

OPENING BALANCE **\$ 77,000**

INTEREST RATE **0.83%**

INFLATION RATE **1.39%**

STARTING CONTRIBUTION \$ 30,000

CONTRIBUTION INFLATION RATE 3.28%

NOTES:

1. No inflation in construction costs have been assumed until the beginning of year 2.
2. Interest calculations are based on average account balances for each year.
3. Recommended annual contribution level is based on the requirement for maintaining a Reserve Fund Balance that is always positive.