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November 29, 2023

The Strata Council Members of Douglas Point, BCS340
17516 - 4th Avenue
Surrey, BC

Dear Strata Council Members:

The enclosed Depreciation Report has been prepared to provide pertinent information about the property at Douglas Point, BCS340, 17516 - 4th Avenue, Surrey, BC. This report is not technically exhaustive.

The entire study must be read in its entirety to understand the findings contained within. Sampling information in the study may put it out of context. We recommend the study be updated every three years to keep it current.

The study will not be released to anyone without your permission.

Thank you for giving us the opportunity to be of service. Should you have any questions regarding this study, please do not hesitate to call us.

Sincerely,

Henry Khuu, P.Eng.
Permit No. 1001944



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DEPRECIATION REPORT UPDATE #2

Douglas Point, BCS340, 17516 - 4th Avenue, Surrey, BC

DATE OF INSPECTION: November 29, 2023

FINAL REPORT SUBMITTED: June 28, 2024



The Strata Council Members of **Douglas Point, BCS340**

17516 - 4th Avenue

Surrey, BC

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DEPRECIATION REPORT UPDATE

Property: **Douglas Point, BCS340**, 17516 - 4th Avenue, Surrey, BC

1.0 SUMMARY:

The Report is intended to assist the owners, the strata council, and the property management make informed decisions about the allocations of resources to the common property Assets. The purpose of the review was to evaluate the condition of the building components, complete with recommendations for repair and/or replacements within the next 30-year timeframe, including budget estimates for replacement costs and funding scenarios.

The present annual contribution of \$115,599 is not considered adequate. Based on the given average rate of return of 1 percent for the reserve fund investment and an annual inflation rate of 3.0 percent, annual contributions starting at \$130,000 to the reserve fund along with the annual contribution increased annually by the inflation rate plus 7 percent from Years 2024 to 2030, and then by the inflation rate thereafter. There are catch-up amounts of \$500,000 in Years 2043 to 2046. These recommended contributions to the Reserve Fund should be adequate.

It is up to the owners, strata council, and property management to decide what funding strategy works best for the property and to customize their own financial plan. The Cash Flow Table for the recommended funding model is included in Appendix E for review. The other scenarios (D and F) are just a few of many possible scenarios for a new funding level in the next fiscal years. It is up to the owners, strata council, and property management to decide what funding strategy works best for the property and to customize their own financial plan.

The general condition of the property appears to be in satisfactory condition. The general maintenance of the property appears to be adequate. Areas where improvements have been undertaken since the last Depreciation Report include:

- Completed some localized paving stone repairs and improvements in 2023.
- Replaced domestic hot water heater at the Amenity Building in 2023.
- Completed roof replacement in 2022. Completed gutter and downspout replacement in 2022.
- Some fascia and bargeboard replacements in conjunction with roof and gutter replacement.
- Replaced wood fencing with vinyl fencing at the majority of the west side of the property in 2021.
- Painting project to the decorative shingles in 2021, and the front doors and garage doors in 2024.

2.0 INTRODUCTION:

2.1 Authorization and Scope:

As per the request of Mr. Jim Clifford of Hugh & McKinnon Realty and in accordance with our Proposal dated July 4, 2023, a Depreciation Report was prepared for Douglas Point, BCS340.

This report complies with The Strata Property Act [SBC 1998] CHAPTER 43.

This study is intended for the exclusive use of our client. Use of the information obtained within this study by another party is not intended and, therefore, we accept no responsibility for such use.

The Depreciation Report is not technically exhaustive. While some comments on building construction may be made with respect to life expectancies, this study is not a technical evaluation of the property. Before any major repairs or replacements are undertaken, we recommend that a detailed condition survey be performed and a plan of action developed.

The site inspection was carried out on November 29, 2023, with access to nine units in order to sample window and door assembly and attic details. Our inspection was limited to components that were readily visible and not obstructed by storage, vegetation, etc.

The units that were sampled during the inspection are as follows:

- Unit 4
- Unit 10
- Unit 20
- Unit 22
- Unit 25
- Unit 36
- Unit 56
- Unit 65
- Unit 69
- Amenity Building

The following defined terms are used to describe the condition of the components and systems reviewed:

- **Satisfactory** – Performing its intended function; no major defects noted.
- **Serviceable** – Performing its intended function but has visible defects or is aging. It will require minor to moderate repairs.
- **Fair** – Barely performing its intended function. Has visible defects or is aging and will require moderate to major repairs in the short term.
- **Poor** – Not properly performing its intended function and is at or beyond its useful life. Component requires major repair or replacement.

Only the items specifically addressed in this study were examined. No comment is offered on building code and building bylaw compliance or on environmental concerns.

2.2 Property Description:

The subject property consists of 19 blocks of single-storey, multi-family residential buildings totaling 75 townhouse units. On the property there is also an Amenity building which has a billiard room, lounge area, kitchen, washrooms, workshop, and a mezzanine reading area. There are two entrances into the property located at the north and south sides.

The buildings are approximately 20 years old and of wood-frame construction. The majority of the exterior walls have vinyl and stone veneer cladding. The Amenity building is clad with fiber-cement boards. There are sloped asphalt shingle covered roofs. There is an attached vehicle garage for each of the townhouse units. There are visitors' parking stalls located at various locations along the roadway in the complex.

There are concrete patios and privacy fences at each of the townhouse units. There is also an RV parking area located next to the Amenity building.

It was reported that the complex was completed in eight separate phases from May 7th to December 17, 2003.

For the purpose of this report, the Amenity building is considered to be facing east.

A more detail description of the building components is provided in Section 3.0 of this study.

2.3 Document Review:

As part of the Depreciation Report, a request to review all building plans, specifications, warranties, and records, as well as the Strata declaration and by-laws, was made. The following was available for our review:

- Financials
- Strata Minutes
- Strata Bylaws
- Reports

2.3.1 Financials:

Income Statement – Douglas Point BCS340 – January to July 2023 - Six Month Ending.

Balance Sheet - Douglas Point BCS340 – January to July 2023.

Budget Comparison (Accrual) - Douglas Point BCS340 – January to July 2023.

2.3.2 Strata Minutes:

Strata Plan BCS340 – Douglas Point- Minutes of Strata Council Meeting Held January to November 2023.

Minutes of the Annual General Meeting of the Owners Strata Plan BCS 340 – Douglas Point dated Thursday September 28, 2023.

2.3.3 Strata Bylaws:

Strata Plan BCS340 Douglas Point Bylaws (17516 4th Avenue, Surrey, British Columbia)
amended October 31, 2022.

Strata Plan BCS340 Douglas Point Rules (17516 4th Avenue, Surrey, British Columbia)
amended September 28, 2022.

2.3.4 Reports:

Electrical Capacity Review by VT Engineering dated November 9, 2022.

Roof evaluation Report by Phoenix Roof Consultants dated May 5, 2021.

3.0 COMPONENT DESCRIPTION:

In this section, the components included in this study are listed, along with descriptions and recommendations for eventual major repairs or replacement. On-site conditions that may have an effect on life expectancy or performance are also noted, where applicable. Improvements to these conditions will help to extend the life expectancy of the components.

Roof

A1 Asphalt Shingle Replacement

The sloped roofs are covered with a single layer of asphalt shingles. The attic ventilations for the complex are soffits and roof vents.

The asphalt shingle installations are approximately 1 year old. The roofs were replaced in the Year 2022 in conjunction with the aluminum gutter and downspout replacement project. This type of system has an average life expectancy of 25 years. No major deficiencies were noted at the sloped roof areas. The overall asphalt roof shingle system condition is satisfactory. The maintenance has been good based upon visual inspection. The lifespan of any sloped roof covering is strongly dependent on the quality of the original material, roof slope and orientation, maintenance level, and weather severity.

The study allows for the ongoing replacement of the asphalt shingle roofs.

It is recommended at that time that the existing shingles be removed before adding another layer.

There are access hatches to the attics within the buildings located at each of the townhouse units. The roof framing consists of wood roof trusses and oriented strand board (OSB) sheathing. Roof vents are located at the roof and at the soffit areas. Sample inspections of the attics revealed no significant issues on the underside of the roof sheathing.

It was noted that some of the sampled attics' drywall tape is missing or loose at the drywall joints at the party walls.

Blown-in fibreglass insulation was present in the attics. Sample inspections of the attics revealed that the attic insulations have been disturbed, with uneven distribution, and the heating ducts are exposed including exhaust fans with missing insulation around the ducting. We recommend correcting and improving the insulation coverage at these areas. The units with noted issues included sample units 10, 20, 25, 36, 56, 65 and 69.

A2 Metal Chimney Vent Replacement

There are metal chimneys above the roofs at the complex. These metal chimneys are for the gas fireplaces, furnaces, and domestic water heaters at the townhouse units. No major deficiencies were noted with the majority of the metal chimneys.

The study allows for the replacement of the above roof sections of the metal chimneys in three separate phases.

- A) Phase 1: \$7,500 in approximately Year 2033 within the next 30 years.
- B) Phase 2: \$7,500 in approximately Year 2035 within the next 30 years.
- C) Phase 3: \$7,500 in approximately Year 2037 within the next 30 years.

A3 Aluminum Gutter and Downspout Replacement

The buildings are equipped with prefinished aluminum gutters and downspouts. The downspouts discharge water below grade. No major deficiencies were noted at these areas.

Aluminum gutters and downspouts were replaced in the Year 2022 in conjunction with the roof replacement project.

As part of the ongoing maintenance program, the following issues should be addressed on a regular basis:

- Cleaning gutters and valleys of organic debris.
- Repairing loose downspouts.
- Sealing gutter joints.
- Improving gutter slope as necessary.
- Damaged or missing riser caps should be replaced.

The study allows for the ongoing replacement of the gutters and downspouts.

A4 Fascia Board, Bargeboard, and Base Band Board Replacement

There are wood fascia boards located throughout the buildings. The fascia boards are attached to the buildings at the upper and lower roofs allowing for gutter attachment. The repairs for this area would typically be done concurrent with gutter and downspout replacement.

There are also wood bargeboards located on the gable ends of the upper and lower roofs and horizontal band boards located around the perimeter of the buildings.

The overall fascia, bargeboard, and band board condition is satisfactory. No major deficiencies were noted at these areas. Plants and shrubs against the exterior walls can cause premature damage. Ensure all plants and shrubs are not in contact with the exterior walls.

The study allows a contingency for the ongoing replacement of the fascia, bargeboards, and band boards in three separate phases. It is assumed that some of the fascia and bargeboards were replaced during the roof replacement along with the gutter and downspout project.

Exterior

A5 Window Replacement

The windows throughout are vinyl-framed, double-glazed units with a 1/2-inch air space between the glass sections. The operable windows are hung and slider types.

All of the windows that were sampled operated properly with no major deficiencies noted.

The study allows for the eventual replacement of the windows in four separate phases. The budget is for window assembly replacement, not just the glazing sections. Replacement always assumes using current technologies, but not necessarily improvements to the existing. For example, if current technology is for double-glazed windows then that is what would be installed. This is not considered an improvement in that this is considered to be a standard practice.

- A) Phase 1: \$128,000 in approximately Year 2039 within the next 30 years.
- B) Phase 2: \$128,000 in approximately Year 2041 within the next 30 years.
- C) Phase 3: \$128,000 in approximately Year 2043 within the next 30 years.
- D) Phase 4: \$128,000 in approximately Year 2045 within the next 30 years.

The caulking around the windows is covered elsewhere in this study.

A6 Slider Door and French Door Replacement

The patio doors at the townhouse units consist of vinyl-framed, double-glazed sliding door units. It was noted that some townhouse units have only one slider door, while other units have two slider doors.

No major deficiencies were noted at these areas. The sliding doors are in satisfactory condition. All slider doors that were sampled operated properly. There are approximately 17 units that have had slider doors replaced with French doors. It is assumed that these additions are the responsibility of the individual owners and, therefore, no costs have been allowed for their replacements in this study.

The Amenity building's exterior doors consist of five centre double-glazed, metal-insulated and wood French doors with standard deadbolt and hardware. The French doors are in satisfactory condition. All doors that were sampled operated properly.

The study allows for the eventual replacement of the sliding glass and Amenity building's French doors with similar units in five separate phases.

- A) Phase 1: \$36,000 in approximately Year 2038 within the next 30 years.
- B) Phase 2: \$36,000 in approximately Year 2040 within the next 30 years.
- C) Phase 3: \$36,000 in approximately Year 2042 within the next 30 years.
- D) Phase 4: \$36,000 in approximately Year 2044 within the next 30 years.
- E) Phase 5: \$10,000 in approximately Year 2043 within the next 30 years.

The caulking around the windows is covered elsewhere in this study.

A7 Service Door Replacement - Exterior Garage Man-Door

The complex has exterior man-doors that are servicing the garages throughout. These doors consist of 6-panel metal units with standard hardware. These doors are currently in good condition.

The weather stripping and trim are in serviceable condition. Maintenance is considered to be good.

The study allows for the eventual replacement of these exterior garage man-doors.

A) \$56,000 in approximately the Year 2038 within the next 30 years.

The caulking around the windows is covered elsewhere in this study.

A8 Entrance Door Replacement - Unit Entrance

The entrance door into each townhouse unit consists of a 6-panel metal-insulated door unit with standard deadbolt and hardware.

These doors are currently in satisfactory condition. All doors that were sampled operated properly. The weather stripping and trim are in satisfactory condition.

The study allows for the eventual replacement of these entrance doors.

A) \$90,000 in approximately Year 2039 within the next 30 years.

The caulking around the windows is covered elsewhere in this study.

A9 Exterior Cladding Replacement

An examination of the buildings' weather exposure level is an important factor in the assessment of the performance of the buildings' components. Buildings with low exposure to the weather will normally perform better than those with higher exposure. Factors that may determine the buildings' exposure level include:

- The presence or absence of roof overhangs and the amount of their projection if present.
- The building height and configuration.
- The orientation of the building according to the predominant direction of wind-driven rain.
- The surrounding topography, vegetation, or other buildings.

The buildings' configuration consists of sloped roofs with approximately 2-foot overhangs being provided to the exterior walls. The vinyl and stone veneer cladding at the townhouse and fiber-cement cladding at the Amenity building in conjunction with the windows and doors are the primary assembly throughout the buildings. The exterior assembly is installed over wood framing.

In the majority of cases, the cladding appears to be in satisfactory condition. We recommend regular and diligent maintenance to achieve long-term performance of the building envelope.

There is loose siding located on the west side of Unit 73 which should be repaired as required.

The study allows for an amount for the eventual replacement of the exterior cladding in two phases and a contingency amount for repairs to the exterior cladding prior to the complete replacement. The cost for the professional fee has also been included in the report.

A) Phase 1: \$647,640 in approximately Year 2046, within the next 30 years.

B) Phase 2: \$647,640 in approximately Year 2047, within the next 30 years.

C) Repair: \$178,749 in approximately Year 2035, within the next 30 years.

The caulking at the exterior cladding is covered elsewhere in this study.

A10 Exterior Caulking Renewal

The exterior of the buildings consist of vinyl and stone veneer cladding, windows, doors and wood trim. Caulking has been used at the bottom sill flashing at the windows.

The caulking at some of the sampled windows is showing varying severity of minor deterioration depending on the exposure level.

The study allows for the ongoing renewal of the exterior caulking at the residential units' windowsill flashings.

A) \$30,000 in approximately Year 2025, and again in approximately Years 2037 and 2049 within the next 30 years.

A11 Paint Renewal

The exterior of the buildings consist of vinyl and stone veneer cladding, windows, doors and wood trim. No major deficiencies were noted at these areas.

The invoices provided from ProStar Painting and Restoration Ltd. and from Unitus Painting Ltd. indicated that the painting was completed in 2021 to the decorative shingles and the front doors and garage doors in 2024, respectively.

The study allows for the ongoing renewal of the exterior paint at the residential units' fascia, bargeboards, horizontal band boards, decorative shingles, front doors, and the exterior garage doors.

A) \$49,000 in approximately Years 2021, and 2024, and again in approximately in Years 2034 and 2046 within the next 30 years.

Site Work

A12 Concrete Patio Repair - Contingency (10%)

There are concrete patios located at the rear of the townhouse units. No major deficiencies were noted at these areas. Some of the patios have been covered with tiles. It is assumed that these additions are the responsibility of the individual owners, and therefore, no costs have been allowed for their replacements in this study.

Complete replacement of the concrete patios will not likely be necessary within the timeframe considered by this study. However, a contingency amount for repairs to the concrete patios has been allowed for.

A) \$20,000 in approximately Year 2038 within the next 30 years.

A13 Stone Paver Repair - Contingency (20%)

There are stone pavers for the walkways, parking stalls, and driveway aprons located at the front of the townhouse units and at portions of the north and south entrance areas. No major deficiencies were noted at these areas.

Over time, the settlement of the stone pavers can create a potential trip hazard to these areas. These areas will require ongoing maintenance and repair.

Complete replacement of the stone pavers will not likely be necessary within the timeframe considered by this study. However, a contingency amount for repairs to the stone pavers has been allowed for.

A) \$31,000 in approximately Year 2038 within the next 30 years.

A14 Garage Vehicle Door Replacement – Single and Double Wide

Each of the townhouse units has either a double-wide or single-wide attached garage structure with a man-door. Each garage has a metal overhead door with a ½-horsepower overhead opener. The vehicle doors are in satisfactory condition.

The study allows for the eventual replacement of the garage doors in four separate phases with the garage openers being assumed to be the owners' responsibility.

A) Phase 1: \$47,500 in approximately Year 2032 within the next 30 years.

B) Phase 2: \$27,000 in approximately Year 2034 within the next 30 years.

C) Phase 3: \$47,500 in approximately Year 2036 within the next 30 years.

D) Phase 4: \$27,500 in approximately Year 2038 within the next 30 years.

A15 Wood Fencing Replacement

There are perimeter fences located at the east and west sides of the complex. These fences are primarily used as privacy barriers for adjacent properties. These fences are in serviceable to satisfactory condition.

There are also fences separating the backyards of the townhouse units. It appears the fences extend out from the back wall of the buildings by approximately 20 feet, depending on the locations. They include wooden gates to allow for access to the adjacent yards.

The perimeter and rear yard fencing at the west side of the complex were replaced with vinyl in 2021 except for the wood sections at the RV parking and the southwest perimeter.

No major deficiencies were noted at this area. The wood fence sections have some minor wood deterioration. It should be anticipated that some ongoing maintenance repairs will be needed prior to the complete replacement of the fencing.

The study allows for the ongoing and eventual replacement of the fences at the perimeter and the rear yard.

A) \$147,542 in approximately Year 2046, within the next 30 years.

B) \$161,395 in approximately Year 2028, within the next 30 years.

A16 Driveway Gate Door and Automatic Gate Door Opener Replacement

There are steel gates that are operated by automatic swing arms at the north and south entrance into the complex. No major deficiencies were noted with the gates and the swing arms.

The study allows for the complete replacement of the entrance gates and automatic gate openers.

- A) \$16,000 in approximately Year 2038, within the next 30 years.
- B) \$12,000 in approximately Year 2028, and again in approximately Year 2048 within the next 30 years.

A17 Asphalt Pavement Replacement

The roadway and visitors parking areas located along the property are covered with asphalt paving and concrete curbs at the perimeters.

Although the asphalt paving displays no major deficiencies, we recommend ongoing monitoring and sealing of large cracks in order to extend the asphalt's service life.

The study allows for the eventual replacement of the asphalt pavement. It is assumed at that time that the existing asphalt will be removed first.

- A) \$120,376 in approximately Year 2038, within the next 30 years.

A18 Landscape Sprinkler Repair – Contingency

There are landscaping sprinklers located at various locations of the property. Most of the pipes are not visible.

The study allows for a contingency amount for major repairs to these components.

- A) \$2,000 in approximately Year 2033, and again approximately every 10 years within the next 30 years.

A19 Landscaping Contingency

There are various landscaping components at the property, including signage, stone retaining walls, plants, etc. Most of these components will require ongoing maintenance repair.

The study allows a contingency amount for ongoing maintenance and replacement of various components.

- A) \$15,000 in approximately Year 2028, and again approximately every 10 years within the next 30 years.

Interior Components

A20 Carpet Flooring Replacement - Amenity Building

The finished flooring in the office and upper mezzanine at the Amenity building consists of standard carpet. No major deficiencies were noted at these areas.

The study allows for the eventual replacement of the carpet flooring.

A) \$4,000 in approximately Year 2028 and again in approximately Year 2048 within the next 30 years.

A21 Resilient Flooring Replacement - Amenity Building

Resilient flooring was noted in the storage area. No major deficiencies were noted.

The study allows for the eventual replacement of the resilient flooring.

A) \$2,000 in approximately Year 2033, and again in approximately Year 2053 within the next 30 years.

A22 Ceramic Tile Flooring Replacement - Amenity Building

Ceramic tile flooring was noted at the lobby, washrooms, kitchen, billiards, lounge, and hall. No major deficiencies were noted.

The study allows for the eventual replacement of the ceramic tile flooring.

A) \$33,660 in approximately Year 2026, and in approximately Year 2051 within the next 30 years.

A23 Interior Paint Renewal - Amenity Building

The Amenity building interior wall paint is consistent with expected wear and tear. No major deficiencies were noted.

The study allows for the repainting of the Amenity building interior.

A) \$10,000 in approximately Year 2028, and again in approximately Year 2048 within the next 30 years.

A24 Furnishing and Equipment- Amenity Building

The Amenity building contains a variety of furniture, a television, shuffleboard, and a billiard table. The majority of the furniture is in satisfactory condition.

The study allows for a contingency amount for ongoing replacement of the furnishings, shuffleboard, and billiard table.

A) \$15,000 in approximately Year 2033, and again in approximately Year 2053 within the next 30 years.

A25 Mailbox Replacement

The complex has banks of metal, locking mailboxes located next to the Amenity building. No major deficiencies were noted at area.

The study allows for the eventual replacement of the mailboxes.

A) \$7,500 in approximately Year 2033, and again in approximately Year 2053 within the next 30 years.

Electrical Components

E1 Light Standard and Fixture Replacement

The light standards at the entrances into the complex are approximately 10 feet in height. The 10-foot high light standards have a glass fixture at the top.

No major deficiencies were noted with the light standards. These will require ongoing paint renewal as part of the ongoing maintenance program.

The study allows for the eventual replacement of the light standards and fixtures.

A) \$7,500 in approximately Year 2053 after the 30 years.

E2 Building Exterior Light Replacement

The exterior walls at the front of the garages, patios, and at the ceiling above the front entry doors include exterior light fixtures. The light fixtures consist of a pre-finished metal body with a glass fixture portion. No significant deficiencies were noted with the fixtures.

The study allows for the eventual replacement of these light fixtures with similar quality units.

A) \$46,400 in approximately Year 2033 within the next 30 years.

E3 Entrance Communicator Panel Replacement

The complex is equipped with a standard communicator system located at the north entrance. This system allows for the remote access entry into the property at the north driveway entrance from the townhouse units.

The study allows for the replacement of this communicator system. It is assumed that the wiring will be reused.

A) \$3,000 in approximately Year 2028, within the next 30 years.

E4 Emergency Generator Replacement

There is a portable gas generator located at the kiosk at the north entrance. The emergency generator is for usage in case of power failure to the sanitary sump pumps.

The study allows for the eventual replacement of the emergency generator.

A) \$3,000 in approximately Year 2028, within the next 30 years.

E5 Electric Baseboard Heater Replacement - Amenity Building

The Amenity building workshop area and the main entrance kiosk are equipped with electric baseboard heaters. These heaters are operated by individual controls directly on the units. Electric heating systems can be repaired indefinitely as long as replacement parts are available. This becomes decreasingly likely after 20 years. No major deficiencies were noted at these areas.

The study anticipates the replacement of the electric baseboard heaters with similar units.

A) \$600 in approximately Year 2033, within the next 30 years.

E6 Distribution Panel Replacement - Amenity Building and Kiosk

The Amenity building and the north entrance kiosk include common area circuit breaker panels. No major deficiencies were noted with the panels.

The study allows for the eventual replacement of the distribution panels and breakers at the Amenity building.

A) \$6,000 in approximately Year 2053.

Mechanical

M1 Furnace and Condenser Replacement - Amenity Building

The Amenity building is equipped with a Lennox mid-efficiency, gas-fired furnace with a 110,000 BTU per hour input capacity. Black steel piping supplies gas to the furnace. The furnace exhaust vents into a typical metal B-vent chimney. The furnace is 20 years old. The heat exchanger normally determines the life expectancy of this equipment. While it is impossible to predict with certainty when a heat exchanger will fail, the average life for heating system of this type is 20 to 25 years.

The Amenity building is air-conditioned by an air-cooled, split system. The condenser coil is located on the north side. The system has an approximate size of 5 tons. The refrigerant used in the air-conditioning systems was identified as HCFC-22. This unit is approximately 20 years old.

Maintenance requirements noted at the heating system are as follows:

- The filters should be inspected monthly and cleaned or replaced as necessary during heating system operation.
- The furnace should be serviced regularly by a qualified technician.

The ductwork and gas piping are expected to last as long as the building.

The study allows for the replacement of the furnace and air conditioning condenser unit.

A) \$7,000 in approximately Year 2028, within the next 30 years.

B) \$4,000 in approximately Year 2026, and again in approximately Year 2041 within the next 30 years.

M2 Exhaust Fan Replacement - Amenity Building

The Amenity building is equipped with exhaust fans located in the bathroom, washrooms, and workshop area. The exhaust fan units appear to be approximately 15 years old. While it is impossible to predict with certainty when a fan will fail, the average life for an exhaust fan of this type is 20 to 25 years.

The study allows for the replacement of the exhaust fan units.

A) \$1,000 in approximately Year 2028 within the next 30 years.

M3 Washroom and Bathroom Renovation - Amenity Building

The bathroom consists of ceramic tile flooring, regular tank toilet, and a vanity with laminate countertop, steel basin with basic faucet, exhaust fan, and a plastic surround shower stall.

The washrooms consist of ceramic tile flooring, regular tank toilet, vanity with laminate countertop, and a steel basin with basic faucet.

No major deficiencies were noted at these areas.

The study allows for the complete renovation of the bathroom and washrooms in the Amenity building using components of a similar quality.

A) \$10,000 in approximately Year 2033 within the next 30 years.

M4 Kitchen Renovation and Appliance Replacement - Amenity Building

The Amenity building's kitchen consists of ceramic tile flooring, upper and lowers cabinets, countertops, stainless steel sinks with basic faucet, conventional stove, fridge, microwave, dishwasher, and a hood exhaust fan.

The study allows for the complete renovation of the kitchen using components of a similar quality.

A) \$15,000 in approximately Year 2033, and again in approximately Year 2053 within the next 30 years.

B) \$3,000 in approximately Year 2033, and again in approximately Year 2053 within the next 30 years.

M5 Domestic Water Heater - Amenity Building

The Amenity building is equipped with a conventional gas-fired, domestic water heater. This domestic water heater is brand new. The domestic water heater provides domestic hot water heating to the Amenity building.

The domestic water heater vents into a typical metal chimney.

The study anticipates the eventual replacement of the domestic water heater unit with a similar unit.

A) \$1,500 in approximately Year 2038, and again in approximately Years 2053 within the next 30 years.

M6 Exterior Sanitary Pump and Sanitary Pump Control Panel Replacement

Located at the northeast side of the property are two sanitary pumps and a control panel. The condition of the pit and pumps are not visible. However, we recommend providing a third spare pump as a backup in case of failure.

The study allows an amount for replacement of the sanitary pumps and provision for a spare sanitary pump. It was indicated by the Strata Council, that the cost for hook up to the sewer system should be considered after 2026.

A) \$6,000 in approximately Year 2026 within the next 30 years.

B) \$3,000 in approximately Year 2026 within the next 30 years.

C) \$3,000 in approximately Year 2033 within the next 30 years.

SS1 Site Services Rehabilitation

There are various site services at the property, including water service pipes, sewers, forced sanitary sewer, telephone wires, cable TV wires, etc. Most of these services are not visible.

The study allows for a contingency amount for major repairs to these components.

A) \$30,000 in approximately Year 2033 within the next 30 years.

Fire Protection

FP1 Fire Extinguisher Replacement

There is a single portable fire extinguisher located at the main entrance of the Amenity building.

The study allows for the eventual replacement of the fire extinguisher.

FP2 Emergency Lighting, Battery Pack, and Exit Lighting Replacement

Emergency and exit lights are installed with a battery pack at various locations of the Amenity building.

The study allows for the eventual replacement of the exit lights, emergency lights, and battery packs.

A) \$4,200 in approximately Year 2038 within the next 30 years.

Engineering

Eng1 Depreciation Report Update – Based on a Site Visit

As updates to the Depreciation Report are required every three years, an allowance has been made for this expense. The cost of this work can be paid for from the reserve fund.

4.0 BUILDING OCCUPANT SURVEYS:

As part of the Depreciation Report, questionnaires were delivered to the strata corporation for distribution to the owners. Their purpose was to gather information about known problems with the common element components of the buildings. During our site visit, problems may have gone undetected because of certain environmental or weather conditions.

The following information was gathered from the occupant surveys:

Unit 13: Please let James Dobney know to check the grout on the rock work on the exterior of the buildings. It is starting to fail in a number of places. One that comes to mind is on the pillars in front of the clubhouse.

Unit 27: None.

Unit 39: None.

Unit 48: We only have one area of concern and that is the 2x4 Trim over the front unit under eave. Wood is rotting or repainting.

Unit 69: The heating ducting in the attic was very poorly installed. There were gaping holes where heat was creeping into the attic. Duct tape not metal tape was used which deteriorate over time. Years ago I attempted to repair the gaps holes on the ducting to the den actually runs outside on the soffit venting.

Unit 76: None

5.0 CAPITAL RENEWAL PROJECTIONS:

Appendix B contains the capital renewal projections for the property. This chart lists the common element components, the remaining life expectancy and replacement cost of the components and provides a starting point for calculating what the annual contributions should be. It should be noted that the calculations in this table do not contemplate interest or inflation.

The following explains each of the terms in the Capital Renewal Projections chart:

Term	Definition
Report Reference Number	This relates to the report reference for the description of the item.
Item Description	This indicates the component being replaced or rehabilitated.
Year of Acquisition	This is the year that the component was acquired. This year is based on known information or is estimated where no information was available.
Present Age	This is the present age of the system or component.
Quantity	This is the quantity or number of components noted from our site survey or document review.
Units	These are the corresponding units for the quantities noted from the site survey or from the document review.
Typical Life	This is the typical life expectancy of the component.
Estimated Life Remaining	This is the estimated remaining life of the component, based on the on-site conditions.
Present Cost of Replacement	This is the present replacement cost, or cost for major rehabilitation, of the item.
Construction Contingency Allowance	This is the amount or percentage, included in the project budget to cover unpredictable changes in the work or items of work.

6.0 SCHEDULE OF RENEWALS:

The chart in Appendix C shows a projection of what the expenditures are anticipated to be each year, over the next 30 years, for major repairs and replacements of the common element components. These figures are provided in present dollar values. These figures include a 15 percent increase for professional fees for replacement projects likely to require professional designers or project management.

7.0 RESERVE FUND CASH FLOW PROJECTIONS:

The charts in Appendices D, E, F, and G show the reserve fund balance over the next 30 years. These values incorporate an assumed annual inflation rate and the given interest rate for the Reserve Fund investment. The following was given by the Strata Council:

- Present reserve fund balance \$594,367
- Average reserve fund rate of return 1%
- The assumed annual inflation rate was taken as 3%

Appendices D, E, and F show three acceptable cash flow scenarios over the next 30 years. To illustrate the current situation, Appendix G shows the reserve fund cash flow over the next 30 years at the present contribution level. These cash flows consider the effect of interest and inflation.

The following provides an explanation for each of the terms in the cash flow projections:

Term	Definition
Opening Balance	This is the amount of money in the reserve fund at the beginning of the year. This amount was given as \$594,367.
Annual Contribution	This is the annual contribution to the reserve fund. The contribution amounts are increased annually by the inflation rate.
Increase over previous year	The value shows what the increase in the annual contribution is over the previous year.
Catch-up Amount	This is the amount of additional funds required to overcome any shortfall in the fund. These amounts are based on the capital renewal projections.
Total Contributions	This is the sum of the annual contribution and the catch-up amount.
Interest Income	In years without an expenditure, this is the interest generated by the opening balance for the entire year, plus interest generated by the annual contribution. In years where there is an expenditure, the interest is calculated based on the expenditure occurring at the half-way point in the year. The interest income is calculated based on the given rate of return.
Renewal Costs	These two columns show the expenditures required, as per the capital renewal projections. These figures are given in 2023 dollars and in inflated dollars, to the year of expenditure.
Closing Balance	This is the balance of the fund at the end of the year. The closing balance equals the total contribution, plus the interest income, less any renewal costs in that year.

8.0 DATA ANALYSIS:

The goal of the study is to ensure there are sufficient funds available for major repairs and replacements. However, since the study covers a finite time period, it is equally important to know what the balance should approximately be at the end of the study period. A balance that is too low at the end of the study period could penalize future owners, as insufficient funds may have been accumulated by the present owners. To have too high a balance at the end of the study period would penalize the present owners.

To ensure the closing balance at the end of the study period is appropriate, the cash flow was projected to 60 years in the future. The Reserve Fund balance was verified not to fall below 20 percent of any expenditure in a given year and not to fall below an absolute minimum of \$10,000. The fund was also verified not to become excessive at any of the recommended contribution scenarios.

Thus, starting total annual contributions of \$130,000 or \$10,833 per month with increases of 10% in Years 2024 to 2030 and then by the inflation rate thereafter, along with catch-up amounts of \$500,000 in Years 2044 to 2047 should prove sufficient to meet both criteria. This cash flow is illustrated in Appendix E. The cash flow scenarios in Appendices D and F use different methods of increasing the contribution levels to provide equally acceptable funding results.

Annual contributions of \$115,599 (the present contribution level) result in a deficit in the Year 2046. This is illustrated in the cash flow in Appendix G.

The inflation rate used in the study was taken as a previous five year average from that published by Statistics Canada. The interest rate used in the study was taken as a five year average from the current Strata reserve fund investment.

9.0 CLOSING COMMENTS:

The information contained in this study is time-sensitive. We recommend this study be updated every three years. Please contact our office in three years for an update.

Please find photographs documenting the common components in Appendix A.

We trust this information is of value. Should you have any questions, please feel free to contact me directly.

Sincerely,

28Jun24



Henry Khuu, P.Eng.
Permit No. 1001944



APPENDIX A

PHOTOGRAPHS

Douglas Point, BCS340
17516 - 4th Avenue
Surrey, BC



Photo 1. Example view of a man-door into a garage.



Photo 2. Example view of a window assembly.



Photo 3. View of the attic sheathing and roof vent.



Photo 4. Example view of an attic space with exposed ducting and poor distribution of the attic insulation.



Photo 5. Example view of an attic space at a townhouse unit.



Photo 6. Example of the separated drywall joints at a sample attic.



Photo 7. Assembly area of the Amenity Building.



Photo 8. Emergency lighting at the Amenity Building.



Photo 9. Storage room at the Amenity Building.



Photo 10. Upper mezzanine reading area of the Amenity Building.



Photo 11. Example view of a washroom at the Amenity Building.



Photo 12. Mechanical room at the Amenity Building.



Photo 13. Gas-fired furnace at the Amenity Building.



Photo 14. Domestic hot water heater at the Amenity Building.



Photo 15. Kitchen at the Amenity building.



Photo 16. Fire extinguisher at the Amenity Building.



Photo 17. Front elevation of the Amenity Building.



Photo 18. Side elevation view of the Amenity Building.



Photo 19. Air Conditioner condenser unit at the exterior of the Amenity Building.



Photo 20. Rear elevation of the Amenity Building.



Photo 21. Overall view of the asphalt paved roadway at the property.



Photo 22. Example view of the paving stone at the property.



Photo 23. Parking stalls located along the roadway.



Photo 24. Example view of a light standard at the roadway.



Photo 25. View of an automatic gate opener.



Photo 26. Example view of the asphalt shingles at an upper sloped roof.



Photo 27. Example view of the wood fencing at the east perimeter of the property.



Photo 28. Another view of the asphalt shingle roof.



Photo 29. Fire hydrant along the roadway.



Photo 30. Front elevation view of a three-plex townhouse block.



Photo 31. Example view of the metal chimney, furnace exhaust, fresh air pipes, and exhaust vents.



Photo 32. Another example view of the wood fencing at the property.

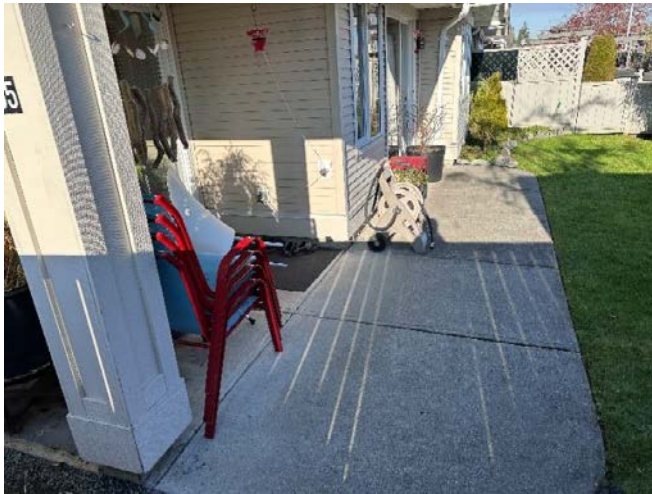


Photo 33. Example view of the concrete pavement at the property.



Photo 34. Example view of the vinyl fencing at the west perimeter of the property.



Photo 35. View of the utility boxes and storm drain at the property.



Photo 36. Example view of a double-wide garage door.



Photo 37. Example view of the asphalt paved walkway.



Photo 38. View of the detention pond located at the north side.



Photo 39. View of the front entrance gate house.



Photo 40. Example view of the front gate.



Photo 41. View of the communicator panel at the main front gate entry.



Photo 42. Interior view of the front entrance gate house.



Photo 43. Emergency generator at the gate house.



Photo 44. Example view of the concrete patio.



Photo 45. Example view of the sliding glass door.



Photo 46. Example view of the rock landscaping.



Photo 47. View of the RV parking area.



Photo 48. View of the electrical panels located at the south side of Amenity Building.

APPENDIX B

CAPITAL RENEWAL PROJECTIONS

Douglas Point, BCS340
17516 - 4th Avenue
Surrey, BC

Appendix B: Capital Renewal Projections

Douglas Point, BCS340

29-Nov-23

Report Ref. #	Item Description	Year of Acquisition	Present Age	Quantity	Units	Typical Life (Years)	Est. Life Remaining (Years)	Present Cost of Replacement
ARCHITECTURAL								
Roof								
A1a	Asphalt Shingle Replacement	2022	1	159586	sq ft	25	24	\$ 877,723
A2a	Metal Chimney Vent Replacement - Phase 1	2003	20	25	each	30	10	\$ 7,500
A2b	Metal Chimney Vent Replacement - Phase 2	2003	20	25	each	30	12	\$ 7,500
A2c	Metal Chimney Vent Replacement - Phase 3	2003	20	26	each	30	14	\$ 7,800
A3	Aluminum Gutter and Downspout Replacement	2022	1	14750	linear ft	25	24	\$ 147,500
A4a	Fascia Board Replacement - Gutter - Contingency - Phase 1	2022	1	6665	linear ft	25	24	\$ 10,000
A4b	Barge Board Replacement - Gable - Contingency - Phase 2	2022	1	3748	linear ft	25	24	\$ 20,000
A4c	Base Band Board Replacement - Contingency - Phase 3	2003	20	4516	linear ft	15	5	\$ 15,000
Exterior								
A5a	Window Replacement - Phase 1	2003	20	2135	sq ft	40	16	\$ 128,100
A5b	Window Replacement - Phase 2	2003	20	2135	sq ft	40	18	\$ 128,100
A5c	Window Replacement - Phase 3	2003	20	2135	sq ft	40	20	\$ 128,100
A5d	Window Replacement - Phase 4	2003	20	2135	sq ft	40	22	\$ 128,100
A6a	Slider Door Replacement - Phase 1	2003	20	18	each	40	15	\$ 30,600
A6b	Slider Door Replacement - Phase 2	2003	20	18	each	40	17	\$ 30,600
A6c	Slider Door Replacement - Phase 3	2003	20	18	each	40	19	\$ 30,600
A6d	Slider Door Replacement - Phase 4	2003	20	18	each	40	21	\$ 30,600
A6e	French Door Replacement - Amenity Building - Phase 5	2003	20	5	each	40	20	\$ 10,000
A7	Service Door Replacement - Exterior Garage Man-Door	2003	20	56	each	35	15	\$ 56,000
A8	Entrance Door Replacement - Unit Entrance	2003	20	75	each	35	15	\$ 90,000
A9a	Exterior Cladding Replacement - Phase 1	2003	20	32382	sq ft	40	23	\$ 647,640
A9b	Exterior Cladding Replacement - Phase 2	2003	20	32382	sq ft	40	24	\$ 647,640
A9c	Exterior Envelope Repair - Contingency (20%)	2003	20	1	lump sum	20	12	\$ 178,649
A10	Exterior Caulking Renewal	2003	20	2238	linear ft	12	2	\$ 30,000
A11	Paint Renewal	2022	1	1	lump sum	12	11	\$ 49,000
Site Work								
A12	Concrete Patio Repair - Contingency (10%)	2003	20	10246	sq ft	15	15	\$ 20,000
A13	Stone Paver Repair - Contingency (20%)	2023	0	25796	sq ft	10	5	\$ 31,000
A14a	Garage Vehicle Door Replacement - Double Wide - Phase 1	2003	20	19	each	30	9	\$ 47,500
A14b	Garage Vehicle Door Replacement - Single Wide - Phase 2	2003	20	18	each	30	11	\$ 27,000
A14c	Garage Vehicle Door Replacement - Double Wide - Phase 3	2003	20	19	each	30	13	\$ 47,500
A14d	Garage Vehicle Door Replacement - Single Wide - Phase 4	2003	20	19	each	30	15	\$ 28,500
A15a	Wood Fencing Replacement - East Perimeter and Rear	2003	20	2483	linear ft	25	5	\$ 161,395
A15a	Vinyl Fencing Replacement - West Perimeter and Rear	2021	2	2307	linear ft	25	23	\$ 147,542
A16a	Driveway Gate Door Replacement	2003	20	2	set	35	15	\$ 16,000
A16b	Automatic Gate Door Opener Replacement - Driveway Gate	2003	20	2	set	20	5	\$ 12,000
A17	Asphalt Pavement Replacement	2003	20	34393	sq ft	30	15	\$ 120,376
A18	Landscape Sprinkler Repair - Contingency	2003	20	1	set	10	10	\$ 2,000
A19	Landscaping Contingency	2003	20	1	set	10	5	\$ 15,000
Interior								
A20	Carpet Flooring Replacement - Amenity Building	2003	20	631	sq ft	20	5	\$ 4,000
A21	Resilient Flooring Replacement - Amenity Building	2003	20	335	sq ft	20	10	\$ 2,000
A22	Ceramic Tile Flooring Replacement - Amenity Building	2003	20	1683	sq ft	25	3	\$ 33,660
A23	Interior Paint Renewal - Amenity Building	2003	20	1	set	20	5	\$ 10,000
A24	Furnishing and Equipment - Amenity Building	2003	20	1	set	20	10	\$ 15,000
A25	Mailbox Replacement	2003	20	75	each	20	10	\$ 7,500
ELECTRICAL								
E1	Light Standard and Fixture Replacement	2003	20	5	each	50	30	\$ 7,500
E2	Building Exterior Light Replacement	2003	20	232	each	30	10	\$ 46,400
E3	Entrance Communicator Panel Replacement	2003	20	1	each	25	5	\$ 3,000
E4	Emergency Generator Replacement	2003	20	1	each	25	5	\$ 3,000
E5	Electric Baseboard Heater Replacement - Amenity Building	2003	20	3	each	30	10	\$ 600
E6	Distribution Panel Replacement - Amenity Building and Kiosk	2003	20	3	each	50	30	\$ 6,000
MECHANICAL								
M1a	Furnace Replacement - Amenity Building	2003	20	1	each	25	5	\$ 7,000
M1b	Condenser Replacement - Amenity Building	2003	20	1	each	15	3	\$ 4,000
M2	Exhaust Fan Replacement - Amenity Building	2003	20	5	each	25	5	\$ 1,000
M3	Washroom and Bathroom Renovation - Amenity Building	2003	20	1	lump sum	25	10	\$ 10,000
M4a	Kitchen Renovation - Amenity Building	2003	20	1	each	20	10	\$ 15,000
M4b	Appliance Replacement - Amenity Building	2003	20	1	each	20	10	\$ 3,000
M5	Domestic Water Heater - Amenity Building	2023	0	1	each	15	15	\$ 1,500
M6a	Exterior Sanitary Pump Replacement	2003	20	2	each	15	3	\$ 6,000
M6b	Exterior Sanitary Pump Provision - Spare	2003	20	1	each	15	3	\$ 3,000
M6c	Sanitary Pump Control Panel Replacement	2003	20	1	each	30	10	\$ 3,000
SS1	Site Services Rehabilitation	2003	20	1	each	20	10	\$ 30,000
Fire Protection								
FP1	Fire Extinguisher Replacement	2003	20	1	each	48	28	\$ 200
FP2a	Emergency Lighting Replacement	2003	20	16	each	35	15	\$ 3,200
FP2b	Battery Pack Replacement	2003	20	3	each	15	5	\$ 600
FP2c	Exit Lighting Replacement	2003	20	4	lump sum	35	15	\$ 400
ENGINEERING								
Eng1	Depreciation Report Update	2023	0	1	each	3	3	\$ 5,700
Subtotal								\$ 4,344,825
Construction Contingency Allowance (10%)								\$ 434,482
TOTALS INCLUDING PROFESSIONAL FEES AND CONTINGENCY:								\$4,779,307

Note: These costs do not take into account routine maintenance and outstanding repair costs.
All repairs/replacements to be covered 100% by the Reserve Fund

APPENDIX C

SCHEDULE OF RENEWALS

Douglas Point, BCS340
17516 - 4th Avenue
Surrey, BC

Appendix C: Schedule of Renewals
(2023 Dollars)

Years 1-10

Douglas Point, BCS340

29-Nov-23

Report Ref. #	Item Description	Years out										
		Immed 2023	1 2024	2 2025	3 2026	4 2027	5 2028	6 2029	7 2030	8 2031	9 2032	10 2033
ARCHITECTURAL												
Roof												
A1a	Asphalt Shingle Replacement											
A2a	Metal Chimney Vent Replacement - Phase 1											7500
A2b	Metal Chimney Vent Replacement - Phase 2											
A2c	Metal Chimney Vent Replacement - Phase 3											
A3	Aluminum Gutter and Downspout Replacement											
A4a	Fascia Board Replacement - Gutter - Contingency - Phase 1											
A4b	Barge Board Replacement - Gable - Contingency - Phase 2											
A4c	Base Band Board Replacement - Contingency - Phase 3						15000					
Exterior												
A5a	Window Replacement - Phase 1											
A5b	Window Replacement - Phase 2											
A5c	Window Replacement - Phase 3											
A5d	Window Replacement - Phase 4											
A6a	Slider Door Replacement - Phase 1											
A6b	Slider Door Replacement - Phase 2											
A6c	Slider Door Replacement - Phase 3											
A6d	Slider Door Replacement - Phase 4											
A6e	French Door Replacement - Amenity Building - Phase 5											
A7	Service Door Replacement - Exterior Garage Man-Door											
A8	Entrance Door Replacement - Unit Entrance											
A9a	Exterior Cladding Replacement - Phase 1											
A9b	Exterior Cladding Replacement - Phase 2											
A9c	Exterior Envelope Repair - Contingency (20%)											
A10	Exterior Caulking Renewal			30000								
A11	Paint Renewal											
Site Work												
A12	Concrete Patio Repair - Contingency (10%)											
A13	Stone Paver Repair - Contingency (20%)						31000					
A14a	Garage Vehicle Door Replacement - Double Wide - Phase 1										47500	
A14b	Garage Vehicle Door Replacement - Single Wide - Phase 2											
A14c	Garage Vehicle Door Replacement - Double Wide - Phase 3											
A14d	Garage Vehicle Door Replacement - Single Wide - Phase 4											
A15a	Wood Fencing Replacement - East Perimeter and Rear						161395					
A15a	Vinyl Fencing Replacement - West Perimeter and Rear											
A16a	Driveway Gate Door Replacement											
A16b	Automatic Gate Door Opener Replacement - Driveway Gate						12000					
A17	Asphalt Pavement Replacement											
A18	Landscape Sprinkler Repair - Contingency											2000
A19	Landscaping Contingency						15000					
Interior												
A20	Carpet Flooring Replacement - Amenity Building						4000					
A21	Resilient Flooring Replacement - Amenity Building											2000
A22	Ceramic Tile Flooring Replacement - Amenity Building				33660							
A23	Interior Paint Renewal - Amenity Building						10000					
A24	Furnishing and Equipment - Amenity Building											15000
A25	Mailbox Replacement											7500
ELECTRICAL												
E1	Light Standard and Fixture Replacement											
E2	Building Exterior Light Replacement											46400
E3	Entrance Communicator Panel Replacement						3000					
E4	Emergency Generator Replacement						3000					
E5	Electric Baseboard Heater Replacement - Amenity Building											600
E6	Distribution Panel Replacement - Amenity Building and Kiosk											
MECHANICAL												
M1a	Furnace Replacement - Amenity Building						7000					
M1b	Condenser Replacement - Amenity Building				4000							
M2	Exhaust Fan Replacement - Amenity Building						1000					
M3	Washroom and Bathroom Renovation - Amenity Building											10000
M4a	Kitchen Renovation - Amenity Building											15000
M4b	Appliance Replacement - Amenity Building											3000
M5	Domestic Water Heater - Amenity Building											
M6a	Exterior Sanitary Pump Replacement				6000							
M6b	Exterior Sanitary Pump Provision - Spare				3000							
M6c	Sanitary Pump Control Panel Replacement											3000
SS1	Site Services Rehabilitation											30000
Fire Protection												
FP1	Fire Extinguisher Replacement											
FP2a	Emergency Lighting Replacement											
FP2b	Battery Pack Replacement						600					
FP2c	Exit Lighting Replacement											
ENGINEERING												
Eng1	Depreciation Report Update	5700			5700			5700			5700	
	Subtotal	5700		30000	52360		262995	5700			53200	142000
	Construction Contingency Allowance (10%)	570		3000	5236		26300	570			5320	14200
TOTALS INCLUDING PROFESSIONAL FEES AND CONTINGENC		\$ 6,270	\$ -	\$ 33,000	\$ 57,596	\$ -	\$ 289,295	\$ 6,270	\$ -	\$ -	\$ 58,520	\$ 156,200

Note: These costs do not take into account routine maintenance and outstanding repair costs.
Also, these figures do not take into account the effects of inflation or interest.

Douglas Point, BCS340

Appendix C: Schedule of Renewals
(2023 Dollars)

Years 11-20

29-Nov-23

Report Ref. #	Item Description	Years out									
		11	12	13	14	15	16	17	18	19	20
		2034	2035	2036	2037	2038	2039	2040	2041	2042	2043
ARCHITECTURAL											
Roof											
A1a	Asphalt Shingle Replacement										
A2a	Metal Chimney Vent Replacement - Phase 1										
A2b	Metal Chimney Vent Replacement - Phase 2		7500								
A2c	Metal Chimney Vent Replacement - Phase 3				7800						
A3	Aluminum Gutter and Downspout Replacement										
A4a	Fascia Board Replacement - Gutter - Contingency - Phase 1										
A4b	Barge Board Replacement - Gable - Contingency - Phase 2										
A4c	Base Band Board Replacement - Contingency - Phase 3										15000
Exterior											
A5a	Window Replacement - Phase 1						147315				
A5b	Window Replacement - Phase 2								147315		
A5c	Window Replacement - Phase 3										147315
A5d	Window Replacement - Phase 4										
A6a	Slider Door Replacement - Phase 1					35190					
A6b	Slider Door Replacement - Phase 2							35190			
A6c	Slider Door Replacement - Phase 3									35190	
A6d	Slider Door Replacement - Phase 4										
A6e	French Door Replacement - Amenity Building - Phase 5										11500
A7	Service Door Replacement - Exterior Garage Man-Door					56000					
A8	Entrance Door Replacement - Unit Entrance					90000					
A9a	Exterior Cladding Replacement - Phase 1										
A9b	Exterior Cladding Replacement - Phase 2										
A9c	Exterior Envelope Repair - Contingency (20%)		178649								
A10	Exterior Caulking Renewal				30000						
A11	Paint Renewal	49000									
Site Work											
A12	Concrete Patio Repair - Contingency (10%)					20000					
A13	Stone Paver Repair - Contingency (20%)					31000					
A14a	Garage Vehicle Door Replacement - Double Wide - Phase 1										
A14b	Garage Vehicle Door Replacement - Single Wide - Phase 2	27000									
A14c	Garage Vehicle Door Replacement - Double Wide - Phase 3			47500							
A14d	Garage Vehicle Door Replacement - Single Wide - Phase 4					28500					
A15a	Wood Fencing Replacement - East Perimeter and Rear										
A15a	Vinyl Fencing Replacement - West Perimeter and Rear										
A16a	Driveway Gate Door Replacement					16000					
A16b	Automatic Gate Door Opener Replacement - Driveway Gate										
A17	Asphalt Pavement Replacement					120376					
A18	Landscape Sprinkler Repair - Contingency										2000
A19	Landscaping Contingency					15000					
Interior											
A20	Carpet Flooring Replacement - Amenity Building										
A21	Resilient Flooring Replacement - Amenity Building										
A22	Ceramic Tile Flooring Replacement - Amenity Building										
A23	Interior Paint Renewal - Amenity Building										
A24	Furnishing and Equipment - Amenity Building										
A25	Mailbox Replacement										
ELECTRICAL											
E1	Light Standard and Fixture Replacement										
E2	Building Exterior Light Replacement										
E3	Entrance Communicator Panel Replacement										
E4	Emergency Generator Replacement										
E5	Electric Baseboard Heater Replacement - Amenity Building										
E6	Distribution Panel Replacement - Amenity Building and Kiosk										
MECHANICAL											
M1a	Furnace Replacement - Amenity Building										
M1b	Condenser Replacement - Amenity Building								4000		
M2	Exhaust Fan Replacement - Amenity Building										
M3	Washroom and Bathroom Renovation - Amenity Building										
M4a	Kitchen Renovation - Amenity Building										
M4b	Appliance Replacement - Amenity Building										
M5	Domestic Water Heater - Amenity Building					1500					
M6a	Exterior Sanitary Pump Replacement								6000		
M6b	Exterior Sanitary Pump Provision - Spare								3000		
M6c	Sanitary Pump Control Panel Replacement										
SS1	Site Services Rehabilitation										
Fire Protection											
FP1	Fire Extinguisher Replacement										
FP2a	Emergency Lighting Replacement					3200					
FP2b	Battery Pack Replacement										600
FP2c	Exit Lighting Replacement					400					
ENGINEERING											
Eng1	Depreciation Report Update		5700			5700			5700		
	Subtotal	76000	191849	47500	37800	422866	147315	35190	166015	35190	176415
	Construction Contingency Allowance (10%)	7600	19185	4750	3780	42287	14732	3519	16602	3519	17642
	TOTALS INCLUDING PROFESSIONAL FEES AND CONTINGENC	\$ 83,600	\$ 211,034	\$ 52,250	\$ 41,580	\$ 465,152	\$ 162,047	\$ 38,709	\$ 182,617	\$ 38,709	\$ 194,057

Note: These costs do not take into account routine maintenance and outstanding repair costs.
Also, these figures do not take into account the effects of inflation or interest.

Douglas Point, BCS340

Appendix C: Schedule of Renewals
(2023 Dollars)

Years 21-30

29-Nov-23

Report Ref. #	Item Description	Years out									
		21 2044	22 2045	23 2046	24 2047	25 2048	26 2049	27 2050	28 2051	29 2052	30 2053
ARCHITECTURAL											
Roof											
A1a	Asphalt Shingle Replacement				1009381						
A2a	Metal Chimney Vent Replacement - Phase 1										
A2b	Metal Chimney Vent Replacement - Phase 2										
A2c	Metal Chimney Vent Replacement - Phase 3										
A3	Aluminum Gutter and Downspout Replacement				147500						
A4a	Fascia Board Replacement - Gutter - Contingency - Phase 1				10000						
A4b	Barge Board Replacement - Gable - Contingency - Phase 2				20000						
A4c	Base Band Board Replacement - Contingency - Phase 3										
Exterior											
A5a	Window Replacement - Phase 1										
A5b	Window Replacement - Phase 2										
A5c	Window Replacement - Phase 3										
A5d	Window Replacement - Phase 4		147315								
A6a	Slider Door Replacement - Phase 1										
A6b	Slider Door Replacement - Phase 2										
A6c	Slider Door Replacement - Phase 3										
A6d	Slider Door Replacement - Phase 4	35190									
A6e	French Door Replacement - Amenity Building - Phase 5										
A7	Service Door Replacement - Exterior Garage Man-Door										
A8	Entrance Door Replacement - Unit Entrance										
A9a	Exterior Cladding Replacement - Phase 1			744786							
A9b	Exterior Cladding Replacement - Phase 2				744786						
A9c	Exterior Envelope Repair - Contingency (20%)										
A10	Exterior Caulking Renewal						30000				
A11	Paint Renewal			49000							
Site Work											
A12	Concrete Patio Repair - Contingency (10%)										20000
A13	Stone Paver Repair - Contingency (20%)					31000					
A14a	Garage Vehicle Door Replacement - Double Wide - Phase 1										
A14b	Garage Vehicle Door Replacement - Single Wide - Phase 2										
A14c	Garage Vehicle Door Replacement - Double Wide - Phase 3										
A14d	Garage Vehicle Door Replacement - Single Wide - Phase 4										
A15a	Wood Fencing Replacement - East Perimeter and Rear										161395
A15a	Vinyl Fencing Replacement - West Perimeter and Rear			147542							
A16a	Driveway Gate Door Replacement										
A16b	Automatic Gate Door Opener Replacement - Driveway Gate					12000					
A17	Asphalt Pavement Replacement										
A18	Landscape Sprinkler Repair - Contingency										2000
A19	Landscaping Contingency					15000					
Interior											
A20	Carpet Flooring Replacement - Amenity Building					4000					
A21	Resilient Flooring Replacement - Amenity Building										2000
A22	Ceramic Tile Flooring Replacement - Amenity Building								33660		
A23	Interior Paint Renewal - Amenity Building					10000					
A24	Furnishing and Equipment - Amenity Building										15000
A25	Mailbox Replacement										7500
ELECTRICAL											
E1	Light Standard and Fixture Replacement										7500
E2	Building Exterior Light Replacement										
E3	Entrance Communicator Panel Replacement										3000
E4	Emergency Generator Replacement										3000
E5	Electric Baseboard Heater Replacement - Amenity Building										
E6	Distribution Panel Replacement - Amenity Building and Kiosk										6000
MECHANICAL											
M1a	Furnace Replacement - Amenity Building										7000
M1b	Condenser Replacement - Amenity Building										
M2	Exhaust Fan Replacement - Amenity Building										1000
M3	Washroom and Bathroom Renovation - Amenity Building										
M4a	Kitchen Renovation - Amenity Building										15000
M4b	Appliance Replacement - Amenity Building										3000
M5	Domestic Water Heater - Amenity Building										1500
M6a	Exterior Sanitary Pump Replacement										
M6b	Exterior Sanitary Pump Provision - Spare										
M6c	Sanitary Pump Control Panel Replacement										
SS1	Site Services Rehabilitation										30000
Fire Protection											
FP1	Fire Extinguisher Replacement								200		
FP2a	Emergency Lighting Replacement										
FP2b	Battery Pack Replacement										
FP2c	Exit Lighting Replacement										
ENGINEERING											
Eng1	Depreciation Report Update	5700			5700			5700			5700
	Subtotal	40890	147315	941328	1937367	72000	30000	5700	33860		290595
	Construction Contingency Allowance (10%)	4089	14732	94133	193737	7200	3000	570	3386		29060
TOTALS INCLUDING PROFESSIONAL FEES AND CONTINGENC		\$ 44,979	\$ 162,047	\$1,035,461	\$2,131,104	\$ 79,200	\$ 33,000	\$ 6,270	\$ 37,246	\$ -	\$ 319,655

Note: These costs do not take into account routine maintenance and outstanding repair costs.
Also, these figures do not take into account the effects of inflation or interest.

APPENDIX D

RESERVE FUND CASH FLOW PROJECTION AT RECOMMENDED CONTRIBUTION LEVEL – SCENARIO 1

Douglas Point, BCS340
17516 - 4th Avenue
Surrey, BC

Appendix D: Reserve Fund Cash Flow Projections at Recommended Contribution Level - Scenario 1

Douglas Point, BCS340

29-Nov-23

INFLATION RATE: 3.00%
INTEREST RATE: 1.00%

2023 ANNUAL CONTRIBUTION: \$175,000 (\$14,583.33 per month)

Note: The Annual Contribution has been increased annually by the inflation rate. There are also catch-up amounts of \$900,000 in Years 2044 to 2047.										
Year	Opening Balance	Annual Contribution	Increase Over Previous Year	Catch-Up Amount	TOTAL CONTRIBUTION	Interest Income	RENEWAL COSTS			Closing Balance
							2023 (\$)	Inflated (\$)	Inflated + GST	
2023	\$ 594,367	\$ 175,000		\$ -	\$ 175,000	\$ 6,786	\$ 6,270	\$ 6,270	\$ 6,584	\$ 769,569
2024	\$ 769,569	\$ 180,250	3.00%		\$ 180,250	\$ 8,597	\$ -	\$ -	\$ -	\$ 958,416
2025	\$ 958,416	\$ 185,658	3.00%		\$ 185,658	\$ 10,329	\$ 33,000	\$ 35,010	\$ 36,760	\$ 1,117,642
2026	\$ 1,117,642	\$ 191,227	3.00%		\$ 191,227	\$ 11,802	\$ 57,596	\$ 62,937	\$ 66,084	\$ 1,254,588
2027	\$ 1,254,588	\$ 196,964	3.00%		\$ 196,964	\$ 13,531	\$ -	\$ -	\$ -	\$ 1,465,083
2028	\$ 1,465,083	\$ 202,873	3.00%		\$ 202,873	\$ 13,904	\$ 289,295	\$ 335,372	\$ 352,140	\$ 1,329,720
2029	\$ 1,329,720	\$ 208,959	3.00%		\$ 208,959	\$ 14,303	\$ 6,270	\$ 7,487	\$ 7,861	\$ 1,545,121
2030	\$ 1,545,121	\$ 215,228	3.00%		\$ 215,228	\$ 16,527	\$ -	\$ -	\$ -	\$ 1,776,876
2031	\$ 1,776,876	\$ 221,685	3.00%		\$ 221,685	\$ 18,877	\$ -	\$ -	\$ -	\$ 2,017,438
2032	\$ 2,017,438	\$ 228,335	3.00%		\$ 228,335	\$ 20,915	\$ 58,520	\$ 76,355	\$ 80,173	\$ 2,186,515
2033	\$ 2,186,515	\$ 235,185	3.00%		\$ 235,185	\$ 21,939	\$ 156,200	\$ 209,920	\$ 220,416	\$ 2,223,224
2034	\$ 2,223,224	\$ 242,241	3.00%		\$ 242,241	\$ 22,836	\$ 83,600	\$ 115,722	\$ 121,508	\$ 2,366,793
2035	\$ 2,366,793	\$ 249,508	3.00%		\$ 249,508	\$ 23,336	\$ 211,034	\$ 300,884	\$ 315,928	\$ 2,323,709
2036	\$ 2,323,709	\$ 256,993	3.00%		\$ 256,993	\$ 24,119	\$ 52,250	\$ 76,731	\$ 80,567	\$ 2,524,254
2037	\$ 2,524,254	\$ 264,703	3.00%		\$ 264,703	\$ 26,236	\$ 41,580	\$ 62,893	\$ 66,038	\$ 2,749,155
2038	\$ 2,749,155	\$ 272,644	3.00%		\$ 272,644	\$ 25,050	\$ 465,152	\$ 724,692	\$ 760,926	\$ 2,285,923
2039	\$ 2,285,923	\$ 280,824	3.00%		\$ 280,824	\$ 22,898	\$ 162,047	\$ 260,037	\$ 273,039	\$ 2,316,606
2040	\$ 2,316,606	\$ 289,248	3.00%		\$ 289,248	\$ 24,276	\$ 38,709	\$ 63,980	\$ 67,179	\$ 2,562,951
2041	\$ 2,562,951	\$ 297,926	3.00%		\$ 297,926	\$ 25,487	\$ 182,617	\$ 310,892	\$ 326,437	\$ 2,559,927
2042	\$ 2,559,927	\$ 306,864	3.00%		\$ 306,864	\$ 26,777	\$ 38,709	\$ 67,876	\$ 71,270	\$ 2,822,298
2043	\$ 2,822,298	\$ 316,069	3.00%		\$ 316,069	\$ 27,963	\$ 194,057	\$ 350,488	\$ 368,012	\$ 2,798,318
2044	\$ 2,798,318	\$ 325,552	3.00%	\$ 900,000	\$ 1,225,552	\$ 33,672	\$ 44,979	\$ 83,674	\$ 87,858	\$ 3,969,684
2045	\$ 3,969,684	\$ 335,318	3.00%	\$ 900,000	\$ 1,235,318	\$ 44,243	\$ 162,047	\$ 310,498	\$ 326,023	\$ 4,923,222
2046	\$ 4,923,222	\$ 345,378	3.00%	\$ 900,000	\$ 1,245,378	\$ 44,730	\$ 1,035,461	\$ 2,043,571	\$ 2,145,750	\$ 4,067,580
2047	\$ 4,067,580	\$ 355,739	3.00%	\$ 900,000	\$ 1,255,739	\$ 24,211	\$ 2,131,104	\$ 4,332,096	\$ 4,548,701	\$ 798,830
2048	\$ 798,830	\$ 366,411	3.00%		\$ 366,411	\$ 8,950	\$ 79,200	\$ 165,827	\$ 174,119	\$ 1,000,072
2049	\$ 1,000,072	\$ 377,403	3.00%		\$ 377,403	\$ 11,514	\$ 33,000	\$ 71,168	\$ 74,726	\$ 1,314,264
2050	\$ 1,314,264	\$ 388,726	3.00%		\$ 388,726	\$ 15,013	\$ 6,270	\$ 13,927	\$ 14,624	\$ 1,703,378
2051	\$ 1,703,378	\$ 400,387	3.00%		\$ 400,387	\$ 18,588	\$ 37,246	\$ 85,216	\$ 89,477	\$ 2,032,877
2052	\$ 2,032,877	\$ 412,399	3.00%		\$ 412,399	\$ 22,391	\$ -	\$ -	\$ -	\$ 2,467,667
2053	\$ 2,467,667	\$ 424,771	3.00%		\$ 424,771	\$ 22,727	\$ 319,655	\$ 775,885	\$ 814,680	\$ 2,100,485

APPENDIX E

RESERVE FUND CASH FLOW PROJECTION AT RECOMMENDED CONTRIBUTION LEVEL – SCENARIO 2

Douglas Point, BCS340
17516 - 4th Avenue
Surrey, BC

Appendix E: Reserve Fund Cash Flow Projections at Recommended Contribution Level - Scenario 2

Douglas Point, BCS340

29-Nov-23

INFLATION RATE: 3.00%
INTEREST RATE: 1.00%

2023 ANNUAL CONTRIBUTION: \$130,000 (\$10,833.33 per month)

Note: The Annual Contribution has been increased annually by 7% from Years 2024 to 2030, and then by the inflation rate thereafter. There are also catch-up amounts of \$500,000 in Years 2043 to 2046.										
Year	Opening Balance	Annual Contribution	Increase Over Previous Year	Catch-Up Amount	TOTAL CONTRIBUTION	Interest Income	RENEWAL COSTS			Closing Balance
							2023 (\$)	Inflated (\$)	Inflated + GST	
2023	\$ 594,367	\$ 130,000		\$ -	\$ 130,000	\$ 6,561	\$ 6,270	\$ 6,270	\$ 6,584	\$ 724,344
2024	\$ 724,344	\$ 143,000	10.00%		\$ 143,000	\$ 7,958	\$ -	\$ -	\$ -	\$ 875,303
2025	\$ 875,303	\$ 157,300	10.00%		\$ 157,300	\$ 9,356	\$ 33,000	\$ 35,010	\$ 36,760	\$ 1,005,198
2026	\$ 1,005,198	\$ 173,030	10.00%		\$ 173,030	\$ 10,587	\$ 57,596	\$ 62,937	\$ 66,084	\$ 1,122,731
2027	\$ 1,122,731	\$ 190,333	10.00%		\$ 190,333	\$ 12,179	\$ -	\$ -	\$ -	\$ 1,325,243
2028	\$ 1,325,243	\$ 209,366	10.00%		\$ 209,366	\$ 12,539	\$ 289,295	\$ 335,372	\$ 352,140	\$ 1,195,008
2029	\$ 1,195,008	\$ 230,303	10.00%		\$ 230,303	\$ 13,062	\$ 6,270	\$ 7,487	\$ 7,861	\$ 1,430,512
2030	\$ 1,430,512	\$ 253,333	10.00%		\$ 253,333	\$ 15,572	\$ -	\$ -	\$ -	\$ 1,699,417
2031	\$ 1,699,417	\$ 260,933	3.00%		\$ 260,933	\$ 18,299	\$ -	\$ -	\$ -	\$ 1,978,649
2032	\$ 1,978,649	\$ 268,761	3.00%		\$ 268,761	\$ 20,729	\$ 58,520	\$ 76,355	\$ 80,173	\$ 2,187,967
2033	\$ 2,187,967	\$ 276,824	3.00%		\$ 276,824	\$ 22,162	\$ 156,200	\$ 209,920	\$ 220,416	\$ 2,266,537
2034	\$ 2,266,537	\$ 285,129	3.00%		\$ 285,129	\$ 23,483	\$ 83,600	\$ 115,722	\$ 121,508	\$ 2,453,641
2035	\$ 2,453,641	\$ 293,683	3.00%		\$ 293,683	\$ 24,425	\$ 211,034	\$ 300,884	\$ 315,928	\$ 2,455,821
2036	\$ 2,455,821	\$ 302,493	3.00%		\$ 302,493	\$ 25,668	\$ 52,250	\$ 76,731	\$ 80,567	\$ 2,703,414
2037	\$ 2,703,414	\$ 311,568	3.00%		\$ 311,568	\$ 28,262	\$ 41,580	\$ 62,893	\$ 66,038	\$ 2,977,206
2038	\$ 2,977,206	\$ 320,915	3.00%		\$ 320,915	\$ 27,572	\$ 465,152	\$ 724,692	\$ 760,926	\$ 2,564,767
2039	\$ 2,564,767	\$ 330,542	3.00%		\$ 330,542	\$ 25,935	\$ 162,047	\$ 260,037	\$ 273,039	\$ 2,648,205
2040	\$ 2,648,205	\$ 340,459	3.00%		\$ 340,459	\$ 27,848	\$ 38,709	\$ 63,980	\$ 67,179	\$ 2,949,333
2041	\$ 2,949,333	\$ 350,672	3.00%		\$ 350,672	\$ 29,615	\$ 182,617	\$ 310,892	\$ 326,437	\$ 3,003,183
2042	\$ 3,003,183	\$ 361,193	3.00%		\$ 361,193	\$ 31,481	\$ 38,709	\$ 67,876	\$ 71,270	\$ 3,324,587
2043	\$ 3,324,587	\$ 372,028	3.00%	\$ 500,000	\$ 872,028	\$ 35,766	\$ 194,057	\$ 350,488	\$ 368,012	\$ 3,864,369
2044	\$ 3,864,369	\$ 383,189	3.00%	\$ 500,000	\$ 883,189	\$ 42,620	\$ 44,979	\$ 83,674	\$ 87,858	\$ 4,702,321
2045	\$ 4,702,321	\$ 394,685	3.00%	\$ 500,000	\$ 894,685	\$ 49,867	\$ 162,047	\$ 310,498	\$ 326,023	\$ 5,320,850
2046	\$ 5,320,850	\$ 406,525	3.00%	\$ 500,000	\$ 906,525	\$ 47,012	\$ 1,035,461	\$ 2,043,571	\$ 2,145,750	\$ 4,128,637
2047	\$ 4,128,637	\$ 418,721	3.00%		\$ 418,721	\$ 20,636	\$ 2,131,104	\$ 4,332,096	\$ 4,548,701	\$ 19,294
2048	\$ 19,294	\$ 431,283	3.00%		\$ 431,283	\$ 1,479	\$ 79,200	\$ 165,827	\$ 174,119	\$ 277,937
2049	\$ 277,937	\$ 444,221	3.00%		\$ 444,221	\$ 4,627	\$ 33,000	\$ 71,168	\$ 74,726	\$ 652,060
2050	\$ 652,060	\$ 457,548	3.00%		\$ 457,548	\$ 8,735	\$ 6,270	\$ 13,927	\$ 14,624	\$ 1,103,719
2051	\$ 1,103,719	\$ 471,274	3.00%		\$ 471,274	\$ 12,946	\$ 37,246	\$ 85,216	\$ 89,477	\$ 1,498,463
2052	\$ 1,498,463	\$ 485,413	3.00%		\$ 485,413	\$ 17,412	\$ -	\$ -	\$ -	\$ 2,001,287
2053	\$ 2,001,287	\$ 499,975	3.00%		\$ 499,975	\$ 18,439	\$ 319,655	\$ 775,885	\$ 814,680	\$ 1,705,022

APPENDIX F

RESERVE FUND CASH FLOW PROJECTION AT RECOMMENDED CONTRIBUTION LEVEL – SCENARIO 3

Douglas Point, BCS340
17516 - 4th Avenue
Surrey, BC

Appendix F: Reserve Fund Cash Flow Projections at Recommended Contribution Level - Scenario 3

Douglas Point, BCS340

29-Nov-23

INFLATION RATE: 3.00%
INTEREST RATE: 1.00%

2023 ANNUAL CONTRIBUTION: \$250,000 (\$20,833.33 per month)

Note: The Annual Contribution has been increased annually by the inflation rate.										
Year	Opening Balance	Annual Contribution	Increase Over Previous Year	Catch-Up Amount	TOTAL CONTRIBUTION	Interest Income	RENEWAL COSTS			Closing Balance
							2023 (\$)	Inflated (\$)	Inflated + GST	
2023	\$ 594,367	\$ 250,000		\$ -	\$ 250,000	\$ 7,161	\$ 6,270	\$ 6,270	\$ 6,584	\$ 844,944
2024	\$ 844,944	\$ 257,500	3.00%		\$ 257,500	\$ 9,737	\$ -	\$ -	\$ -	\$ 1,112,181
2025	\$ 1,112,181	\$ 265,225	3.00%		\$ 265,225	\$ 12,264	\$ 33,000	\$ 35,010	\$ 36,760	\$ 1,352,910
2026	\$ 1,352,910	\$ 273,182	3.00%		\$ 273,182	\$ 14,565	\$ 57,596	\$ 62,937	\$ 66,084	\$ 1,574,573
2027	\$ 1,574,573	\$ 281,377	3.00%		\$ 281,377	\$ 17,153	\$ -	\$ -	\$ -	\$ 1,873,103
2028	\$ 1,873,103	\$ 289,819	3.00%		\$ 289,819	\$ 18,419	\$ 289,295	\$ 335,372	\$ 352,140	\$ 1,829,201
2029	\$ 1,829,201	\$ 298,513	3.00%		\$ 298,513	\$ 19,745	\$ 6,270	\$ 7,487	\$ 7,861	\$ 2,139,598
2030	\$ 2,139,598	\$ 307,468	3.00%		\$ 307,468	\$ 22,933	\$ -	\$ -	\$ -	\$ 2,470,000
2031	\$ 2,470,000	\$ 316,693	3.00%		\$ 316,693	\$ 26,283	\$ -	\$ -	\$ -	\$ 2,812,976
2032	\$ 2,812,976	\$ 326,193	3.00%		\$ 326,193	\$ 29,360	\$ 58,520	\$ 76,355	\$ 80,173	\$ 3,088,356
2033	\$ 3,088,356	\$ 335,979	3.00%		\$ 335,979	\$ 31,461	\$ 156,200	\$ 209,920	\$ 220,416	\$ 3,235,380
2034	\$ 3,235,380	\$ 346,058	3.00%		\$ 346,058	\$ 33,477	\$ 83,600	\$ 115,722	\$ 121,508	\$ 3,493,407
2035	\$ 3,493,407	\$ 356,440	3.00%		\$ 356,440	\$ 35,137	\$ 211,034	\$ 300,884	\$ 315,928	\$ 3,569,056
2036	\$ 3,569,056	\$ 367,133	3.00%		\$ 367,133	\$ 37,123	\$ 52,250	\$ 76,731	\$ 80,567	\$ 3,892,746
2037	\$ 3,892,746	\$ 378,147	3.00%		\$ 378,147	\$ 40,488	\$ 41,580	\$ 62,893	\$ 66,038	\$ 4,245,343
2038	\$ 4,245,343	\$ 389,492	3.00%		\$ 389,492	\$ 40,596	\$ 465,152	\$ 724,692	\$ 760,926	\$ 3,914,505
2039	\$ 3,914,505	\$ 401,177	3.00%		\$ 401,177	\$ 39,786	\$ 162,047	\$ 260,037	\$ 273,039	\$ 4,082,428
2040	\$ 4,082,428	\$ 413,212	3.00%		\$ 413,212	\$ 42,554	\$ 38,709	\$ 63,980	\$ 67,179	\$ 4,471,015
2041	\$ 4,471,015	\$ 425,608	3.00%		\$ 425,608	\$ 45,206	\$ 182,617	\$ 310,892	\$ 326,437	\$ 4,615,393
2042	\$ 4,615,393	\$ 438,377	3.00%		\$ 438,377	\$ 47,989	\$ 38,709	\$ 67,876	\$ 71,270	\$ 5,030,488
2043	\$ 5,030,488	\$ 451,528	3.00%		\$ 451,528	\$ 50,722	\$ 194,057	\$ 350,488	\$ 368,012	\$ 5,164,727
2044	\$ 5,164,727	\$ 465,074	3.00%		\$ 465,074	\$ 53,533	\$ 44,979	\$ 83,674	\$ 87,858	\$ 5,595,476
2045	\$ 5,595,476	\$ 479,026	3.00%		\$ 479,026	\$ 56,720	\$ 162,047	\$ 310,498	\$ 326,023	\$ 5,805,198
2046	\$ 5,805,198	\$ 493,397	3.00%		\$ 493,397	\$ 49,790	\$ 1,035,461	\$ 2,043,571	\$ 2,145,750	\$ 4,202,635
2047	\$ 4,202,635	\$ 508,199	3.00%		\$ 508,199	\$ 21,824	\$ 2,131,104	\$ 4,332,096	\$ 4,548,701	\$ 183,957
2048	\$ 183,957	\$ 523,444	3.00%		\$ 523,444	\$ 3,586	\$ 79,200	\$ 165,827	\$ 174,119	\$ 536,869
2049	\$ 536,869	\$ 539,148	3.00%		\$ 539,148	\$ 7,691	\$ 33,000	\$ 71,168	\$ 74,726	\$ 1,008,982
2050	\$ 1,008,982	\$ 555,322	3.00%		\$ 555,322	\$ 12,793	\$ 6,270	\$ 13,927	\$ 14,624	\$ 1,562,473
2051	\$ 1,562,473	\$ 571,982	3.00%		\$ 571,982	\$ 18,037	\$ 37,246	\$ 85,216	\$ 89,477	\$ 2,063,016
2052	\$ 2,063,016	\$ 589,141	3.00%		\$ 589,141	\$ 23,576	\$ -	\$ -	\$ -	\$ 2,675,733
2053	\$ 2,675,733	\$ 606,816	3.00%		\$ 606,816	\$ 25,718	\$ 319,655	\$ 775,885	\$ 814,680	\$ 2,493,587

APPENDIX G

RESERVE FUND CASH FLOW PROJECTION AT PRESENT CONTRIBUTION LEVEL

Douglas Point, BCS340
17516 - 4th Avenue
Surrey, BC

Appendix G: Reserve Fund Cash Flow Projections at Present Contribution Level

Douglas Point, BCS340

(Note deficit at year 2046)

29-Nov-23

INFLATION RATE: 3.00%
INTEREST RATE: 1.00%

2023 ANNUAL CONTRIBUTION: \$115,599 (\$9,633.25 per month)

Note: The Annual Contribution has been increased annually by the inflation rate.										
Year	Opening Balance	Annual Contribution	Increase Over Previous Year	Catch-Up Amount	TOTAL CONTRIBUTION	Interest Income	RENEWAL COSTS			Closing Balance
							2023 (\$)	Inflated (\$)	Inflated + GST	
2023	\$ 594,367	\$ 115,599		\$ -	\$ 115,599	\$ 6,489	\$ 6,270	\$ 6,270	\$ 6,584	\$ 709,871
2024	\$ 709,871	\$ 119,067	3.00%		\$ 119,067	\$ 7,694	\$ -	\$ -	\$ -	\$ 836,632
2025	\$ 836,632	\$ 122,639	3.00%		\$ 122,639	\$ 8,796	\$ 33,000	\$ 35,010	\$ 36,760	\$ 931,307
2026	\$ 931,307	\$ 126,318	3.00%		\$ 126,318	\$ 9,614	\$ 57,596	\$ 62,937	\$ 66,084	\$ 1,001,156
2027	\$ 1,001,156	\$ 130,108	3.00%		\$ 130,108	\$ 10,662	\$ -	\$ -	\$ -	\$ 1,141,925
2028	\$ 1,141,925	\$ 134,011	3.00%		\$ 134,011	\$ 10,329	\$ 289,295	\$ 335,372	\$ 352,140	\$ 934,125
2029	\$ 934,125	\$ 138,031	3.00%		\$ 138,031	\$ 9,992	\$ 6,270	\$ 7,487	\$ 7,861	\$ 1,074,287
2030	\$ 1,074,287	\$ 142,172	3.00%		\$ 142,172	\$ 11,454	\$ -	\$ -	\$ -	\$ 1,227,913
2031	\$ 1,227,913	\$ 146,437	3.00%		\$ 146,437	\$ 13,011	\$ -	\$ -	\$ -	\$ 1,387,362
2032	\$ 1,387,362	\$ 150,830	3.00%		\$ 150,830	\$ 14,227	\$ 58,520	\$ 76,355	\$ 80,173	\$ 1,472,246
2033	\$ 1,472,246	\$ 155,355	3.00%		\$ 155,355	\$ 14,397	\$ 156,200	\$ 209,920	\$ 220,416	\$ 1,421,583
2034	\$ 1,421,583	\$ 160,016	3.00%		\$ 160,016	\$ 14,408	\$ 83,600	\$ 115,722	\$ 121,508	\$ 1,474,499
2035	\$ 1,474,499	\$ 164,817	3.00%		\$ 164,817	\$ 13,989	\$ 211,034	\$ 300,884	\$ 315,928	\$ 1,337,377
2036	\$ 1,337,377	\$ 169,761	3.00%		\$ 169,761	\$ 13,820	\$ 52,250	\$ 76,731	\$ 80,567	\$ 1,440,390
2037	\$ 1,440,390	\$ 174,854	3.00%		\$ 174,854	\$ 14,948	\$ 41,580	\$ 62,893	\$ 66,038	\$ 1,564,154
2038	\$ 1,564,154	\$ 180,099	3.00%		\$ 180,099	\$ 12,737	\$ 465,152	\$ 724,692	\$ 760,926	\$ 996,065
2039	\$ 996,065	\$ 185,502	3.00%		\$ 185,502	\$ 9,523	\$ 162,047	\$ 260,037	\$ 273,039	\$ 918,051
2040	\$ 918,051	\$ 191,068	3.00%		\$ 191,068	\$ 9,800	\$ 38,709	\$ 63,980	\$ 67,179	\$ 1,051,740
2041	\$ 1,051,740	\$ 196,800	3.00%		\$ 196,800	\$ 9,869	\$ 182,617	\$ 310,892	\$ 326,437	\$ 931,971
2042	\$ 931,971	\$ 202,704	3.00%		\$ 202,704	\$ 9,977	\$ 38,709	\$ 67,876	\$ 71,270	\$ 1,073,381
2043	\$ 1,073,381	\$ 208,785	3.00%		\$ 208,785	\$ 9,938	\$ 194,057	\$ 350,488	\$ 368,012	\$ 924,092
2044	\$ 924,092	\$ 215,048	3.00%		\$ 215,048	\$ 9,877	\$ 44,979	\$ 83,674	\$ 87,858	\$ 1,061,159
2045	\$ 1,061,159	\$ 221,500	3.00%		\$ 221,500	\$ 10,089	\$ 162,047	\$ 310,498	\$ 326,023	\$ 966,725
2046	\$ 966,725	\$ 228,145	3.00%		\$ 228,145	\$ 79	\$ 1,035,461	\$ 2,043,571	\$ 2,145,750	\$ (950,801)
2047	\$ (950,801)	\$ 234,989	3.00%		\$ 234,989	\$ (31,077)	\$ 2,131,104	\$ 4,332,096	\$ 4,548,701	\$ (5,295,590)
2048	\$ (5,295,590)	\$ 242,039	3.00%		\$ 242,039	\$ (52,616)	\$ 79,200	\$ 165,827	\$ 174,119	\$ (5,280,286)
2049	\$ (5,280,286)	\$ 249,300	3.00%		\$ 249,300	\$ (51,930)	\$ 33,000	\$ 71,168	\$ 74,726	\$ (5,157,642)
2050	\$ (5,157,642)	\$ 256,779	3.00%		\$ 256,779	\$ (50,366)	\$ 6,270	\$ 13,927	\$ 14,624	\$ (4,965,853)
2051	\$ (4,965,853)	\$ 264,482	3.00%		\$ 264,482	\$ (48,784)	\$ 37,246	\$ 85,216	\$ 89,477	\$ (4,839,631)
2052	\$ (4,839,631)	\$ 272,417	3.00%		\$ 272,417	\$ (47,034)	\$ -	\$ -	\$ -	\$ (4,614,249)
2053	\$ (4,614,249)	\$ 280,589	3.00%		\$ 280,589	\$ (48,813)	\$ 319,655	\$ 775,885	\$ 814,680	\$ (5,197,152)

STATEMENTS OF QUALIFICATIONS

HENRY KHUU, P.Eng. – James Dobney Inspections - Commercial Division

James Dobney Inspections – Commercial Division is an engineering firm that specializes in Property Condition Assessments, Capital Reserve Studies and Reserve Fund Studies on commercial and residential properties.

- Graduated from the University of Calgary with a Bachelor of Science in Mechanical Engineering
- Designated by the Engineers and Geoscientists of BC (EGBC) as a Professional Engineer
- Employed by James Dobney Inspections since 2005 performing residential and commercial building inspections. Henry is part of a team that performs Property Condition Assessments, Capital Reserve Studies and Reserve Fund Studies on commercial and residential properties
- Licensed Home inspector with the Business Practices & Consumer Protection Authority of British Columbia – CPBC (#47510)
- Previously an instructor at Douglas College for the Carson Dunlop Home Inspection Training Program. It is consistent with and recognized by the National Occupational Standards document created as part of the National Certification Program for home inspectors in Canada. I have taught the following courses: Structure, Insulation and Interior, Electrical, and Plumbing
- An employee of James Dobney Inspections in 2005. Duties include inspecting over 1,700 residential and commercial buildings of various descriptions and reporting on conditions of major components such as structure, building envelope and mechanical systems
- An employee of Carson Dobney Weldon & Associates Ltd from 2008 to 2015, an engineering firm that specializes in Property Condition Assessments of commercial buildings.
- Memberships:
 - EGBC – Engineers and Geoscientists of BC
 - BCBEC – British Columbia Building Envelope Council
 - CPBC – Business Practices & Consumer Protection Authority
 - CHOA – Condominium Home Owners Association
- Continuing education courses include:
 - Certified Level 1 Thermographer, itc – Flir Canada
 - Green Roof Design, BCIT
 - Building Code: Part 9 (SFD), BCIT
 - Building Envelope Performance, BCIT

GLOSSARY

ABS — A type of black plastic pipe commonly used for waste water lines.

Aggregate — Crushed rock or stone.

Air chamber — A vertical, air filled pipe that prevents water hammer by absorbing pressure when water is shut off at a faucet or valve.

Air-conditioner condenser — The outside fan unit of the air-conditioning system. The condenser discharges heat to the building exterior.

Alligatoring — Coarse checking pattern on the surface of a material. Typically caused by ageing, exposure to sun and/or loss of volatiles.

Ampacity — Refers to the how much current a wire can safely carry. For example, a 12-gauge electrical copper wire can safely carry up to 20 amps.

Asphalt — A bituminous material employed in roofing and road paving materials because of its waterproofing ability.

B-Vent — A double-walled metal flue used for venting gas fired appliances in the U.S. and Canada. In some areas a single-walled vent might be used for gas-fired equipment such as a water heater. A single-walled metal vent or a B-vent would be unsafe if used to vent a woodstove or oil-fired equipment.

Backfill — The replacement of excavated earth into a trench or pit.

Backflow — A reverse flow of water or other liquids into the water supply pipes, caused by negative pressure in the pipes

Ballast — A transformer that steps up the voltage in a florescent lamp.

Balusters — Vertical members in a railing used between a top rail and bottom rail or the stair treads. Sometimes referred to as pickets or spindles.

Base sheet — Bottom layer of built-up roofing.

Batt — A section of fiberglass or rock-wool insulation.

Bay window — Any window space projecting outward from the walls of a building, either square or polygonal in plan.

Beam — A structural member transversely supporting a load. A structural member carrying building loads (weight) from one support to another. Sometimes called a girder.

Bearing wall — A wall that supports any vertical load in addition to its own weight.

Bird's-mouth cut — A cutout in a rafter where it crosses the top plate of the wall providing a bearing surface for nailing. Also called a heel cut.

Bitumen — Term commonly applied to various mixtures of naturally occurring solid or liquid hydrocarbons, excluding coal. These substances are described as bituminous. Asphalt is a bitumen. *See Asphalt.*

Blocking — Small wood pieces to brace framing members or to provide a nailing base for gypsum board or paneling.

Board and batten — A method of siding in which the joints between vertically placed boards or plywood are covered by narrow strips of wood.

Bottom chord — The lower or bottom horizontal member of a truss.

Brick tie — Metal strips or wires that are inserted into the mortar joints of the brick veneer. Ties hold the veneer wall to the backer wall behind it.

Brick veneer — A vertical facing of brick used to clad a building. Brick veneer is not a load-bearing component.

Building paper — A general term for papers, felts and similar sheet materials used in buildings without reference to their properties or uses. Generally comes in long rolls.

Built-up roof — A roofing composed of three to five layers of asphalt felt laminated with coal tar, pitch or asphalt. The top is finished with crushed slag or gravel. Generally used on flat or low-pitched roofs.

Butt joint — The junction where the ends of building materials meet. To place materials end-to-end or end-to-edge without overlapping.

Cant strip — A triangular shaped piece of lumber used at the junction of a flat deck and a wall to prevent cracking of the roofing which is applied over it.

Cantilever — Any part of a structure that projects beyond its main support and is balanced on it.

Cap flashing — The flashing covering over a horizontal surface to prevent water from migrating behind the base flashing.

Cap sheet — The top layer in modified bitumen roofing.

Casement window — A window with hinges on one of the vertical sides and swings open like a door.

Ceiling joist — One of a series of parallel framing members used to support ceiling loads and supported in turn by larger beams, girders or bearing walls. Can also be roof joists.

Cement — The grey powder that is the "glue" in concrete. Portland cement. Also, any adhesive.

Certificate of Occupancy — Certificate is issued by the local municipality and is required before anyone can occupy and live within the building. It is issued only after the local municipality has made all inspections and all monies and fees have been paid.

CFM (cubic feet per minute) — A rating that expresses the amount of air a blower or fan can move. The volume of air (measured in cubic feet) that can pass through an opening in one minute.

Chase — A framed enclosed space around a flue pipe or a channel in a wall, or through a ceiling for something to lie in or pass through.

Checking — Cracks that appear with age in many large timber members. The cracks run parallel to the grain of the wood. At first superficial, but in time may penetrate entirely through the member and compromise its integrity.

Cleanout — An opening providing access to a drain line. Closed with a threaded plug.

Closed-cut valley — A method of valley treatment in which shingles from one side of the valley extend across the valley, while shingles from the other side are trimmed 2 inches from the valley centerline. The valley flashing is not exposed.

GLOSSARY

Collar tie — Nominal one- or two-inch-thick members connecting opposite roof rafters. They serve to stiffen the roof structure.

Column — A vertical structural compression member that supports loads acting in the direction of its longitudinal axis.

Combustion air and ventilation air — The ductwork installed to bring fresh, outside air to the furnace or boiler room. Normally two separate supplies of air are brought in: one high for ventilation and one low for combustion.

Compressor — A mechanical device that pressurizes gas in order to turn it into a liquid, thereby allowing heat to be removed or added. A compressor is the main component of conventional heat pumps and air-conditioners. In an air-conditioning system, the compressor normally sits outside and has a large fan (to remove heat).

Concrete board or cement board — A panel made out of concrete and fiberglass, usually used as a tile backing material.

Condensate drain line — The pipe that runs from the air-conditioning cooling coil to the exterior or internal building drain, to drain away condensation.

Condensation — The change of water from vapor to liquid when warm, moisture-laden air comes in contact with a cold surface.

Condensing unit — The outdoor component of a cooling system. It includes a compressor and condensing coil designed to give off heat.

Conduit, electrical — A pipe, usually metal, in which wire is installed. The pipe serves to protect the wire.

Control joint — Tooled, straight grooves made on concrete floors or structures to “control” where the concrete should crack (as a result of shrinkage).

Cooling load — The amount of cooling required to keep a building at a specified temperature during the summer, usually 25° C, based on a design outside temperature.

Corbel — To build out one or more courses of brick or stone from the face of a wall. This may be decorative, or serve to support a structural component.

Counterflashing — A metal flashing usually used to cover another flashing and prevent moisture entry.

Course — A row of shingles or roll roofing running the length of the roof. Parallel layers of building materials such as bricks, or siding laid up horizontally.

CPVC — See *PVC*.

Crawlspace — A shallow space below a building, normally enclosed by the foundation walls.

Cricket — A saddle-shaped, peaked construction connecting a sloping roof plane with a wall or chimney. Designed to encourage water drainage away from the chimney or wall joint.

Culvert — Round, corrugated drain pipe (normally 15 or 18 inches in diameter) installed beneath a driveway and parallel to and near the street.

Cupping — A type of warping that causes boards or shingles to curl up at their edges. Typically caused by uneven drying or loss of volatiles.

Curb — The short elevation of a supporting element above the deck of a roof. Normally a box (on the roof) on which a skylight or piece of mechanical equipment is attached.

Curtain wall — An exterior building wall that is supported entirely by the building structure, rather than being self-supporting or load-bearing.

Damper — A metal “door” placed within the ductwork, typically. Used to control flow of air, etc., in the ductwork.

Damp-proofing — The black, tar-like material applied to the exterior of a foundation wall. Used to minimize moisture penetration into the wall.

Deck — The surface, installed over the supporting framing members, to which the roofing is applied.

Dedicated circuit — An electrical circuit that serves only one appliance or a series of electric heaters or smoke detectors.

Dew point — Temperature at which a vapor begins to deposit as a liquid. Applies especially to water in the atmosphere.

Disconnect — A large electrical ON-OFF switch.

Diverter valve — A device that changes the direction of water flow from one faucet to another.

Dormer — A box-like projection from the sloping plane of a roof that frames a window.

Double-hung window — A window with two vertically sliding sashes, both of which can move up and down.

Downspout — A pipe for draining water from roof gutters. Also called a leader.

Drain tile — A perforated, corrugated plastic pipe laid at the bottom of the foundation wall and used to drain excess water away from the foundation. It prevents ground water from seeping through the foundation wall. Sometimes called perimeter drain.

Drip — A groove in the underside of a sill or drip cap to cause water to drop off on the outer edge instead of drawing back and running down the face of the building.

Ducts — Usually round or rectangular metal pipes installed for distributing warm or cold air from the heating and air-conditioning equipment.

Eaves protection — Additional layer of roofing material applied at the eaves to help prevent damage from water backup (typically caused by ice damming).

EIFS — Exterior Insulation Finish System. An exterior cladding system that employs a relatively thin acrylic stucco coating over insulation panels. (Pronounced “ee-fus”)

Elbow — A plumbing or electrical fitting that lets you change directions in runs of pipe or conduit.

Evaporator coil — The part of a cooling system that absorbs heat from air passing through it. The evaporator coil is found within the ductwork.

Expansion joint — A joint that allows for building material expansion and contraction caused by temperature changes.

Exposed aggregate finish — A method of finishing concrete which washes the cement/sand mixture off the top layer of the aggregate — usually gravel. Often used with precast concrete exterior wall finishes.

GLOSSARY

Exposure — The portion of the roofing or wall cladding material exposed to the weather after installation.

Fascia — a vertical member attached to the ends of the roof structure and often the backing of the gutter.

Felt — Fibrous material saturated with asphalt and used as an underlayment or part of a built-up roofing system.

Finger joint — A manufacturing process of interlocking two shorter pieces of wood end to end to create a longer piece of dimensional lumber or molding. Often used in jambs and casings and are normally painted (instead of stained).

Fire stop — A solid, tight closure of a concealed space, placed to prevent the spread of fire and smoke through such a space. Includes stuffing wire and pipe holes in the fire separations.

Flashing — (1) Sheet metal or flexible membrane pieces fitted to the joint of any roof intersection, penetration or projection (chimneys, copings, dormers, valleys, vent pipes, etc.) to prevent water leakage. (2) The building component used to connect portions of a roof, deck, or siding material to another surface such as a chimney, wall, or vent pipe. Often made out of various metals, rubber or tar and is mostly intended to prevent water entry.

Flatwork — Common word for concrete floors, driveways, patios and sidewalks.

Flue — The space or passage in a chimney through which smoke, gas, or fumes ascend.

Fluorescent lighting — A fluorescent lamp is a gas-filled glass tube with a phosphor coating on the inside. Gas inside the tube is ionized by electricity which causes the phosphor coating to glow. Normally with two pins that extend from each end.

Footing — A widened, below-ground base of a foundation wall or a poured concrete, below-ground, base used to support foundations or piers.

Forced air heating — a common form of heating with natural gas, propane, oil or electricity as a fuel. Air is heated through a heat exchanger and distributed through a set of metal ducts.

Form — Temporary structure erected to contain concrete during placing and initial hardening.

Foundation — The supporting portion of a structure below the first floor construction, or below grade, including the footings.

Framing — The structural wood, steel or concrete elements of the building.

Framing, balloon — A system of framing a building in which all vertical structural elements of the bearing walls consist of single pieces extending from the top of the foundation sill plate to the roof plate and to which all floor joists are fastened.

Frost line — The depth of frost penetration in soil and/or the depth at which the earth will freeze and swell. This depth varies in different parts of the country.

Furring — Strips of wood or metal applied to a wall or other surface to even it and normally to serve as a fastening base for finish material.

Gable — A sidewall, typically triangular, that is formed by two sloping roof planes.

Gable roof — A type of roof with sloping planes of the same pitch on each side of the ridge. Has a gable at each end.

Gasket — A device used to seal joints against leaks.

GFI or GFCI or Ground Fault Current Interrupter — An electrical device used to prevent injury in locations where one might be in contact with a grounded surface and an electrical appliance. Most GFIs are located in a receptacle or circuit breaker and can be identified by the presence of a "test" and a "reset" button.

Glued laminated beam (glulam) — A structural beam composed of wood laminations. The laminations are pressure-bonded with adhesives.

Granules — Crushed rock coated with ceramic material, applied to the exposed surface of asphalt roofing products to add color and reduce ultraviolet degradation. Copper compounds added to these help make them algae resistant.

Groundwater — Water from a subsurface water source.

Grout — Mortar made of such consistency (by adding water) that it will flow into the joints and cavities of the masonry work and fill them solid.

Gusset — A flat metal, wood, plywood or similar type member used to provide a connection at the intersection of wood members. Most commonly used at joints of wood trusses. They are fastened by nails, screws, bolts, or adhesives.

Gutter — The trough that channels water from the eaves to the downspouts.

H-beam — A steel beam with a cross section resembling the letter H.

H-clip — Small metal clips formed like an H that fits at the joints of two plywood (or wafer board) sheets to stiffen the joint. Normally used on the roof sheathing.

Header — A beam placed perpendicular to joists and to which joists are attached in framing for around an opening.

Hearth — The fireproof area directly in front of a fireplace. The inner or outer floor of a fireplace, usually made of brick, tile, or stone.

Heat pump — A device that uses compression and decompression of gas to heat and/or cool a building.

Heating load — The amount of heating required to keep a building at a specified temperature during the winter, based on an outside design temperature.

Hip — The external angle formed by the meeting of two sloping sides of a roof.

Honeycombs — The appearance concrete makes when aggregate in the concrete is visible and where there are void areas in the concrete.

Hose bib — An exterior water faucet.

Hot wire — The wire that carries electrical energy to a receptacle or other device in contrast to a neutral, which carries electricity away again. Normally the black wire.

HVAC — An abbreviation for Heat, Ventilation, and Air-Conditioning.

GLOSSARY

I-beam — A steel beam with a cross section resembling the letter I.

Ice damming — The buildup of ice and water at the eaves of a sloped roof. Melting snow on the roof refreezes at the roof overhang, causing the damming. Buildings with inadequate attic insulation or ventilation or with large roof projections beyond the exterior walls are more prone to ice damming.

Irrigation — Lawn sprinkler system.

Jack post — A type of structural support made of metal, which can be raised or lowered through a series of pins and a screw to meet the height required. Typically used as a replacement for an old supporting member in a building.

Joist — One of a series of parallel beams, usually two inches in thickness, used to support floor and ceiling loads, and supported in turn by larger beams, girders, or bearing walls.

Joist hanger — A metal U-shaped item used to support the end of a floor joist and attached with hardened nails to another bearing joist or beam.

Knob-and-tube wiring — A common form of electrical wiring used before the Second World War. When in good condition it may still be functional for low amperage use such as smaller light fixtures.

Lath — A building material of narrow wood, metal, gypsum, or insulating board that is fastened to the frame of a building to act as a base for plaster, shingles, or tiles.

Lattice — An open framework of crisscrossed wood or metal strips that form regular, patterned spaces.

Leader — See *Downspout*.

Ledger — The wood or metal members attached to a beam, studding, or wall used to support joist or rafter ends.

Lintel — A horizontal structural member that supports the load over an opening such as a door or window.

Load-bearing wall — A wall supporting its own weight and some other structural elements of the building such as the roof and floor structures.

Louvre — A vented opening into a room that has a series of horizontal slats and arranged to permit ventilation but to exclude rain, snow, light, insects, or other living creatures.

Mansard roof — A roof with two sloping planes of different pitch on each of its four sides. The lower plane is steeper than the upper, and may be almost vertical.

Masonry — Stone, brick, concrete, hollow-tile, concrete block, or other similar building units or materials. Normally bonded together with mortar to form a wall.

Modified bitumen roof — A roof covering that is typically composed of a factory-fabricated composite sheet consisting of a copolymer-modified bitumen, often reinforced with polyester and/or fiberglass, and installed in one or more plies. The membrane is commonly surfaced with field-applied coatings, factory-applied granules or metal foil. The roofing system may incorporate rigid insulation.

Mortise — A slot cut into a board, plank, or timber, usually edgewise, to receive the tenon (or tongue) of another board, plank, or timber to form a joint.

Mullion — A vertical divider in the frame between windows, doors, or other openings.

Neutral wire — Usually color-coded white, this wire carries electricity from a load back to the service panel.

Newel post — The large starting post to which the end of a stair guard railing or balustrade is fastened.

Nosing — The projecting edge of a molding or drip or the front edge of a stair tread.

On center — The measurement of spacing for studs, rafters, and joists in a building from the center of one member to the center of the next.

Open valley — Method of valley construction in which shingles on both sides of the valley are trimmed along a chalk line snapped on each side of the valley. Shingles do not extend across the valley. Valley flashing is exposed.

Open web steel joist — One of a series of parallel beams, used to support floor and roof loads, and supported in turn by larger beams, girders or bearing walls. Consists of horizontal top and bottom chords, with diagonal and/or vertical web members connecting the chords together.

Oriented Strand Board or osb — A manufactured 4-foot-by-8-foot wood panel made out of one- to two-inch wood chips and glue. Often used as a substitute for plywood.

P-trap — Curved, U-section of drain pipe that holds a water seal to prevent sewer gasses from entering a building through a fixtures' drain pipe.

Parapet — The portion of an exterior wall that extends above the edge of a roof.

Parging — A thin layer of cement placed over masonry units.

Partition — A wall that subdivides spaces within any story of a building or room.

Paver — Materials (commonly masonry) laid down to make a firm, even surface on the exterior.

Performance bond — An amount of money (usually 10 percent of the total price of a job) that a contractor must put on deposit with a governmental agency as an insurance policy that guarantees the contractors' proper and timely completion of a project or job.

Perimeter drain — Typically 4-inch perforated plastic pipe around the perimeter (either inside or outside) of a foundation wall (before backfill) that collects and diverts ground water away from the foundation.

Pilot light — A small, continuous flame (in a boiler, or furnace) that ignites gas or oil burners when needed.

Pitch — (1) The degree of roof incline expressed as the ratio of the rise, in feet, to the span, in feet. (2) A thick, oily substance commonly obtained from tar, used to seal out water at joints and seams. Pitch is produced from distilling coal tar, wood tar, or petroleum.

Pitch pocket — A container, usually formed of sheet metal, around supporting connections with roof-mounted equipment. Filling the container with pitch, or better yet, plastic roof cement, helps seal out water even when vibration is present. A pitch pocket is *not* the preferred method of flashing a roof penetration.

Plan view — Drawing of a structure with the view from overhead, looking down.

GLOSSARY

Plate — Normally a horizontal member within a framed structure, such as: (1) sill plate — a horizontal member anchored to a concrete or masonry wall; (2) Sole plate — bottom horizontal member of a frame wall; or (3) top plate — top horizontal member of a frame wall supporting ceiling joists, rafters, or other members.

Plenum — The main supply air or return air duct leading from a heating or cooling unit.

Plumbing stack — A plumbing vent pipe that penetrates the roof.

Ply — A term to denote the number of layers of roofing felt, veneer in plywood, or layers in built-up materials, in any finished piece of such material.

Point load — A point where a bearing/structural weight is concentrated and transferred to another structural member or component.

Portland cement — Cement made by heating clay and crushed limestone into a brick and then grinding to a pulverized powder state.

Post — a vertical framing member usually designed to carry a beam.

Post-and-beam — A basic building method that uses just a few hefty posts and beams to support an entire structure. Contrasts with stud framing.

Power vent — A vent that includes a fan to speed up air flow.

Pressure relief valve — A safety device mounted on a water heater or boiler. The relief valve is designed to release any high pressure in the vessel and thus prevent tank explosions.

Pressure-treated wood — Lumber that has been saturated with a preservative to resist rot.

PVC or CPVC — (Polyvinyl chloride) A type of white or light gray plastic pipe sometimes used for water supply lines and waste pipe.

Quarry tile — A man-made or machine-made clay tile used to finish a floor or wall. Generally 6 inches by 6 inches by 1/4-inch thick.

R value — A measure of insulation's resistance to heat flow. The higher the R value the more effective the insulation.

Rafter — (1) The framing member that directly supports the roof sheathing. A rafter usually follows the angle of the roof, and may be a part of a roof truss. (2) The supporting framing member immediately beneath the deck, sloping from the ridge to the wall plate.

Rafter, hip — A rafter that forms the intersection of an external roof angle.

Rafter, valley — A rafter that forms the intersection of an internal roof angle.

Rake edge — The overhang of an inclined roof plane beyond the vertical wall below it.

Rebar — Reinforcing bar. Ribbed steel bars installed in concrete structures designed to strengthen concrete. Comes in various thicknesses and strength grades. May be epoxy coated to enhance rust resistance.

Refrigerant — A substance that remains a gas at low temperatures and pressure and can be used to transfer heat. Freon is an example.

Register — A grille placed over a supply air or return air duct.

Reglaze — To replace a broken window.

Reinforcing — Steel rods or metal fabric placed in concrete slabs, beams, or columns to increase their strength.

Relief valve — A device designed to open if it detects excess temperature or pressure. Commonly found on water heating or steam producing systems.

Resilient flooring — A durable floor cover that has the ability to resume its original shape.

Retaining wall — A structure that holds back a slope or elevation of land and prevents erosion.

Ridge — The horizontal line at the junction of the top edges of two sloping roof surfaces.

Riser — A vertical member between two stair treads.

Roll roofing — Asphalt roofing products manufactured in roll form.

Romex — A name brand of nonmetallic sheathed electrical cable that is used for indoor wiring.

Roof deck — The surface, installed over the supporting framing members, to which the roofing is applied.

Roof sheathing — The wood panels or sheet material fastened to the roof rafters or trusses on which the shingle or other roof covering is laid.

Roof valley — The "V" created where two sloping roofs meet.

Roofing membrane — The layer or layers of waterproofing products that cover the roof deck.

Run, stair — The horizontal distance of a stair tread from the nosing to the riser.

Saddle — Two sloping surfaces meeting in a horizontal ridge, used between the back side of a chimney, or other vertical surface, and a sloping roof. Used to divert water around the chimney or vertical surface.

Sanitary sewer — A sewer system designed for the collection of waste water from the bathroom, kitchen and laundry drains, and is usually not designed to handle storm water.

Sash — The frame that holds the glass in a window, often the movable part of the window.

Saturated felt — A felt that is impregnated with tar or asphalt.

Scratch coat — The first coat of plaster, which is scratched to form a bond for a second coat.

Scupper — (1) An opening for drainage in a wall, curb or parapet. (2) The drain above a downspout or in a flat roof, usually connected to the downspout.

Sealer — A finishing material, either clear or pigmented, that is usually applied directly over raw wood or concrete for the purpose of sealing the wood or concrete surface.

GLOSSARY

Seasoning — Drying and removing moisture from green wood in order to improve its usability.

Service equipment — Main control gear at the electrical service entrance, such as circuit breakers, switches, and fuses.

Service lateral — Underground power supply line.

Shake — A wood roofing material, normally cedar or redwood. Produced by splitting a block of the wood along the grain line. Modern shakes are sometimes machine sawn on one side.

Sheathing — (1) Sheets or panels used as roof deck material. (2) Panels that lie between the studs and the siding of a structure.

Short circuit — A situation that occurs when hot and neutral wires come in contact with each other. Fuses and circuit breakers protect against fire that could result from a short.

Sill — (1) The two-by-four or two-by-six wood plate framing member that lays flat against and bolted to the foundation wall (with anchor bolts) and upon which the floor joists are installed. (2) The member forming the lower side of an opening, as a door sill or window sill.

Skylight — A more or less horizontal window located on the roof of a building.

Slab-on-grade — A type of foundation with a concrete floor which is placed directly on the soil. In warm climates, the edge of the slab is usually thicker and acts as the footing for the walls. In cold climates, the slab is independent of the perimeter foundation walls.

Sleeper — Usually, a wood member that serves to support equipment.

Soffit — (1) The finished underside of the eaves. (2) A small ceiling-like space, often out of doors, such as the underside of a roof overhang.

Solid waste pump — A pump used to 'lift' waste water to a gravity sanitary sewer line. Usually used in basements and other locations which are situated below the level of the city sewer.

Spalling — The cracking and breaking away of the surface of a material.

Span — The clear distance that a framing member carries a load without support (between structural supports).

Splash block — A pad placed under the lower end of a downspout to divert the water from the downspout away from the building. Usually made out of concrete or fiberglass.

Stair stringer — Supporting member for stair treads. Can be a notched plank or a steel member.

Starter strip — Asphalt roofing applied at the eaves that provides protection by filling in the spaces under the cutouts and joints of the first course of shingles.

Step flashing — Flashing application method used where a vertical surface meets a sloping roof plane.

Storey — That part of a building between any floor or between the floor and roof.

Storm collar — A metal flashing used to seal around a penetration in a roof.

Storm sewer — A sewer system designed to collect storm water, separate from the waste water system.

Storm window — An extra window usually placed outside of an existing one, as additional protection against cold weather, or damage.

Stucco — An outside plaster finish made with Portland cement as its base.

Stud — One of a series of slender wood or metal vertical structural members placed as supporting elements in walls and partitions.

Stud framing — A building method that distributes structural loads to each of a series of relatively lightweight studs. Contrasts with post-and-beam.

Sump — Pit or large plastic bucket/barrel inside a basement, designed to collect ground water (storm water) from a perimeter drain system.

Sump pump — A submersible pump in a sump pit that pumps any excess ground water to the storm sewer.

Suspended ceiling — A ceiling system supported by hanging it from the overhead structural framing.

Tempered — Strengthened. Tempered glass will not shatter nor create shards, but will "pelletize" like an automobile window. Required in tub and shower enclosures, for example.

Termites — Insects that superficially resemble ants in size, general appearance, and habit of living in colonies; hence, they are frequently called "white ants." Subterranean termites establish themselves in buildings not by being carried in with lumber, but by entering from ground nests after the building has been constructed. If unmolested, they eat out the woodwork, leaving a shell of sound wood to conceal their activities, and damage may proceed so far as to cause collapse of parts of a structure before discovery.

Terra cotta — A ceramic material molded into masonry units.

Threshold — The bottom metal, concrete, or wood plate of an exterior door frame. They may be adjustable to keep a tight fit with the door slab.

Toenailing — To drive a nail in at a slant. Method used to secure floor joists to the plate. Not acceptable for securing joists flush to a header or beam.

Tongue-and-groove — A joint made by a tongue (a rib on one edge of a board) that fits into a corresponding groove in the edge of another board to make a tight flush joint. Typically, the subfloor plywood is tongue-and-groove.

Top chord — The upper or top member of a truss.

Trap — A plumbing fitting that holds water to prevent air, gas, and vermin from entering into a building.

Tread — The walking surface board in a stairway on which the foot is placed.

Treated lumber — A wood product which has been impregnated with chemicals to reduce damage from wood rot or insects. Often used for the portions of a structure which is likely to be in ongoing contact with soil and water. Wood may also be treated with a fire retardant.

GLOSSARY

Truss — An engineered and manufactured roof support member with “zig-zag” framing members. Does the same job as a rafter but is designed to have a longer span than a rafter.

Tube-and-knob wiring — *See knob-and-tube wiring.*

UFFI — Urea Formaldehyde Foam Insulation, a foam insulation blown into existing walls. (Pronounced “you-fee”)

Ultraviolet degradation — A reduction in certain performance limits caused by exposure to ultraviolet light.

Underlayment — (1) A one-quarter-inch material placed over the subfloor plywood sheathing and under finish coverings, such as vinyl flooring, to provide a smooth, even surface. (2) A secondary roofing layer that is waterproof or water-resistant, installed on the roof deck and beneath shingles or other roof-finishing layer.

Uv rays — Ultraviolet rays from the sun.

Valley — The inward angle formed by two intersecting, sloping roof planes. Since it naturally becomes a water channel, additional attention to waterproofing it is desirable.

Vapour barrier — A building product installed on exterior walls and ceilings under the drywall and on the warm side of the insulation. It is used to retard the movement of water vapour into walls and prevent condensation within them. Normally, polyethylene plastic sheeting is used.

Vent — A pipe or duct allowing the flow of air and gases to the outside. In a plumbing system, the vent is necessary to allow sewer gases to escape to the exterior

Vermiculite — A mineral closely related to mica, with the faculty of expanding on heating to form lightweight material with insulation quality. Used as bulk insulation and also as aggregate in insulating and acoustical plaster and in insulating concrete floors.

Water closet — A toilet.

Weather stripping — Narrow sections of thin metal or other material installed to prevent the infiltration of air and moisture around windows and doors.

Weep holes — Small holes in exterior wall cladding systems that allow moisture to escape and air pressure equalization in the cavity space drained by the weep hole.

Wythe — (rhymes with “tithe” or “scythe”) A vertical layer of masonry that is one masonry unit thick.

Zone — The section of a building that is served by one heating or cooling loop because it has noticeably distinct heating or cooling needs. Also, the section of property that will be watered from a lawn sprinkler system.

Zone valve — A device, usually placed near the heater or cooler, which controls the flow of water or steam to parts of the building; it is controlled by a zone thermostat.