



2009 RESERVE FUND STUDY UPDATE BASED ON A SITE INSPECTION FOR

CCC 750 Merivale Gardens
Glenridge Road, Ridgepark Private,
Garden Glen Private
Ottawa, Ontario

May 27, 2010

Prepared For:

OCSCC 750 Merivale Gardens
c/o Condominium Management Group
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Project Number: 209yA009A

FINAL

2009 RESERVE FUND STUDY UPDATE
BASED ON A SITE INSPECTION
FOR

OCSCC 750
MERIVALE GARDENS:
300-410 GARDEN GLEN PRIVATE
201-267 RIDGE PARK PRIVATE
AND 35A-39C GLENRIDGE ROAD, OTTAWA, ON

OTTAWA STANDARD CONDOMINIUM CORPORATION NO. 750

c/o Condominium Management Group
355 Catherine Street, Suite 200
Ottawa, ON K1R 5T4

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209yA009A

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1 INTRODUCTION

As requested, we have completed this Class 1 Reserve Fund Study Update (based on a site inspection) for your Corporation.

2 GENERAL DESCRIPTION OF CORPORATION

The Condominium Corporation consists of 87, 2 storey residential townhouse units divided into 14 blocks: four blocks have central corridors and are referred to as "townhouse blocks" (Units 223-241, 310-326, 344-362, 380-398) and ten blocks are referred to as "garden units" (Units 37A-37C, 201-207, 209-217, 247-255, 257-261, 267-273, 300-304, 35A-35C, 334-340, 368-374, 404-414) as they have no central corridors and direct access to the exterior from the front and rear of the unit. The complex was constructed in about 1971.

The buildings are of wood-framed construction with poured-in-place concrete foundations supported on strip footings.

There are mansards along the perimeter of the flat roofs on each townhome block. There are asphalt shingles on the mansards. The flat roofs are protected with built-up multi-ply asphaltic membranes and modified bitumen membranes.

The walls are clad with brick veneer on the ground floors and a small percentage of vinyl siding below the bedroom windows on the second floors.

Service corridors are provided in the basements of the townhouse blocks.

Interior finishes generally consist of painted drywall walls and ceilings.

Suite heating and cooling is provided gas-fired furnaces in each unit.

The main electrical supply is supplied by pad mounted transformers.

The fiscal year end of the Corporation is April 30.

2.1 Common Element Components

The Declaration for the Corporation includes Schedule C which defines the boundaries of units. Each condominium unit is bounded as follows:

2.1.1 Vertically by:

- a) The upper unfinished surface and plane of the concrete floor slab beneath the unit and its production.
- b) The upper surface and plane of the drywall ceiling above the unit and its

This report is subject to specific limitations. See Appendix E.



production.

- c) The upper face and plane of the floor joists - Applicable to Units 13 to 22, Units 27 to 36, Units 51 to 60 and Units 64 to 73, all on Level 1.
- d) The lower face and plane of the floor joists - Applicable to Units 5, 9, 25, 39, 44, 48, 63, 76, 81 and 85, all on Level 1.
- e) The unfinished unit side surface of all exterior door frames and window frames and sash.

The boundary of "a) "above shall be produced across all openings for drains and pipes leading to or from the unit.

The boundary "b) above shall be produced across the attic openings of the second floor of all units on Level 1.

2.1.2 Horizontally by:

- a) The unit side surface of the concrete foundation wall.
- b) The backside surface and plane of the drywall and its vertical production enclosing the exterior walls.
- c) The backside surface and plane of the drywall and its vertical production separating the unit from the common elements (pipe chases). Applicable to Units 4, 10, 43, 48, and 81, all on Level 1.
- d) The unit side surface of the concrete block wall separating the units from each other and from the common elements).
- e) The unfinished unit side surface of all exterior doors, exterior door frames, windows and window frames and sash (the said doors and windows being in a closed position), and the unit side surface of all window panes contained therein.
- f) The unfinished unit side surface of all patio doors and patio door frames (the said doors being in a closed position) and the unit side surface of the patio door glass.

2.1.3 Notwithstanding the above, each unit shall include all pipes, wires, cables, ducts, flues and mechanical or similar apparatus, including the heating equipment that supply any service to that particular Unit only.

2.1.4 Notwithstanding the above, each owner shall be responsible to maintain and repair all windows and doors (including the repair/replacement of glass and hardware); mailboxes; light fixtures (including replacing bulbs); all fireplaces (including associated venting, apparatus, and all services which provide a service to that particular unit only; and for any damage to traffic toppings caused by spills or leaks.

Our interpretation of the Declaration is that the following building components are the common elements which must be addressed as part of this Reserve Fund Study:

This report is subject to specific limitations. See Appendix E.



- ▶ Building structure;
- ▶ Roofs;
- ▶ Exterior walls;
- ▶ Exterior windows and doors (general replacement only);

- ▶ Interior finishes in common areas including entrance lobby, corridors recreation facilities;
- ▶ Site finishes consisting of soft landscaping (trees, shrubs, grassed areas) and asphalt walkways; and
- ▶ Common mechanical and electrical facilities.

2.2 Unit Owned Elements

We understand that components which are not common elements and are the responsibility of the individual owners include:

- ▶ Interior suite finishes;
- ▶ Suite plumbing and electrical fixtures and associated piping and wiring;
- ▶ Suite fancoil units; and
- ▶ Unit hot water tanks.

3 FINANCIAL ANALYSIS

3.1 Physical Description and Budgeting

Items covered by the study are described, including budgets, in Appendix A.

➔ **Appendix A**
for physical description
and budgeting

3.2 Analysis

We have included two funding scenarios. Scenario 1 is an optimum funding scenario where the contribution increases next year in one step so that increases in subsequent years simply keep pace with inflation. This is our recommended approach. Scenario 4 shows the required increase phased-in. This scenario should be considered a minimum contribution level.

➔ **Appendix B**
for funding scenarios
and expenditures table

Either of these two scenarios meets the requirements of the Condominium Act. You can pick any contribution level between the upper and lower extreme presented. We can calculate the resultant cash flow for use in your Form 15.

As your Corporation was registered after May 5, 2001, you have to become “adequately” funded immediately. This requirement can be interpreted different

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ways. It is our opinion and that of some lawyers that a funding plan that provides enough money to cover expenses is "adequate". However, some auditors and lawyers are defining "adequate" as a plan where annual increases match inflation. To avoid concerns related to this requirement, we have limited the phase-in period to just a few years, which in our opinion, given the time to your first critical year, is not materially different from a one-time increase.

4 ASSUMPTIONS

4.1 Factors Affecting Analysis

The assumptions we have made about hidden conditions, predicting technical performance, and ongoing maintenance needs for the common elements are described in the "Repair and Replacement Protocol Appendix".

4.2 Operating Budget Expenditures

Maintenance and minor repairs are carried out under the operating budget. The Reserve Fund Study should not duplicate these items. You indicated that the operating budget includes work items which cost less than a threshold of about \$5,000. These items are also those which cannot be reasonably predicted or accounted for by the Reserve Fund plan as they may occur on a random or infrequent basis.

The Regulations under the Condominium Act require an inventory of items costing \$500 or more to be used as the basis for planning expenditures. It also requires identifying the percentage included in the reserve for each item. Because \$500 is not a reasonable limit for the size of your corporation, items between \$500 and your threshold are not included in the Reserve Fund, as they would be assigned a 0% "paid from reserve" attribute (because they are 100% paid from operating).

A full inventory of items not budgeted within the Reserve Fund is not provided. If required and/or useful for management or accounting purposes, we recommend others compile an inventory of these operating items.

Operating expenditures should be carefully monitored. Conditions that require increasing expenditure may indicate problems that should be dealt with differently than how we have assumed. Further evaluation may be appropriate to determine if a more comprehensive repair or replacement program should be added to the Reserve Fund, or if programs already planned should be advanced. These types of changes would be reflected in updates.

This report is subject to specific limitations. See Appendix E.

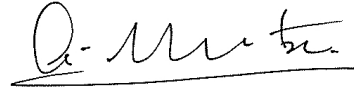


Please call with any questions.

Respectfully submitted,
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209yA009 rep.01 Final reserve fund study 2010.05.27.wpd

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APPENDIX A
RESERVE FUND ITEMS



1. STRUCTURE

1.1 Structural Frame

Description:

Based on the drawings provided, the structural frame consists of wood frame construction on 9" thick poured-in-place concrete foundation walls, resting on poured-in-place concrete strip footings. The floor construction consists of 2"x 8" floor joists spaced at 16" o.c. The floors are supported by 3" diameter adjustable steel posts.

The interior basement service corridor walls are constructed of concrete block. The exterior walls (foundation walls) are poured-in-place concrete walls. The ceiling above the corridor is shown to be constructed of a 4" thick concrete slab with 6" x 6" mesh reinforcing, over a steel deck. The basement floors consist of 3" deep concrete slabs-on-grade, on 4" thick crushed stone.

Condition:

2009 Halsall: We did not observe any evidence of settlement or structural cracking that would indicate a problem with major structural distress or that would lead us to anticipate capital expenditures for the concealed structural frame within the report term.

There is evidence of water leakage into the basement corridors. Corrosion and dampness was observed on the steel deck in the corridor, as well as at the end foundation walls adjacent the electrical panel on the east wall. The source of the leak should be investigated and repairs made. An allowance has been included for the current deterioration, as well as to address future foundation wall leakage.

Project Name	Present Cost	Inflated Cost	First Occur.	Cycle	# Occurrences	Class.	Status
1.1.1 Foundation Wall Leakage Investigation and Repair allowance	\$21,957	\$22,396	2011	5 yrs	recurring	3	Forecasted



2. BUILDING ENVELOPE

2.1 Walls

Description:

According to the drawings provided, the wall assemblies are as follows (from the exterior to the interior):

- 4" face brick
- 1" air space and/or asphalt shingles on 1/2" ply sheathing (the latter assembly is located at the mansards)
- building paper
- tentest
- 2" x 4" wood studs @ 16" o.c
- batt insulation
- 1/2" drywall

Vinyl siding is installed below the 2nd floor windows.

The perimeters of windows and doors are sealed with caulking.

The canopies located over the main entrance to each townhouse block have sheet metal soffit and fascia. The support posts are also clad in sheet metal.

Condition:

2009 Halsall: Spalled brick and deteriorated mortar was noted particularly at areas with poor water shedding, such as at and below window sills and at chimneys. Most of the chimney caps are deteriorated and require either repair, or replacement.

The canopies showed no evidence of deterioration. Minor repairs may be undertaken from the maintenance budget. Budget replacement at the same time as the soffit replacement (see Sloped Roofing).

We recommend completing a wall condition evaluation to refine the repair scope and associated budget. Pending this evaluation, the plan includes an allowance for repointing and local brick repair. In addition, we recommend improving water shedding of the brick sills and chimney caps by installing metal flashings with drip edges. This will help protect the masonry from future damage. local brick repair, installing retrofit connectors, exposing shelf angles for repair to flashings and corrosion protection.

The building sealants are generally flexible and intact where randomly checked. Joints seem to be of a reasonable profile. No leakage has been reported to us. Budget to periodically replace building sealants.

Project Name	Present Cost	Inflated Cost	First Occur.	Cycle	# Occurrences	Class.	Status
2.1.1 Repoint Brick	\$72,542	\$75,473	2012	20 yrs	recurring	3	Forecasted
2.1.2 Caulking	\$33,071	\$36,513	2015	20 yrs	recurring	3	Forecasted



2.2 Windows

Description:

The windows typically consist of thermally-broken, 2-sash, double-glazed, horizontally sliding units in vinyl frames.

The fixed windows consist of double glazed insulating glass units (IGU) in thermally broken vinyl frames with aluminum spacers date stamped "2005". They are two-sash, double glazed panes with fibrous weatherstripping. There are sheet metal sill flashings under the windows intended to shed water away from the wall cladding below.

Repair History:

2005: All windows including the basement windows were replaced, as reported by Unit 348 owner.

Condition:

2009 Halsall: Weatherstripping generally appears in good condition. No water or air leakage has been reported to us. Budget for the eventual replacement of the window system. The Plan includes for 95% of the total cost, as the remainder is assumed to be paid from the re-caulking budget.

Some insulated glass and hardware replacement should be expected periodically, but we understand this is the unit owner's responsibility.

Project Name	Present Cost	Inflated Cost	First Occur.	Cycle	# Occurrences	Class.	Status
2.2.1 Replace Windows (95% of the cost)	\$426,705	\$772,917	2040	35 yrs	recurring	3	Forecasted



2.3 Exterior Doors

Description:

Each garden unit has a painted, insulated steel front entrance door and a vinyl-clad sliding door that leads to the backyard.

The townhouse units each have a solid-core entry door leading into the corridor and vinyl-clad sliding doors that leads to the backyard.

Clear anodized aluminum doors with visionlite are installed at the end of each corridor leading into the lobby.

Repair History:

2005: Sliding doors and exterior front entrance doors were replaced as reported by Unit 348 owner.

Condition:

2009 Halsall: No major concerns were noted on site, or were reported to us by the Property Manager. General replacement of the steel front doors and the corridor entry doors is not anticipated; individual repairs and replacements can likely be undertaken as part of routine maintenance. Budget for repainting.

Budget for the eventual general replacement of the sliding doors. Periodic glass and hardware repairs, or replacements should be anticipated to be required, but we understand this to be the responsibility of each unit owner.

Project Name	Present Cost	Inflated Cost	First Occur.	Cycle	# Occurrences	Class.	Status
2.3.1 Paint Entrance Doors	\$5,454	\$6,022	2015	35 yrs	recurring	3	Forecasted
2.3.2 Replace Sliding Doors	\$157,847	\$285,918	2040	35 yrs	recurring	3	Forecasted



2.4 Flat Roofing

Description:

The roof assemblies at Blocks 209-217, 223-241, 267-273, 300-304, 35A-35C, 37A-39C, 344-362, 380-398 consist of (from top to bottom) the following, based on test cuts carried out as part of a roof condition evaluation:

- multi-ply asphaltic membranes
- "tentest" sheathing
- 4" batt insulation
- 2" x 8" wood joists @16" o.c.
- vapour barrier
- 1/2" drywall

There are many modified-bitumen repair patches present at Units 207, 217 and 247 Ridgeway Pvt. 300 Garden Glen and 39C Glenridge Road.

The roof assemblies at Units 209,211,247,249,251,257,259,261,310,312,314,316,318,320,322,324,326,328,368,370,372,374,404,406 and 408 have newer modified bitumen membranes with granulated cap sheets. We do not know whether any of the wood decks were replaced as part of the re-roofing, nor when the re-roofing projects were carried out.

Numerous roof vents, plumbing stacks and chimneys penetrate each roof.

Perimeter flashings comprise of pre-finished aluminum counter flashings.

Internal area drains provide drainage with overflow scuppers present at the roof perimeters.

Condition:

2009 Halsall: The roofs on most of the blocks have been repaired over time. Currently the roof over Unit 350 (forming part of block 344-362) is leaking. There are several reports of leaks as recorded by the Property Manager including at 205, 207, 209, 217 and 247 Ridgeway Pvt., 300 and 350 Garden Glen Pvt., and 39C Glenridge Road. A roof evaluation project is currently being undertaken by Halsall Associates. Pending completion of this evaluation, the Plan budgets for alternating programs of repair and replacement of the roofing membranes, including up to 25% of the sheathing on a phased basis. We have assumed that the modified bitumen roofs are less than 5 years old, based on their condition.

Project Name	Present Cost	Inflated Cost	First Occur.	Cycle	# Occurrences	Class.	Status
2.4.1 Roof evaluation	\$4,517	\$4,517	2010	N/A	One time	3	Forecasted
2.4.2 Re-roof Built-up Roofing Block 344-362	\$88,560	\$90,331	2011	25 yrs	recurring	1	Forecasted
2.4.3 Repair Roofing Allowance	\$14,586	\$17,780	2020	7 yrs	recurring	3	Forecasted
2.4.4 Re-roof Built-up Roofing Block 380-398, 273-267	\$121,133	\$126,027	2012	25 yrs	recurring	3	Forecasted
2.4.5 Re-Roof Built-up Roofs Blocks 37a-37c, 39a-39c, 213-217	\$80,353	\$81,960	2011	25 yrs	recurring	1	Forecasted
2.4.6 Re-Roof Built-up Roofs Blocks 223-241, 300-304, 35a-35c	\$130,296	\$135,560	2012	25 yrs	recurring	3	Forecasted
2.4.7 Re-Roof Built-up Roofs Blocks 275-279, 201-207	\$64,065	\$65,346	2011	25 yrs	recurring	1	Forecasted
2.4.8 Re-roof Modified Bitumen Roofs Blocks 404-408, 257-261, 247-251, 209-211	\$96,254	\$143,028	2030	25 yrs	recurring	3	Forecasted
2.4.9 Re-Roof Modified Bitumen Roofs Blocks 334-340, 310-328, 368-374	\$153,707	\$237,628	2032	25 yrs	recurring	3	Forecasted
2.4.10 Reclad Chimneys	\$100,800	\$102,816	2011	1 yrs	2	1	Forecasted



2.5 Sloped Roofing

Description:

There are asphalt-shingled mansards with aluminum soffits on all blocks with aluminum soffits.

Condition:

2009 Halsall: There are several dislodged and missing shingles on most of the buildings. This is likely due to the use of improper shingles for this application. Budget for re-shingling.

Budget to replace the soffits with every 3rd re-shingling program.

The drip flashing located over the exterior doors of townhouse blocks 344-362 and 380-398 is installed incorrectly. Thee sheet metal is broken and bent in order to permit the doors to open properly. The flashing should be properly repaired and detailed; this can be carried out as part of a flat roofing program.

It was reported by a unit owner that the end walls of the units (Unit 360) are experiencing frozen pipes on the 2nd floor adjacent to the mansard roofs. This may be an indication of poor insulation within the cavity space. It is recommended that further investigation of the the cavity spaces of the mansard roofs be undertaken. A budget is included. along with a repair allowance to increase the insulation present in the cavity.

Project Name	Present Cost	Inflated Cost	First Occur.	Cycle	# Occurrences	Class.	Status
2.5.1 Allowance to Investigate and Locally Re-Insulate Mansard Cavities	\$28,250	\$28,815	2011	N/A	One time	3	Forecasted
2.5.2 Replace Asphalt Shingles at Mansards - Phase 1	\$159,083	\$162,265	2011	15 yrs	recurring	3	Forecasted
2.5.3 Replace Asphalt Shingles at Mansards - Phase 2	\$159,083	\$165,510	2012	15 yrs	recurring	3	Forecasted
2.5.4 Replace Soffit	\$74,809	\$146,676	2044	45 yrs	recurring	3	Forecasted



3. FIRE SAFETY

3.1 Detection/Alarm

Description:

There is no central fire alarm system at the garden units.

A Mircom fire alarm system including horns in each apartment, and detectors is installed in townhouse block 344-362. We understand this system was installed in 2008 as reported by Unit 348 owner.

Based on discussions with the contractor, the system includes fire alarm pull stations at each exit door, detectors in the basement service corridor and audible devices in each unit.

Emergency lighting is also being installed in the corridors, similar to townhouse block 344-362.

fire hydrants are installed throughout the property.

Condition:

2009 Halsall: Vipond is in the process of installing a fire alarm system in each of the remaining 3 townhouse blocks. The systems are new/currently being installed. Budget for their eventual replacements. The Plan allows to replace all of the wiring and devices with every 3rd panel replacement, in order to maintain compatibility with changing technology.

The fire separation between the basement corridor and adjacent units should be verified at the same time as the fire alarm installation. Particular attention should be paid to the spaces between the top of the block walls and the underside of the steel decking.

Annual flushing and maintenance of the fire hydrants can be undertaken using maintenance funds. Budget for repairs/replacement to the fire hydrants.

Project Name	Present Cost	Inflated Cost	First Occur.	Cycle	# Occurrences	Class.	Status
3.1.1 Replace Fire Alarm Panels	\$67,153	\$95,911	2028	N/A	One time	3	Forecasted
3.1.2 Replace Fire Alarm Wiring and Devices	\$86,274	\$272,076	2068	N/A	One time	3	Forecasted
3.1.3 Repair/replace Fire Hydrants	\$25,649	\$27,219	2013	N/A	One time	3	Forecasted



4. FINISHES, FURNITURE AND EQUIPMENT

4.1 Entrance Lobby

Description:

An entrance lobby is located at each end of the 4 townhouse blocks. Finishes include: ceramic tile floors, painted drywall walls and ceilings.

The tile was reportedly replaced in 2008 as reported by the resident in Unit 348.

Condition:

2009 Halsall: Finishes appear in serviceable condition. Budget for periodic refurbishing.

Project Name	Present Cost	Inflated Cost	First Occur.	Cycle	# Occurrences	Class.	Status
4.1.1 Refinish Entrance Lobbies	\$25,416	\$40,078	2033	25 yrs	recurring	3	Forecasted

4.2 Corridors

Description:

The 4 blocks of townhouses open to interior corridor running the length of each building.

The corridor finishes consist of painted drywall walls and ceilings and carpeted floors with ceramic edges. The carpets was reportedly replaced in 2008, as reported by the resident in Unit 348.

Condition:

2009 Halsall: The corridor finishes are generally in good condition. However, throughout each corridor, some of the drywall ceilings have been damaged by water leaks stemming from 2nd floor bathrooms. The leaks should be promptly repaired, including the ceilings. as part of normal maintenance.

Budget to periodically refinish the corridors, including painting the doors.

Project Name	Present Cost	Inflated Cost	First Occur.	Cycle	# Occurrences	Class.	Status
4.2.1 Refinish Corridors including door painting	\$55,719	\$67,921	2020	10 yrs	recurring	3	Forecasted

5. SITE

5.1 Site Features

Description:

The property includes grassed areas around each block. Some areas are bermed. Mature trees, shrubs and other plantings are also located around the property. An approximate 10' tall cedar hedge is present along the west side of the property.

Wood board-on-board fencing provides privacy around each backyard. The fencing ranges in height from approximately 4' to 6' high. There is also wood board-on-board fencing along the north side separating the adjacent retail mall from the Corporation property. We understand this fence belongs to the adjacent mall and is not the responsibility of the Corporation.

A cedar gazebo is located within the courtyard.

At the front entrance to Ridgepark Pvt., a retaining wall of 6" x 6" cedar topped with a guard and a precast unit retaining wall are installed.

Window wells are installed around the basement windows.

Condition:

2009 Halsall: Site features and landscaping maintenance are typically managed from the operating budget.

The cedar gazebo is weathered and should be treated to prolong its life. The fencing is also weathered and should be treated. A budget is provided.

Replace the fencing and gazebo at the end of their service life.

Budget for repairs to the wood and precast retaining wall within the term of this report and for its eventual replacement.

The window wells did not appear to provide drainage and are likely to leak. This should be monitored and repairs made using funds from the maintenance budget.

Project Name	Present Cost	Inflated Cost	First Occur.	Cycle	# Occurrences	Class.	Status
5.1.1 Stain Fencing and Gazebo	\$6,510	\$6,640	2011	5 yrs	recurring	3	Forecasted
5.1.2 Retaining Wall Replacement Precast and Cedar	\$153,789	\$183,792	2019	40 yrs	recurring	3	Forecasted
5.1.3 Replace Fencing and Gazebo	\$204,181	\$253,873	2021	20 yrs	recurring	3	Forecasted
5.1.4 Retaining Wall Repairs Precast and Cedar	\$7,189	\$10,473	2029	10 yrs	recurring	3	Forecasted

5.2 Paving

Description:

Asphalt paved parking areas and walkways are located throughout the property. Concrete curbs are present at the sides of the parking areas.

Brick unit pavers are located throughout the property, including walkways leading to front entrances of the townhouse and garden home blocks.

We understand that the paving was generally replaced in 2008 as reported by Unit 348 owner.

Condition:

2009 Halsall: The asphalt-paved parking areas and walkways showed no major deterioration. Budget for alternating programs of repairs and replacement.

At some of the entrances, the brick unit pavers have settled and need to be reset as part of normal maintenance. General replacement of the unit pavers is not anticipated, provided periodic repairs and re-setting are carried out as maintenance.

Project Name	Present Cost	Inflated Cost	First Occur.	Cycle	# Occurrences	Class.	Status
5.2.1 Repair/Asphalt Pavement	\$20,131	\$21,790	2014	5 yrs	recurring	3	Forecasted
5.2.2 Overlay Asphalt Pavement	\$28,758	\$37,202	2023	15 yrs	recurring	3	Forecasted
5.2.3 Replace Asphalt Pavement	\$208,495	\$370,255	2039	30 yrs	recurring	3	Forecasted

5.3 Site Services

Description:

Buried piping provides storm and sanitary drainage and potable water supply.

Condition:

2009 Halsall: The building services are buried underground where they extend from the edge of the building to the property line (where they typically become the responsibility of the municipality). They are not visible for us to evaluate their condition.

The Plan includes an allowance intended to cover periodic repairs to these buried components, as needed. Periodic camera surveys and flushing (for drains) are recommended to help identify issues before they become crises. We assume these surveys will be paid from the operating budget.

A unit owner reported that many owners have been experiencing sewer backups. This problem should be further investigated; pending this investigation, we have assumed that the budget allowance carried above will be sufficient to address any issues.

Project Name	Present Cost	Inflated Cost	First Occur.	Cycle	# Occurrences	Class.	Status
5.3.1 Repair Buried Services	\$14,638	\$14,931	2011	7 yrs	recurring	3	Forecasted



6. ELECTRICAL

6.1 Electric Supply and Distribution

Description:

Electricity is supplied to the building basements via pad-mounted transformers located throughout the property. Hydro meters and main electrical panels serving the townhouse blocks are installed in the basement service corridors. Hydro meters are installed on the exterior wall of each garden home block.

Plug-ins for block heaters are mounted on wood posts, or conduit.

LIGHTING

Wall sconces are present at the entrance to each unit in the corridors of the townhouse blocks.

HID lights are present on the the end walls of the blocks to provide illumination to the parking areas.

Condition:

2009 Halsall: There is no information on the pad-mounted transformers to indicate their size. This information can generally be obtained by contacting the electric utility provider. We also recommend confirming who owns the transformers, as their replacement is sometimes the property owner's responsibility.

In townhouse block 344-362, a water leak was observed near the electrical breaker panel. The leak should be repaired soon. (see Structural Frame)

Unit 348 owner reported that most of the exterior lighting is not working as needed. We understand that this is largely the unit owner's responsibility, but this should be checked. A survey of the lighting should be undertaken and bulbs replaced. The unit owner also reported that the plugs located in the parking areas for block heaters are not functioning. This should be investigated and necessary repairs made as part of normal maintenance.

Budget for periodic repairs to common area electrical equipment.

LIGHTING

Budget for replacement of the wall sconces every other corridor refinishing.

Budget for replacement of the HID units on an as-needed basis using funds from the maintenance budget.

Project Name	Present Cost	Inflated Cost	First Occur.	Cycle	# Occurrences	Class.	Status
6.1.1 Miscellaneous Electrical Repairs	\$14,379	\$16,193	2016	10 yrs	recurring	3	Forecasted
6.1.2 Replace Wall Sconces in Corridors Every 2nd Corridor Refinish	\$8,627	\$10,310	2019	20 yrs	recurring	3	Forecasted



7. MISCELLANEOUS

7.1 Waste Disposal/Collection

Description:

Waste disposal/collection areas are located throughout the property. The bins are located within wood fence enclosures.

Condition:

2009 Halsall: Garbage bins are provided throughout the site. The fence enclosures at some locations is falling down. The maintenance and replacement of the bins and enclosures is typically managed from the operating budget.

7.2 Security Systems

Description:

An intercom system is located in the main entrance lobby to each of the four townhouse block. We understand these were installed in 2008 as reported by the owner of Unit 348.

Condition:

2009 Halsall: No concerns were noted and reported to us. budget for the eventual replacement of the intercom systems.

Project Name	Present Cost	Inflated Cost	First Occur.	Cycle	# Occurrences	Class.	Status
7.2.1 Replace Intercom System	\$34,821	\$49,733	2028	20 yrs	recurring	3	Forecasted

7.3 Consulting Services

Description:

A reserve fund study update is required to be undertaken every 3 years as per the Condominium Act.

Condition:

2009 Halsall: The plan allows to update the Reserve Fund Study every 3 years, alternating with and without site visits, as required by the Condominium Act.

Project Name	Present Cost	Inflated Cost	First Occur.	Cycle	# Occurrences	Class.	Status
7.3.1 Reserve Fund Study Update With Site Visit	\$5,763	\$5,763	2010	6 yrs	recurring	3	Forecasted
7.3.2 Reserve Fund Study Update	\$3,458	\$3,670	2013	6 yrs	recurring	3	Forecasted



PHOTOS





Photo No. 1: Garden home exterior (typical)



Photo No. 2: Rear of typical townhouse block



Photo No. 3: Basement ceiling construction

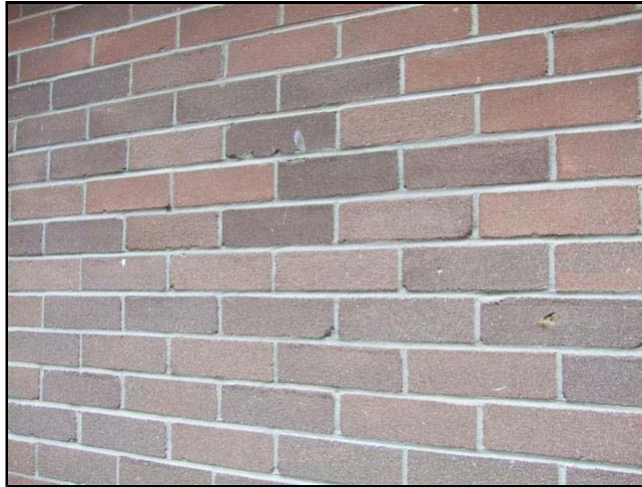


Photo No. 4: Spalling brick



Photo No. 5: Window (typical)



Photo No. 6: Mansard roof (shingles lifting)



Photo No. 7: Roof of TH Block 344-362 (water ponding)
(water ponding)



Photo No. 8: Adjacent roof layout (water ponding)



Photo No. 9: Stair to service corridor



Photo No. 10: Fire alarm panel



Photo No. 11: TH corridor (typical)



Photo No. 12: Damaged corridor ceiling (water leak from upstairs bathroom)



Photo No. 13: Retaining wall



Photo No. 14: Interior courtyard



Photo No. 15: Unit pavers at front entrance to TH blocks



Photo No. 16: Gazebo



Photo No. 17: Parking area (typical)



Photo No. 18: Asphalt walkway (typical)



Photo No. 19: Meters in basement service corridor



Photo No. 20: Exit /emergency light



Photo No. 21: Garbage enclosure



Photo No. 22: Intercom in TH lobby

APPENDIX B

**CASH FLOW SCENARIOS AND
RESERVE FUND EXPENDITURES**



Scenario 1 – Optimized with Inflation

Glenridge Road, Ridgepark Private, Garden Glen Private, Ottawa
Carleton Condominium Corporation No. 750

Assumptions:

Opening Balance of the Reserve Fund:	\$78,000	Interest Rate Earned:	4%
Current Annual Contribution:	\$60,000	Expenditure Inflation Rate:	2%
Minimum Reserve Fund Balance:	\$50,000	Minimum Balance Inflation Rate:	2%
First Critical Year:	2012	Second Critical Year:	2042

Results:

Year	Opening Balance	Recommended Annual Base Contributions	Other Contributions	Estimated Inflation Adjusted Expenditure	Estimated Interest Earned	Percentage Increase In Recommended Annual Contribution	Increase In Recommended Annual Contribution	Closing Balance
2010	\$78,000	\$60,000	\$0	\$10,280	\$4,114			\$131,834
2011	\$131,834	\$542,313	\$0	\$575,500	\$4,610	803.9	\$482,313	\$103,257
2012	\$103,257	\$553,160	\$0	\$607,442	\$3,045	2	\$10,846	\$52,020
2013	\$52,020	\$119,316	\$0	\$30,889	\$3,849	-78.4	-\$433,844	\$144,296
2014	\$144,296	\$121,702	\$0	\$21,790	\$7,770	2	\$2,386	\$251,978
2015	\$251,978	\$124,136	\$0	\$42,535	\$11,711	2	\$2,434	\$345,291
2016	\$345,291	\$126,619	\$0	\$54,742	\$15,249	2	\$2,483	\$432,417
2017	\$432,417	\$129,152	\$0	\$0	\$19,880	2	\$2,532	\$581,449
2018	\$581,449	\$131,735	\$0	\$17,151	\$25,550	2	\$2,583	\$721,582
2019	\$721,582	\$134,369	\$0	\$222,293	\$27,105	2	\$2,635	\$660,763
2020	\$660,763	\$137,057	\$0	\$85,701	\$27,458	2	\$2,687	\$739,576
2021	\$739,576	\$139,798	\$0	\$289,269	\$26,594	2	\$2,741	\$616,698
2022	\$616,698	\$142,594	\$0	\$7,309	\$27,374	2	\$2,796	\$779,357
2023	\$779,357	\$145,446	\$0	\$37,202	\$33,339	2	\$2,852	\$920,939
2024	\$920,939	\$148,354	\$0	\$26,562	\$39,273	2	\$2,909	\$1,082,005
2025	\$1,082,005	\$151,322	\$0	\$24,355	\$45,820	2	\$2,967	\$1,254,791
2026	\$1,254,791	\$154,348	\$0	\$277,205	\$47,735	2	\$3,026	\$1,179,669
2027	\$1,179,669	\$157,435	\$0	\$243,179	\$45,472	2	\$3,087	\$1,139,397
2028	\$1,139,397	\$160,584	\$0	\$153,875	\$45,710	2	\$3,149	\$1,191,815
2029	\$1,191,815	\$163,795	\$0	\$39,800	\$50,153	2	\$3,212	\$1,365,963
2030	\$1,365,963	\$167,071	\$0	\$225,824	\$53,463	2	\$3,276	\$1,360,674
2031	\$1,360,674	\$170,413	\$0	\$48,388	\$56,867	2	\$3,341	\$1,539,566
2032	\$1,539,566	\$173,821	\$0	\$372,406	\$57,611	2	\$3,408	\$1,398,592
2033	\$1,398,592	\$177,297	\$0	\$40,078	\$58,688	2	\$3,476	\$1,594,499
2034	\$1,594,499	\$180,843	\$0	\$65,110	\$66,095	2	\$3,546	\$1,776,327
2035	\$1,776,327	\$184,460	\$0	\$54,256	\$73,657	2	\$3,617	\$1,980,189
2036	\$1,980,189	\$188,149	\$0	\$461,569	\$73,739	2	\$3,689	\$1,780,508
2037	\$1,780,508	\$191,912	\$0	\$435,063	\$66,357	2	\$3,763	\$1,603,715
2038	\$1,603,715	\$195,751	\$0	\$50,068	\$67,062	2	\$3,838	\$1,816,460
2039	\$1,816,460	\$199,666	\$0	\$460,086	\$67,450	2	\$3,915	\$1,623,489

Description:

This scenario shows the one-time increase required so that future annual increases simply keep pace with inflation.

Note: Opening balance was provided by the Property Manager, as audited statements for the 2009 fiscal year have yet to be completed.



Scenario 4 – Special Assessment plus Increase Phased-in

Glenridge Road, Ridgepark Private, Garden Glen Private, Ottawa
Carleton Condominium Corporation No. 750

Assumptions:

Opening Balance of the Reserve Fund:	\$78,000	Interest Rate Earned:	4%
Current Annual Contribution:	\$60,000	Expenditure Inflation Rate:	2%
Minimum Reserve Fund Balance:	\$50,000	Minimum Balance Inflation Rate:	2%
First Critical Year:	2042	Second Critical Year:	2062

Results:

Year	Opening Balance	Recommended Annual Base Contributions	Other Contributions	Estimated Inflation Adjusted Expenditure	Estimated Interest Earned	Percentage Increase In Recommended Annual Contribution	Increase In Recommended Annual Contribution	Closing Balance
2010	\$78,000	\$60,000	\$1,000,000	\$10,280	\$24,114			\$1,151,834
2011	\$1,151,834	\$73,660	\$0	\$575,500	\$36,037	22.8	\$13,660	\$686,031
2012	\$686,031	\$87,593	\$0	\$607,442	\$17,044	18.9	\$13,933	\$183,227
2013	\$183,227	\$101,805	\$0	\$30,889	\$8,747	16.2	\$14,212	\$262,890
2014	\$262,890	\$116,302	\$0	\$21,790	\$12,406	14.2	\$14,496	\$369,808
2015	\$369,808	\$118,628	\$0	\$42,535	\$16,314	2	\$2,326	\$462,215
2016	\$462,215	\$121,000	\$0	\$54,742	\$19,814	2	\$2,373	\$548,286
2017	\$548,286	\$123,420	\$0	\$0	\$24,400	2	\$2,420	\$696,106
2018	\$696,106	\$125,889	\$0	\$17,151	\$30,019	2	\$2,468	\$834,863
2019	\$834,863	\$128,406	\$0	\$222,293	\$31,517	2	\$2,518	\$772,493
2020	\$772,493	\$130,974	\$0	\$85,701	\$31,805	2	\$2,568	\$849,572
2021	\$849,572	\$133,594	\$0	\$289,269	\$30,869	2	\$2,619	\$724,766
2022	\$724,766	\$136,266	\$0	\$7,309	\$31,570	2	\$2,672	\$885,292
2023	\$885,292	\$138,991	\$0	\$37,202	\$37,447	2	\$2,725	\$1,024,529
2024	\$1,024,529	\$141,771	\$0	\$26,562	\$43,285	2	\$2,780	\$1,183,023
2025	\$1,183,023	\$144,606	\$0	\$24,355	\$49,726	2	\$2,835	\$1,353,001
2026	\$1,353,001	\$147,498	\$0	\$277,205	\$51,526	2	\$2,892	\$1,274,820
2027	\$1,274,820	\$150,448	\$0	\$243,179	\$49,138	2	\$2,950	\$1,231,228
2028	\$1,231,228	\$153,457	\$0	\$153,875	\$49,241	2	\$3,009	\$1,280,051
2029	\$1,280,051	\$156,527	\$0	\$39,800	\$53,537	2	\$3,069	\$1,450,314
2030	\$1,450,314	\$159,657	\$0	\$225,824	\$56,689	2	\$3,131	\$1,440,836
2031	\$1,440,836	\$162,850	\$0	\$48,388	\$59,923	2	\$3,193	\$1,615,221
2032	\$1,615,221	\$166,107	\$0	\$372,406	\$60,483	2	\$3,257	\$1,469,405
2033	\$1,469,405	\$169,429	\$0	\$40,078	\$61,363	2	\$3,322	\$1,660,120
2034	\$1,660,120	\$172,818	\$0	\$65,110	\$68,559	2	\$3,389	\$1,836,387
2035	\$1,836,387	\$176,274	\$0	\$54,256	\$75,896	2	\$3,456	\$2,034,301
2036	\$2,034,301	\$179,800	\$0	\$461,569	\$75,737	2	\$3,525	\$1,828,268
2037	\$1,828,268	\$183,396	\$0	\$435,063	\$68,097	2	\$3,596	\$1,644,699
2038	\$1,644,699	\$187,064	\$0	\$50,068	\$68,528	2	\$3,668	\$1,850,222
2039	\$1,850,222	\$190,805	\$0	\$460,086	\$68,623	2	\$3,741	\$1,649,564

Description:

The total required contribution increase is uniformly phased in over a number of years by applying lump sum annual increases, escalated by inflation, in combination with a one time special assessment. Phasing in a required increase results in higher future contributions than those calculated in an inflation-matched scenario. This plan of increasing reserve fund contributions greater than the rate of inflation will be evident on Status Certificates and may be perceived negatively.

Note: Opening balance was provided by the Property Manager, as audited statements for the 2009 fiscal year have yet to be completed.



CCC 750 Merivale Gardens, Glenridge Road, Ridgemark Private, Garden Glen Private-, Ottawa-Ontario,										Projected Expenditures													
Item	Description	Class	Status	Present Cost	First Occur.	Cycle	No. Occurr.	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	
1	STRUCTURE																						
1.1.1	Foundation Wall Leakage Investigation and Repair allowance	3	Forecasted	\$21,957	2011	5			\$22,396					\$24,727					\$27,301				
2	BUILDING ENVELOPE																						
2.1.1	Repoint Brick	3	Forecasted	\$72,542	2012	20				\$75,473													
2.1.2	Caulking	3	Forecasted	\$33,071	2015	20							\$36,513										
2.2.1	Replace Windows (95% of the cost)	3	Forecasted	\$426,705	2040	35																	
2.3.1	Paint Entrance Doors	3	Forecasted	\$5,454	2015	35							\$6,022										
2.3.2	Replace Sliding Doors	3	Forecasted	\$157,847	2040	35																	
2.4.1	Roof evaluation	3	Forecasted	\$4,517	2010			\$4,517															
2.4.2	Re-roof Built-up Roofing Block 344-362	1	Forecasted	\$88,560	2011	25			\$90,331														
2.4.3	Repair Roofing Allowance	3	Forecasted	\$14,586	2020	7												\$17,780					
2.4.4	Re-roof Built-up Roofing Block 380-398, 273-267	3	Forecasted	\$121,133	2012	25				\$126,027													
2.4.5	Re-Roof Built-up Roofs Blocks 37a-37c, 39a-39c, 213-217	1	Forecasted	\$80,353	2011	25			\$81,960														
2.4.6	Re-Roof Built-up Roofs Blocks 223-241, 300-304, 35a-35c	3	Forecasted	\$130,296	2012	25				\$135,560													
2.4.7	Re-Roof Built-up Roofs Blocks 275-279, 201-207	1	Forecasted	\$64,065	2011	25			\$65,346														
2.4.8	Re-roof Modified Bitumen Roofs Blocks 404-408, 257-261, 247-251, 209-211	3	Forecasted	\$96,254	2030	25																	
2.4.9	Re-Roof Modified Bitumen Roofs Blocks 334-340, 310-328, 368-374	3	Forecasted	\$153,707	2032	25																	
2.4.10	Reclad Chimneys	1	Forecasted	\$100,800	2011	1	2		\$102,816	\$104,872													
2.5.1	Allowance to Investigate and Locally Re-Insulate Mansard Cavities	3	Forecasted	\$28,250	2011				\$28,815														
2.5.2	Replace Asphalt Shingles at Mansards - Phase 1	3	Forecasted	\$159,083	2011	15			\$162,265														
2.5.3	Replace Asphalt Shingles at Mansards - Phase 2	3	Forecasted	\$159,083	2012	15				\$165,510													
2.5.4	Replace Soffit	3	Forecasted	\$74,809	2044	45																	
3	FIRE SAFETY																						
3.1.1	Replace Fire Alarm Panels	3	Forecasted	\$67,153	2028																		
3.1.2	Replace Fire Alarm Wiring and Devices	3	Forecasted	\$86,274	2068																		
3.1.3	Repair/replace Fire Hydrants	3	Forecasted	\$25,649	2013						\$27,219												
4	FINISHES, FURNITURE AND EQUIPMENT																						
4.1.1	Refinish Entrance Lobbies	3	Forecasted	\$25,416	2033	25																	
4.2.1	Refinish Corridors including door painting	3	Forecasted	\$55,719	2020	10												\$67,921					
5	SITE																						
5.1.1	Stain Fencing and Gazebo	3	Forecasted	\$6,510	2011	5			\$6,640					\$7,331					\$8,094				
5.1.2	Retaining Wall Replacement Precast and Cedar	3	Forecasted	\$153,789	2019	40											\$183,792						
5.1.3	Replace Fencing and Gazebo	3	Forecasted	\$204,181	2021	20													\$253,873				
5.1.4	Retaining Wall Repairs Precast and Cedar	3	Forecasted	\$7,189	2029	10																	
5.2.1	Repair/Asphalt Pavement	3	Forecasted	\$20,131	2014	5						\$21,790					\$24,058					\$26,562	
5.2.2	Overlay Asphalt Pavement	3	Forecasted	\$28,758	2023	15															\$37,202		
5.2.3	Replace Asphalt Pavement	3	Forecasted	\$208,495	2039	30																	
5.3.1	Repair Buried Services	3	Forecasted	\$14,638	2011	7			\$14,931							\$17,151							
6	ELECTRICAL																						
6.1.1	Miscellaneous Electrical Repairs	3	Forecasted	\$14,379	2016	10								\$16,193									

CCC 750 Merivale Gardens, Glenridge Road, Ridgemark Private, Garden Glen Private-, Ottawa-Ontario,											Projected Expenditures												
Item	Description	Class	Status	Present Cost	First Occur.	Cycle	No. Occurr.	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	
6	ELECTRICAL																						
6.1.2	Replace Wall Sconces in Corridors Every 2nd Corridor Refinish	3	Forecasted	\$8,627	2019	20											\$10,310						
7	MISCELLANEOUS																						
7.2.1	Replace Intercom System	3	Forecasted	\$34,821	2028	20																	
7.3.1	Reserve Fund Study Update With Site Visit	3	Forecasted	\$5,763	2010	6		\$5,763						\$6,490						\$7,309			
7.3.2	Reserve Fund Study Update	3	Forecasted	\$3,458	2013	6					\$3,670						\$4,133						
Total Projected Expenditures								\$10,280	\$575,500	\$607,442	\$30,889	\$21,790	\$42,535	\$54,742	\$0	\$17,151	\$222,293	\$85,701	\$289,269	\$7,309	\$37,202	\$26,562	

CCC 750 Merivale Gardens, Glenridge Road, Ridgemark Private, Garden Glen Private-, Ottawa-Ontario,										Projected Expenditures												
Item	Description	Class	Status	Present Cost	First Occur.	Cycle	No. Occurr.	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
1	STRUCTURE																					
1.1.1	Foundation Wall Leakage Investigation and Repair allowance	3	Forecasted	\$21,957	2011	5			\$30,142					\$33,279					\$36,743			
2	BUILDING ENVELOPE																					
2.1.1	Repoint Brick	3	Forecasted	\$72,542	2012	20									\$112,148							
2.1.2	Caulking	3	Forecasted	\$33,071	2015	20												\$54,256				
2.2.1	Replace Windows (95% of the cost)	3	Forecasted	\$426,705	2040	35																
2.3.1	Paint Entrance Doors	3	Forecasted	\$5,454	2015	35																
2.3.2	Replace Sliding Doors	3	Forecasted	\$157,847	2040	35																
2.4.1	Roof evaluation	3	Forecasted	\$4,517	2010																	
2.4.2	Re-roof Built-up Roofing Block 344-362	1	Forecasted	\$88,560	2011	25													\$148,198			
2.4.3	Repair Roofing Allowance	3	Forecasted	\$14,586	2020	7				\$20,424							\$23,461					
2.4.4	Re-roof Built-up Roofing Block 380-398, 273-267	3	Forecasted	\$121,133	2012	25														\$206,760		
2.4.5	Re-Roof Built-up Roofs Blocks 37a-37c, 39a-39c, 213-217	1	Forecasted	\$80,353	2011	25													\$134,464			
2.4.6	Re-Roof Built-up Roofs Blocks 223-241, 300-304, 35a-35c	3	Forecasted	\$130,296	2012	25														\$222,400		
2.4.7	Re-Roof Built-up Roofs Blocks 275-279, 201-207	1	Forecasted	\$64,065	2011	25													\$107,208			
2.4.8	Re-roof Modified Bitumen Roofs Blocks 404-408, 257-261, 247-251, 209-211	3	Forecasted	\$96,254	2030	25							\$143,028									
2.4.9	Re-Roof Modified Bitumen Roofs Blocks 334-340, 310-328, 368-374	3	Forecasted	\$153,707	2032	25									\$237,628							
2.4.10	Reclad Chimneys	1	Forecasted	\$100,800	2011	1	2															
2.5.1	Allowance to Investigate and Locally Re-Insulate Mansard Cavities	3	Forecasted	\$28,250	2011																	
2.5.2	Replace Asphalt Shingles at Mansards - Phase 1	3	Forecasted	\$159,083	2011	15			\$218,387													
2.5.3	Replace Asphalt Shingles at Mansards - Phase 2	3	Forecasted	\$159,083	2012	15				\$222,755												
2.5.4	Replace Soffit	3	Forecasted	\$74,809	2044	45																
3	FIRE SAFETY																					
3.1.1	Replace Fire Alarm Panels	3	Forecasted	\$67,153	2028						\$95,911											
3.1.2	Replace Fire Alarm Wiring and Devices	3	Forecasted	\$86,274	2068																	
3.1.3	Repair/replace Fire Hydrants	3	Forecasted	\$25,649	2013																	
4	FINISHES, FURNITURE AND EQUIPMENT																					
4.1.1	Refinish Entrance Lobbies	3	Forecasted	\$25,416	2033	25										\$40,078						
4.2.1	Refinish Corridors including door painting	3	Forecasted	\$55,719	2020	10							\$82,796									
5	SITE																					
5.1.1	Stain Fencing and Gazebo	3	Forecasted	\$6,510	2011	5			\$8,937					\$9,867					\$10,894			
5.1.2	Retaining Wall Replacement Precast and Cedar	3	Forecasted	\$153,789	2019	40																
5.1.3	Replace Fencing and Gazebo	3	Forecasted	\$204,181	2021	20																
5.1.4	Retaining Wall Repairs Precast and Cedar	3	Forecasted	\$7,189	2029	10						\$10,473										\$12,767
5.2.1	Repair/Asphalt Pavement	3	Forecasted	\$20,131	2014	5						\$29,327					\$32,379					\$35,750
5.2.2	Overlay Asphalt Pavement	3	Forecasted	\$28,758	2023	15															\$50,068	
5.2.3	Replace Asphalt Pavement	3	Forecasted	\$208,495	2039	30																\$370,255
5.3.1	Repair Buried Services	3	Forecasted	\$14,638	2011	7		\$19,701							\$22,630							\$25,995
6	ELECTRICAL																					
6.1.1	Miscellaneous Electrical Repairs	3	Forecasted	\$14,379	2016	10			\$19,739										\$24,062			

CCC 750 Merivale Gardens, Glenridge Road, Ridgemark Private, Garden Glen Private-, Ottawa-Ontario,												Projected Expenditures											
Item	Description	Class	Status	Present Cost	First Occur.	Cycle	No. Occurr.	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	
6	ELECTRICAL																						
6.1.2	Replace Wall Sconces in Corridors Every 2nd Corridor Refinish	3	Forecasted	\$8,627	2019	20																\$15,320	
7	MISCELLANEOUS																						
7.2.1	Replace Intercom System	3	Forecasted	\$34,821	2028	20					\$49,733												
7.3.1	Reserve Fund Study Update With Site Visit	3	Forecasted	\$5,763	2010	6					\$8,231						\$9,269						
7.3.2	Reserve Fund Study Update	3	Forecasted	\$3,458	2013	6		\$4,654						\$5,241						\$5,902			
Total Projected Expenditures								\$24,355	\$277,205	\$243,179	\$153,875	\$39,800	\$225,824	\$48,388	\$372,406	\$40,078	\$65,110	\$54,256	\$461,569	\$435,063	\$50,068	\$460,086	

APPENDIX C
RESERVE FUND CONCEPTS



APPENDIX C RESERVE FUND CONCEPTS

The following concepts and definitions are used in calculating the required contributions to the Reserve Fund:

Life Expectancies

Life expectancies are our estimates based on our observations of the performance of similar materials systems or components at other buildings, literature we have read, and/or recommendations made to us by manufacturers or suppliers.

We estimate two factors when considering the timing of future repairs or replacements:

- a) Time to first occurrence or "Time" is our estimate of when the work will be required. This estimate is based on the apparent condition of the item and may not simply be the time remaining in the standard estimated life cycle.
- b) Life cycle or "cycle" is the frequency at which the repair or replacement is normally expected to be required. The time cycle following a repair or replacement may be different from the original service life as a result of changes in the materials or equipment employed, and changes in technology.

We endeavour to estimate the timing of repairs to reflect the necessity of maintaining the building standards and achieving this at the lowest cost. Some items that are not critical to the building operation (such as finishes, site work) may be deferred from our recommended time, however, this may result in a decrease in building standards. For some items, particularly those such as leakage, there may be an increase in the extent of repairs and costs if the required work is deferred.

For some building materials and systems, the actual service life is difficult to estimate as a result of a short history of application or use in other similar buildings. This can be particularly true of mechanical and electrical systems. While the estimated service lives for these components may be exceeded, it is recommended that the funds be available for the repairs or replacements at the times indicated.

Costs

Costs given represent our opinion regarding the current dollar value for the work described. They are based on our assumptions regarding the likely scope of the work, and the materials or equipment that will be required. We base our opinion on comparing the assumed scope with costs of similar work at other buildings, using construction estimating manuals, or by discussions with contractors. Replacement costs are often much different than new construction costs as a result of disposal, difficulties with access and the requirement to work around finishes. Costs are intended to include GST and where appropriate, allowances for design, inspection and testing that may be

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required to execute the work.

More accurate cost estimates will require a detailed scope of work to be developed, design completed, bid documents prepared, and quotations from qualified contractors obtained.

Limits to Accuracy

Given the level of review completed for a reserve fund study and the uncertainties associated with predicting the future, we can in no way guarantee the precision of the cost data or timing. While we apply our experience and expertise to our estimates, the exercise is not intended to be exact, but rather to reduce the risk of long term under-funding or over-funding. We cannot be responsible for under-funding or over-funding identified in future reserve fund studies.

Fiscal Year

Our naming convention for years is that a year is labelled according to the calendar year it ends in regardless how many actual months fall in each calendar year.

Opening Balance

The opening balance is the amount in the reserve fund at the beginning of the year the study is prepared, as taken from the previous year and audited financial statements (when these are made available to us).

Minimum Reserve Fund

The present value of the lowest allowable Reserve Fund balance is referred to as the "Minimum Balance". This level is reached at what we term the "critical years". These years are highlighted on the cash flow tables.

The minimum balance could be set at zero. However, we generally recommend a higher amount as a factor of safety against estimates that prove to be inaccurate, unexpected repair items becoming necessary in the future and changes legislated by Building Authorities.

Interest Rate and Interest Earned

The estimated annual interest rate earned on savings, assuming these monies are re-invested into the Reserve Fund, should not necessarily be the current interest rate, but should reflect expected average trends.

It is not the assumed interest rate but the spread between interest and inflation that most affects Reserve Fund planning.

This report is subject to specific limitations. See Appendix E.



Our analysis assumes that interest earned on the reserve balance is available in the year earned. In some instances, with longer term investments, the interest does not actually come available until maturity. Managing Reserve Fund investments and expenditures is required to assure positive cash flow in critical years, when the balance is at its lowest.

Cost Inflation Rate

The “cost inflation rate” is the estimated annual inflation rate used to increase the estimated costs of repairs and replacements. As interest earned on money has historically been greater than inflation, the spread between interest and inflation act to decrease the level of contribution to the Reserve Fund (assuming interest monies are re-invested into the Reserve Fund).

Minimum Reserve Fund Inflation Rate

This refers to the percentage rate at which the minimum Reserve Fund balance is increased. This ensures the minimum Reserve Fund balance at the critical years is not devalued as a result of inflation. This is usually the same as the inflation rate, unless there is a desire to accelerate the minimum balance at a rate greater than inflation.

Contribution Phase-in

The Reserve Fund contribution can be increased at a level above inflation each year in order to phase in a required increase. This can be used to prevent abrupt changes in the level of contribution and to provide a stable funding plan which balances the interests of both present and future owners.

First Critical Year

In cash flow analysis, a critical year is the year in which the fund balance reaches the minimum reserve fund balance you specify.

Expenditures up to the first critical year are used to calculate the Reserve Fund contribution. Deferring work beyond the first critical year can reduce contribution requirements by providing further time to accrue the required funds for that work. This reduction can be significant if the first critical year occurs soon (within about 10 years).

If the first critical year is further away (20 years or beyond), changes in work timing tend to have a smaller effect on the Reserve Fund contributions. Other variables such as the difference between interest and inflation rates or the contribution inflation rate can have a greater effect owing to the increased time for compounding.

Subsequent Critical Years

The subsequent critical years (if they occur within the scope of the analysis) govern the contributions required beyond the first critical year. The level of contribution required following the first critical year may decrease. A significant decrease is a reflection of

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previous under-funding to the Reserve Fund, or an excessive amount of work planned or required within the near future.

The rate of contribution increase after the first critical year can usually be reduced to match inflation, even if a rate higher than inflation is required until the first critical year.

Analysis Period

Our analysis checks to ensure the critical year(s) which govern the required Reserve Fund contributions have been identified. For some studies, this can involve analysing projected cash flow beyond 50 years. While the analysis period may exceed 30 years, we typically only print a 30 year cash flow plan.

This report is subject to specific limitations. See AppendixE.



APPENDIX D
SCOPE OF WORK



APPENDIX D SCOPE OF WORK

Authorization

This study was commissioned by the Board of Directors of Ottawa Carleton Standard Condominium Corporation No. 750, in accordance with our proposal dated May 14, 2009.

Purpose

The Condominium Act requires that contributions to the Reserve Fund be calculated on the basis of expected repair or replacement costs, and life expectancies of the common elements.

We include items which typically require replacement because their service life is shorter than the service life of the building (such as caulking, roofing, equipment, etc.). We also include items which would not have been anticipated to be required when the building was new, but which have become necessary due to building specific deterioration (concrete repair related to poor durability, window modifications due to loss of internal seals, etc.). There may be expenses which arise which we have not anticipated, related to concealed conditions or unexpected deterioration.

As long as these relate to the repair or replacement of the common elements, they can often be paid out of the Reserve Fund provided the study is updated to account for the impact of these expenditures.

If you are in doubt about whether or not an expenditure can be paid for out of the Reserve Fund, we recommend you check with your legal counsel or chartered accountant.

Survey Method

Halsall Associates Limited visited the site on August 4, 5 and September 23 and reviewed the following components:

- ▶ The exterior walls from grade;
- ▶ The windows from interior and exterior;
- ▶ The roofs from; and
- ▶ The perimeter site.

The following documents were available for use in this study:

- ▶ Architectural drawings prepared by Andrews Brothers Construction.
- ▶ Document and Declaration dated February 23, 2007

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Mr. Stefan Novak, Property Manager from Condominium Management Group answered questions about the history of performance of the various systems, described existing capital plans, etc.

A financial questionnaire was completed by the Corporation and the results were incorporated.

During the site visits, unit owners provided additional background information of the complex.

This report is subject to specific limitations. See AppendixE.



APPENDIX E

LIMITATIONS



LIMITATIONS

- ▶ No party other than the Client shall rely on the Consultant's work without the express written consent of the Consultant. The scope of work and related responsibilities are defined in the Conditions of Assignment. Any use which a third party makes of this work, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. Decisions made or actions taken as a result of our work shall be the responsibility of the parties directly involved in the decisions or actions. Any third party user of this report specifically denies any right to any claims, whether in contract, tort and/or any other cause of action in law, against the Consultant (including Sub-Consultants, their officers, agents and employees).
- ▶ The work reflects the Consultant's best judgement in light of the information reviewed by them at the time of preparation. Unless otherwise agreed in writing by Halsall, it shall not be used to express or imply warranty as to the fitness of the property for a particular purpose. This is not a certification of compliance with past or present regulations. No portion of this report may be used as a separate entity; it is written to be read in its entirety.
- ▶ This work does not wholly eliminate uncertainty regarding the potential for existing or future costs, hazards or losses in connection with a property. No physical or destructive testing and no design calculations have been performed unless specifically recorded. Conditions existing but not recorded were not apparent given the level of study undertaken. Only conditions actually seen during examination of representative samples can be said to have been appraised and comments on the balance of the conditions are assumptions based upon extrapolation. We can perform further investigation on items of concern if so required.
- ▶ Only the specific information identified has been reviewed. The Consultant is not obligated to identify mistakes or insufficiencies in the information obtained from the various sources or to verify the accuracy of the information.
- ▶ Halsall is not investigating or providing advice about pollutants, contaminants or hazardous materials. This work is included only in the mandate of the environmental consultant.
- ▶ Budget figures are our opinion of a probable current dollar value of the work and are provided for approximate budget purposes only. Accurate figures can only be obtained by establishing a scope of work and receiving quotes from suitable contractors.
- ▶ Time frames given for undertaking work represent our opinion of when to budget for the work. Failure of the item, or the optimum repair/replacement process, may vary from our estimate.



APPENDIX F

HALSALL PROFESSIONAL LIABILITY INSURANCE CERTIFICATE





15 Alstate Parkway, Suite 220
Markham, Ontario L3R 5B4
Phone 905-305-1054
Toll Free 1-800-361-9080
Fax 905-305-1093

Pro-Form Insurance Services

Insurance • Financial Services

www.proforminsurance.ca**CERTIFICATE OF INSURANCE**

TO: To Whom it May Concern

THIS IS TO CERTIFY THAT insurance has been effected as shown below:

INSURED: Halsall Associates Limited, and other insureds who may be identified in the policy.

INSURER: XL Insurance Company Limited

POLICY NO.: DPX 9430208

POLICY EXPIRY: June 30, 2010, 12:01 A.M. Local Standard Time

COVERAGE: Professional Liability Insurance

LIMIT OF LIABILITY: CDN\$1,000,000 each claim and in the aggregate annually CDN\$1,000,000

This certificate is valid at the date of issuance.

This certificate is issued for information only, and confers no rights on any holder and imposes no liability upon the insurer, which assumes no responsibility whatsoever in furnishing this certificate.

The Policy contains all the terms and conditions of coverage. The policy is not limited to claims by or in connection with the above-noted certificate-holder. The Limit of Liability may be inclusive of damages and claims expenses; the aggregate limit is the maximum available for all covered claims.

PRO-FORM INSURANCE SERVICES

Dated: June 11, 2009

By: _____


Pro-Form Insurance
Services
Authorized Representative

APPENDIX G
REPAIR AND REPLACEMENT RATIONALE



GENERAL COMMENTS

Concealed Conditions: The performance and durability of many building components is often dependent upon the condition of concealed elements. These cannot be evaluated by visual review. Dis-assembly and/or testing would be required. Expected future performance and the scope and timing of repairs and replacements are based on judgment influenced by visual appearance, experience with performance of similar components at other buildings, and the performance history at this building as discussed with property management and/or service contractors.

Changes to the plan may be required to incorporate findings from future testing and/or repair programs. We recommend further investigation or testing where identified to be necessary to develop an appropriate management strategy. Resulting changes to budgets will need to be incorporated into reserve fund updates.

Comprehensive Service Contracts: Comprehensive Service Contracts can promote proper maintenance and require the service contractor to replace specific components as is necessary to restore service to the specified level. In some instances, these replacements also lead to building component renewal, reducing the need to draw upon the Reserve Fund for repairs or replacements.

We identify components which are expected to be replaced outside of the Reserve Fund based on reviewing the Contract scope(s), and discussion with Property Management to check the history of previous replacements undertaken by the service contractor. We do not complete a legal review of the Service Contract to evaluate the conditions and limitations associated with replacement under the Contract(s).

Even where service contracts exist, our experience has been that there is still a need for budgeting for major programs of repair or replacement. Service Contracts only cover limited periods of time. Once major equipment has reached the end of its service life, has become obsolete or is otherwise impractical to maintain, it may not be possible to renew the Contract at the end of the term. Replacement from the Reserve Fund then becomes necessary.

Adequate Maintenance: Prior to the time of an identified program of renewal, local repairs, replacements and maintenance are necessary paid from the operating budget or reserve contingency. These are assumed to be diligently completed to assure that the expected remaining service life is achieved. If performance is poorer than expected, increased levels of repair or an earlier time for renewal may need be accommodated by the reserve fund. This should be reflected in future reserve fund updates.

This report is subject to specific limitations. See Appendix E



1 STRUCTURE

Foundations: Unless problems with settlement or deterioration are detected, building foundations are generally not expected to require repair or replacement within the foreseeable future.

Leakage problems may develop if ground water drainage systems become plugged and/or waterproofing treatments which may be applied to below grade walls or floors become rigid and split at cracks or penetrations. These types of problems can usually be managed by local excavation to allow waterproofing or restoring drainage, or by periodic injection sealing from the interior. Unless general problems with leakage develop, only an allowance is provided to accommodate these types of local repairs.

Main Building Structure: It is assumed that the original structural design and construction met applicable Building Codes. The structure is generally contained within the building envelope, and protected from the deteriorating effects of weather. Except as otherwise noted, the main building structural elements are generally not expected to require repair, replacement or upgrading within the time frame of this study. This relies upon proper maintenance and repair of other building components to assure that conditions which might lead to deterioration do not develop.

Balcony Guards and Dividers: Balcony guards are subject to deterioration from exposure to weather. Painted finishes degrade from UV (sunlight) and moisture. Wear and tear imposed by residents and maintenance activities causes damage. Steel elements can begin to corrode (rust). Gaskets or seals which may be present can become rigid and split.

If a pro-active program of repair and maintenance is implemented to limit deterioration, it is often possible to defer the need to replace the guards. However, appearance tends to degrade with repeated re-painting and repair programs. Planning for future replacement is generally recommended to avoid escalating repair cost, and to maintain acceptable aesthetics.

2 BUILDING ENVELOPE - CLADDING, WINDOWS AND DOORS

General Requirements: The exterior walls include components which resist wind and rain, and thermal insulation to assist in maintaining interior comfort. Many elements are concealed. A visual review is only able to check for evidence of problems which may have developed. A more comprehensive evaluation usually requires test openings and/or performance testing.

Local leakage may occur from time to time. This may be adequately addressed by local repair under the operating budget. If we expect the magnitude of these repairs to be significant enough, we include a periodic repair allowance as part of the reserve.

This report is subject to specific limitations. See Appendix E



Insulation is usually incorporated within the cladding assembly. Most common types of insulation do not deteriorate providing they are not exposed to frequent or excessive wetting as may occur with rain or air leakage. Upgrading thermal insulation may become desirable in the future in response to rising energy costs, but is not included in this plan unless a specific need were identified. If this were to be considered, this would usually be completed in conjunction with interior finish replacement or general cladding renewal.

An “air barrier” is required in modern cladding systems. This limits energy loss from air leakage, as well as helping to resist rain water penetration, moisture accumulation (condensation) and insect ingress (cluster flies). Many buildings, particularly those constructed prior to about the late 80s may have a poor air barrier. However, unless specific and general problems related to air leakage are detected, upgrading by air sealing defects is not included in the plan. Performance testing should be completed to identify typical problem areas and the potential benefits related to air sealing. If required, maintaining air seals that may include interior caulking at windows, seals between floors and walls and seals at outlets or other penetrations is assumed to be completed paid from the operating budget.

Vapour retarders are also required to be incorporated within cladding to resist moisture flow into the cladding. These are generally seen to be less critical to wall performance than the air barrier.

Water shedding details frequently play an important part in promoting durability. Details that allow rain water to run onto adjacent components should be identified to consider whether they need to be corrected to promote durability. Improvements and repairs required to promote water shedding are assumed to be managed as part of maintenance, or in conjunction with other repair programs.

A cleaning program (a supplement to regular maintenance such as window washing) may become desirable to remove pollutants which may collect on the cladding to maintain an acceptable appearance. This is a discretionary item. Whether or not this becomes necessary is a function of the cladding finishes, details related to water shedding, and local environment. We include this work only where we expect appearance to degrade excessively so that this is desired by owners.

Sealants and Caulking: Exterior sealants are generally relied upon to provide a weather seal. These tend to become rigid and split with age and exposure to UV (sunlight). Various degrees of defects are also incorporated at the time of application as a result of poor workmanship. There are also industry problems with respect to poor or improper detailing, particularly with window systems. It is often found that a program of local repair can be effective at deferring the need to complete a program of general replacement. Depending on the expected magnitude of this work, this may or may not require a reserve item. Before general problems with deterioration develop, renewal should be completed. This work is best timed in conjunction with other exterior repairs or replacements. High performance sealant materials should be employed to prolong the service life.



Brick and Concrete Masonry: Brick and concrete masonry can develop various deterioration problems. The actual performance varies considerably between buildings, according to the quality of materials, design and workmanship. To fully evaluate masonry walls requires performance testing and test openings. We estimate repair allowances based on reports and observations, as well as experience with similar cladding systems at other buildings.

Even brick and mortar which meets modern standards can be vulnerable to deterioration (spalling) when exposed to moisture and freeze-thaw action. Problems with cracking can also develop where there are inadequate joints to allow movement which occur with thermal changes and structure flexibility.

Rain water can normally penetrate masonry. Leakage problems can develop if where internal drained cavities and/or flashings are inadequate to manage this water. Maintaining the exterior surface to limit water ingress and local masonry removal and internal repair to internal flashings can often be effective in managing these types of problems.

Embedded steel elements which may exist can corrode. Even if galvanized, wetting can lead to this protection being consumed. Steel elements can include connectors securing the outer masonry to the back-up, support angles at floor slabs and/or over windows, and reinforcing embedded within the masonry. Expansion which occurs with corrosion may lead to the exterior spalling. Stainless steel retrofit anchors are available to replace corroding connectors with little disruption. Other steel elements tend to require masonry removal to allow replacement or applying protection. We include an allowance for the repair we expect to be necessary.

Precast and Cast-in-Place Concrete: Cast-in place concrete is subject to deterioration from carbonation as described for exposed structural elements (see Section 1). In addition, cast-in-place concrete cladding tends to be subject to problems with cracking from shrinkage and movements. These cracks need to be maintained sealed to resist water leakage.

Precast walls are also subject to deterioration from carbonation (see Section 1). However, there should be a lower risk for these problems as the factory fabrication allows improved quality control related to concrete quality and concrete cover over reinforcing steel. Unless problems are detected, only minor problems are anticipated. Cracks may require sealing. Structural anchors securing panels are generally concealed and can be subject to corrosion damage if exposed to frequent wetting. Unless problems are detected, the interior air barrier and exterior seals are assumed to be properly maintained so that this does not develop within the time frame of this study.

Stucco and Exterior Insulated Finish Systems (EIFS): Stucco and exterior finish cladding systems (EIFS) can develop problems with internal deterioration that could only be detected by further evaluation including test openings. Problems which develop could involve the mesh reinforcing, water resisting sheathing wraps, sheathing board, studs, and/or fasteners. However, unless general problems are detected or expected to occur, it is assumed that the cladding is properly designed and constructed, and will be maintained so that general replacement is avoided within the time frame of this study.

This report is subject to specific limitations. See Appendix E



Local repairs are expected to be effective in deferring the need to replace the cladding. These would include repairing local defects with cracking or deterioration, and applying a new vapour permeable protective coating to improve the exterior weather seal and renew appearance.

Sheet Metal Cladding: Sheet metal cladding service life varies according to material and finish types.

These elements are subject to wear and tear from ice and maintenance activities. Where the resulting damage is not aesthetically acceptable, replacement becomes necessary. Replacement of many of these items becomes necessary in conjunction with roof renewal.

Painted finishes degrade with exposure to UV (sunlight) and exposure to pollutants. While field painting to renew the appearance is possible in some instances, the quality of finish may not be as aesthetically pleasing or as durable as the original finish.

Galvanized steel is protected from corrosion only as long as the zinc coating exists. Once the zinc coating is consumed, corrosion begins. This often first becomes evident at cut edges. Once widespread corrosion develops, replacement becomes necessary.

Paint and Coatings: Paints and other architectural coatings provide varied performance that depends on factors including quality of material, workmanship in preparation and application, exposure to moisture, UV (sunlight), and wear and tear. Unless problems with inadequate bond are detected, it is generally assumed that re-finishing can occur over the existing finishes with limited surface preparation. Use of a high performance coating to obtain a longer service life is generally recommended as the least cost strategy.

The timing for re-finishing is somewhat discretionary. As long as the underlying materials are not allowed to become exposed and allow progressive deterioration, timing may be deferred as long as the degrading appearance is deemed to be acceptable.

In conjunction with re-finishing, an allowance should be provided to accommodate local repairs to the substrate which may be necessary to provide a sound and even surface.

Wood Siding: Wood siding performance is dependent upon being maintained in a dry condition. It relies upon the protective finish, and the design and workmanship of the overall installation. Unless problems are detected, it is assumed that the design and construction are acceptable and do not result in premature deterioration.

Programs of local repair and repainting are expected to be capable of deferring the need to replace the wood siding. This may require local replacement at areas which deteriorate prematurely. However, deterioration is expected to increase with time, leading to general problems such as rot, splitting, warping, and corrosion of fasteners. Replacement or cladding over the existing becomes necessary as it will eventually no longer be practical to maintain the siding or achieve an acceptable appearance by repainting.

This report is subject to specific limitations. See Appendix E



Hardboard Siding: Hardboard siding performance is dependent upon being maintained in a dry condition. It relies upon the protective finish, and the design and workmanship of the installation. Unless problems are detected, it is assumed that the design and construction are acceptable and do not result in premature deterioration.

Hardboard siding is provided with a durable factory finish which is intended to provide a long service life. We expect that once the finish has visibly degraded, other problems such as warping or deterioration at poorly sealed cut joints will mandate a program of general replacement. Until this time, local problems are expected to be managed on an as-needed basis as part of maintenance and/or in conjunction with other maintenance and repair activities.

Vinyl Siding: Vinyl siding durability is primarily a function of the manufactured quality and exposure to UV (sunlight). Plasticizer loss is expected to eventually result in the siding becoming brittle. The appearance of the finish may become unacceptable as a result of chalking and staining. This can be a particular problem with darker colours. Underlying sheathing wrap, sheathing, and/or siding fasteners may begin to deteriorate from long term exposure to moisture. A program of removal and replacement is expected to become necessary.

Window and Door Systems - General: Window and door performance as mandated by building codes is often found to be inadequate. Leakage problems can develop with wind driven rains. Performance testing would be necessary to check the level of resistance to leakage. Unless reported or observed to be a general problem, we assume that acceptable performance is managed by maintenance.

With weatherstripping wear, the effectiveness of the weather seal degrades. Replacement becomes necessary to provide a reliable level of resistance to leakage, to control energy loss and maintain comfort. It may be preferable to undertake a program of general weatherstripping replacement rather than replacing it in a piecemeal fashion. This allows greater quality control. Performance testing should be completed to identify the full scope of work which will be necessary. Drainage improvements, and hardware maintenance would likely be included in this rehabilitation program.

Glazing tape seals at glass and metal panels become less effective with thermal movements and pumping action from winds. The glazing tape tends to be pushed out of the joint. If leakage develops, an increased rate of sealed insulated glass unit (IGU) failure may occur. However, these seals are also replaced in conjunction with IGU replacement. Exterior cap sealing (needle glazing) is recommended if leakage problems are expected and the IGU are generally expected to have sufficient remaining service life to warrant this investment.

Some window systems have internal seals located within drained pockets which are necessary to avoid leakage. These seals tend to become rigid with age and may split with thermal movements and require re-sealing. Leakage may become evident on the interior, or may drain into cladding systems and lead to concealed deterioration. Detailed evaluation and testing would be necessary to check for current problems. This is recommended in conjunction with planning for a general program of rehabilitation.

This report is subject to specific limitations. See Appendix E



If proper maintenance and repair is implemented to protect windows and doors, it is expected that replacement could be deferred to beyond the time frame of this study. Where we expect maintenance and repair to become too costly, and/or inadequate to meet owners expectations, we recommend replacement. In addition, owner considerations with respect to aesthetics, comfort and ease of operation may create a discretionary desire to upgrade and replace these elements. This decision should be made prior to investing in other related repair programs so that the related portions of the reserve fund can be put towards the replacement cost.

Aluminium Systems: It is difficult to predict whether or not modern aluminum framed, double-glazed windows and doors will require full replacement within the timeframe of the study. Pending actual industry experience, which will only come with time, it seems reasonable to assume that replacement will eventually be required. This may be necessary due to material degradation (corrosion of frames, deterioration of concealed elements) or to meet resident's increased expectations for serviceability, aesthetics and comfort. These expectations are likely to be raised by advances in window technology.

The finishes applied to aluminium are subject to deterioration depending upon the material and exposure to UV (sunlight). High performance fluoropolymer coatings are available to provide a longer service life. However, lower quality finishes are common at many residential buildings and chalk aggressively. Cleaning to eliminate the easily marked chalk can actually hasten coating removal. Field re-coating (repainting) is expected to become necessary. Industry improvements in materials and application techniques are expected to become available to service this growing demand.

Anodized aluminium finishes are expected not to require work within the life of this study. Problems with pitting from exposure to pollutants are becoming evident at some buildings, but this is assumed to be avoided by regular cleaning.

Wood Windows and Doors: The durability of wood framed windows depends highly on initial quality of materials and assembly, and the extent to which they are exposed to moisture. The wood is exposed to interior humidity. There is also the potential for moisture ingress at internal joints and joints at the surrounding cladding. Preventative maintenance to maintain the protective paint finish and promptly correct leakage problems is assumed to be provided in estimating the replacement time. Aesthetic considerations and the desire to eliminate this ongoing maintenance may influence the replacement timing.

Vinyl Framed Windows and Doors: Vinyl window systems are expected to deteriorate with exposure to weather and ultraviolet light. Loss of plasticizer results in the vinyl becoming brittle. Welded joints may give way.

Vinyl Clad Wood Windows and Doors: Vinyl clad wood windows have been found to deteriorate by allowing moisture ingress at joints, or by detachment of the vinyl. The underlying wood is often not treated or protected. If moisture ingress occurs, the vinyl can impede drying, promoting accelerated wood rot.

This report is subject to specific limitations. See Appendix E



Sealed Insulating Glazing Units (IGU): Sealed window units fail when the perimeter seal allows moisture to penetrate the cavity between the panes of glass. This moisture obscures vision by condensing on and scumming the inside surfaces. Replacement becomes necessary for aesthetic reasons. Factors which affect IGU durability include the quantity of desiccant available in the spacer to absorb penetrating moisture, the vapour resistance provided by the perimeter seal, and the extent to which the IGU is exposed to moisture penetrating the glazing pocket. This moisture can arise from deteriorating external seals, or problems with interior condensation. It is expected that these conditions will be promptly corrected so that accelerated deterioration does not occur.

In most residential window systems, sealed units are replaced from the interior of the building. However, in some systems replacement is completed from the exterior, requiring the higher cost of access. Some windows are “channel glazed”, which can also require sash replacement when the IGU fails.

IGU failure tends to occur in a distributed fashion, requiring replacement on a frequent basis. Early failures tend to occur where there are local problems with poor workmanship in manufacturing or installation, or where there is greater exposure to moisture. We attempt to budget for progressive replacement, based on the apparent performance and experience at other buildings. Property management should maintain records to enable monitoring the actual IGU replacement rate.

Skylights: Skylight systems are exposed to increased demands with respect to UV (sunlight) exposure on seals, direct rain fall, and snow and ice accumulation. Acceptable performance usually relies upon concealed seals and drainage to collect and remove water which may penetrate the outer surface. If leakage problems develop, rigorous maintenance to exterior seals can sometimes provide a lower initial cost maintenance strategy to defer a program of rehabilitation. However, dis-assembly is eventually expected to become necessary to allow renewing the system including interior seals and glazing.

Acrylic dome skylights eventually require replacement when the plastic deteriorates and fades from UV exposure.

Steel Clad Doors: Steel clad doors provide good resistance to wear and tear. The painted finish can be maintained. However, these doors frequently provide poor resistance to leakage unless sheltered or provided with a storm door. Unless specific problems are detected, we generally do not expect these doors to require repair or replacement within the time frame of this study.

Overhead Doors: Overhead doors tend to require repair as a result of frequent use and impact damage. Required repairs and replacements of components are generally managed from the operating budget or reserve contingency. If the cost of ongoing repair becomes excessive, replacement with a more durable, less maintenance intensive system would be appropriate.

3 BUILDING ENVELOPE - ROOFING

This report is subject to specific limitations. See Appendix E



Sloped Asphalt Shingled Roofing: Sloped asphalt shingled roof performance is influenced by variables that include shingle quality, exposure to sunlight, the substrate quality, and ventilation beneath the roofing. Manufacturers often assign specific warranty ratings to shingles (such as 15, 20 or 25 years). In many cases, these are expected to be conservative service lives, actual performance should exceed these ratings.

While local repairs can be completed to areas which deteriorate sooner than the field of the roof, the ability to do so is limited because of difficulties sealing to adjoining brittle shingles, and resulting unacceptable variations in appearance. Removal of all existing shingles prior to applying new is best practice, promoting performance and avoiding increased future disposal costs. Employing high performance shingles at the time of re-roofing to achieve a long service life for the new roof is generally recommended as it reduces ownership costs.

Sheet Metal: Sheet metal components may include sloped metal roofing systems, protective metal flashings, and drainage systems such as eaves troughs and down spouts.

These elements are subject to wear and tear from ice and maintenance activities. Where the resulting damage affects function or becomes aesthetically unacceptable, replacement becomes necessary. Replacement of many of these items becomes necessary in conjunction with roof renewal.

Painted finishes degrade with exposure to UV (sunlight) and exposure to pollutants. While field painting to renew the appearance may be possible in some instances, the quality of finish is generally not as aesthetically pleasing or as durable as the original finish. As a result, this is generally only considered as an option where it is expected the resulting appearance would be acceptable and the cost for deferring replacement could be justified.

Galvanized steel is protected from corrosion only as long as the zinc coating exists. Once the zinc coating is consumed, corrosion begins. This often first becomes evident at cut edges. Once widespread corrosion develops, replacement becomes necessary.

Soffits and Fascia Trim: Prefinished aluminium fascia trim and soffits is expected to have a lifespan up to about 40 years. The soffits are protected and the material should be able to perform as intended indefinitely. The material is often replaced as part of overall programs of cladding rejuvenation in order to blend aesthetically. We generally assume these components will eventually be replaced. The timing can vary considerably. Replacement is not expected if the cladding is masonry.

4 FIRE SAFETY

Separations: Unless specific problems are detected, fire safety components related to fire separations are assumed not to require general replacement or upgrading within the time frame of this study. This includes structure fire protection, wall and floor fire separations, suite doors with associated hardware, fire stopping and smoke sealing at penetrations (if provided), fire dampers at ducts or pipes.

This report is subject to specific limitations. See Appendix E



Local repair and replacements as part of the operating budget are assumed to be completed to keep these components in acceptable condition. No audit or design check was completed to confirm that these meet current code requirements unless otherwise noted.

Detection: Detection systems include the fire alarm system, smoke and heat detectors, signalling devices, and associated wiring. In conjunction with annual testing completed as part of the operating budget, local repairs and replacements are required. These activities are expected to lead to renewal of some devices. However, advances in fire alarm and detection technology tend to result in systems becoming obsolete. Once compatible replacement parts are no longer manufactured, it becomes difficult to continue to maintain the system. In addition, advances in fire safety may lead to upgrading being necessary. A general program of renewal is expected to become necessary

The actual scope of the renewal will need to be identified. It is normally expected that many components could be salvaged, particularly those renewed as part of operations. Components which may be salvaged are expected to include wiring, and some devices.

Some manufacturers are requiring replacement of all end-devices and wiring when their system is installed. Whether or not this is a long-term trend is unknown. Until more information is available, we only budget for replacement on a case-specific basis.

5 INTERIOR FINISHES

There are no common areas at this complex, so there are no common element interior finishes.

6 SITE

General Comments: Repairs to exterior site finishes are required to maintain safe conditions and an aesthetically pleasing environment. The scope and timing of work varies according to owner expectations, and the extent to which repairs and replacements are completed as part of operations. We attempt to judge the extent to which maintenance activities are likely to maintain acceptable conditions, and assume that a reasonably diligent program will be provided.

Repair and replacement programs related to site finishes need to be carefully coordinated with other programs. Work that requires removal of site finishes (such as underground roof deck re-waterproofing) or which may risk causing damage should be completed in advance of site finish renewal.



Asphalt Pavements: Asphaltic concrete pavements deteriorate as a result of loads from vehicles, oxidization with exposure to ultraviolet light, and embrittlement from age. Asphalt paving can also fail if the sub-grade materials are inadequate and/or are allowed to become excessively wet as a result of poor drainage or failure to seal cracks. Treatments available to address deteriorating pavement include:

- crack sealing and patch repairs
- an asphalt overlay
- milling the surface and installing an overlay
- removing the asphalt, proof compacting and installing new asphalt
- removing the existing asphalt and sub-base and installing new

Testing would be necessary to more accurately establish the appropriate scope of future repair or replacement. Unless significant problems are detected, local crack sealing and patch repair to defer replacement are assumed to be managed as part of operations. In the absence of visible distress, we assume that general asphalt and sub-base replacement can be avoided in favour of less costly options involving an overlay.

Concrete Curbs and Walkways: Concrete elements can deteriorate with sub-base heaving, long term exposure to weather, and impact damage. However, assuming adequate concrete quality was provided, some areas may not require repair or replacement within the time frame of this report. Some repairs and replacements are expected to be completed in conjunction with other site work such as re-paving. An allowance is included in the Reserve Fund if costs for this work are expected to become excessive.

Unit Pavers: Unless general problems with deterioration are detected, unit pavers are not expected to deteriorate within the time frame of this study. This assumes that there is adequate sub-base drainage and concrete quality. Local areas of settlement or damage which occur can normally be addressed by local replacement and re-setting as part of operations or in conjunction with other repairs. If costs for this work are expected to become excessive, an allowance is included in the Reserve Fund.

In situations where unit pavers are a dominant part of the site finishes, such as unit drives and roadways, a different strategy may be adopted. In such cases, Owners often choose to replace unit pavers for aesthetic reasons as colors and patterns become “dated”. Maintenance of larger areas also tends to result in a patchwork appearance as original pavers may no longer be available from the manufacturer. In these cases, Reserve allowances for full replacement can be considered.

Landscaping: Annual plantings and local replacement of dead items is expected to be managed as part of the operating budget. However, with age, trees and shrubs can become overgrown, root structures may become too large at areas, and planting beds may lose nutrients. If landscape maintenance is inadequate to address these problems, a general program of renewal may become necessary. Judgment is used to determine whether this needs to be included. The scope and budgets for these types of programs vary, only an expected order of magnitude budget can be established pending landscaping design.

This report is subject to specific limitations. See Appendix E



Landscape Irrigation System: Landscape irrigation piping can fail due to aging, plastic embrittlement and stress from thermal expansion/contraction and ground movements. Localized replacement of damaged sprinkler heads and piping is assumed to be handled from the operating budget as part of normal maintenance.

Wood Fences, Decks and Gazebos: Wood fences, decks and gazebos are subject to deterioration or rot over time with continued exposure to moisture. Regular application of protective coatings can act to prolong the service life. However, general problems eventually develop with long term weathering and may include rot, splitting, warping, and corrosion of fasteners.

Wrought Iron Fencing: Wrought iron fences are generally not expected to require replacement within the time frame of this study providing local repairs and painting are diligently carried out to address problems with rust.

Iron fences with a factory vinyl coating are generally not expected to require replacement within the term of this report.

Chain Link Fencing: Chain link fencing will require replacement when it corrodes, the linking becomes excessively worn, or it sustains physical damage. With vinyl coated fencing, the vinyl on the post/rails tends to shrink/crack and expose the underlying steel.

Masonry Landscape Walls: Brick or stone masonry landscape walls deteriorate as discussed in Section 3. These walls often deteriorate more aggressively than building walls as a result of increased exposure to rain water, ground water wicking, or cracking from shallow foundations that allow movement.

Retaining Walls: Retaining walls can be vulnerable to gradual overturning, particularly if not properly engineered to resist pressures applied by the earth and frost. In our experience, there are no standard construction guidelines, and these structures are often built without an adequate structural design. Deterioration can also occur with exposure to rain and ground moisture, and with freezing. Timber retaining walls provide a limited service life. Unless problems are detected, concrete retaining walls are assumed not to require replacement within the term of this study. For other retaining walls, we allow for replacement after a long service life, but this is really impossible to predict, as the ties and drainage system which define the service life are fully concealed from view.

Playground Equipment: Playground equipment may become obsolete as safety requirements evolve. Deterioration can also occur and eventually require replacement to maintain an adequate level of safety.

This report is subject to specific limitations. See Appendix E



Tennis Courts: The tennis court play surface can deteriorate by settlement, heaving, cracking or fading. There are various options for renewing the tennis court surfaces. The selected option and timing of work will depend upon the quality of finish desired by owners. Options may include ongoing patch repair, re-coating with acrylic paint, replacing with new asphalt, applying a penetration lift or sand carpet surface, or use of fabricated surfaces such as Astroturf. Further review and analysis may be necessary to select an appropriate solution. We identify a renewal strategy that we expect would be appropriate given the apparent finish quality desired. Until this time, local repairs are assumed to be completed as part of operations.

7 HEATING, VENTILATION AND AIR CONDITIONING

The HVAC systems are not common element at this site.

8 PLUMBING

Site Services: Site services include buried piping to supply water to the building (for fire and potable purposes), storm sewers to drain away rain and ground water, sanitary sewers to drain away waste. Periodic maintenance including pressure flushing and camera inspection is assumed to be managed as part of the operating budget.

Unless problems are detected, we do not expect there will be a need for widespread replacement within the time frame of this study. However, repairs may be needed to correct local problems that may develop, such as local collapse or breakage with ground settlement, leakage or major blockage or restrictions from deposits, or deterioration such as corrosion of steel piping. Identifying the actual locations, quantities, types and conditions related to these buried services would require further investigation. An allowance which is expected to be reasonable to accommodate limited problems is included in the Reserve Fund.

Drainage Plumbing: Drainage lines are generally not expected to require replacement within the time frame of the study unless specific problems with deterioration are identified. Flushing of all risers and main lines should be carried out every one to two years as an operating expense to avoid major expenses which can result from not flushing.

Swimming Pools and Hot Tubs: Swimming pool and hot tub equipment can deteriorate by corrosion or other mechanisms, depending upon factors such as the degree of maintenance and chemical balance of the water. Replacing filters, pumps, heaters and chemical treatment systems is usually necessary as part of the operating budget prior to a program of renewal under the reserve fund.

There are various options for renewing the swimming pool or hot tub basins. The selected option and timing of work will depend upon the quality of finish desired by owners. Options may include local repair and re-coating or general replacement with a new liner or specialty finish. Further review and analysis may be necessary for the Board to select an appropriate solution. A repair that is expected to be appropriate is assumed.

This report is subject to specific limitations. See Appendix E



Landscape Irrigation System: Components and sections of piping are expected to be replaced as-needed out of operating budgets. No reserve expenditures are included except in the case of an extremely complicated system.

9 WASTE DISPOSAL SYSTEMS

There are no common element systems related to waste removal that would impact Reserve Fund Planning.

10 ELECTRICAL SYSTEMS

Electrical Distribution: Insulation used on distribution wiring tends to become brittle with age and is expected to crack and split. Connections tend to deteriorate where subject to increased heating or stress from thermal movements. Power surges related to the utility service or lightening strikes can hasten deterioration. Maintenance including electrical thermography and local repairs is expected to be completed as part of the operating budget. This should be completed at least every three years, and more frequently for systems incorporating aluminium wiring. Once aged, portions of the system are expected to require replacement from the reserve fund. An allowance for a phased program of replacement is included. Further monitoring and evaluation will be necessary to establish the actual scope of work and rate of replacement which will be necessary.

Transformers: Transformers tend to fail abruptly once aged. This can be related to deterioration of insulation. Oil filled transformers should be scanned as part of the routine electrical thermal scans. Some transformers are owned by the local utility (generally pole mounted units, or those located in vaults owned by the utility). No costs should be incurred related to this equipment unless additional power becomes needed, requiring a transformer upgrade, or the equipment is damaged by uncontrolled leakage that is deemed to be the Corporation's responsibility. The Reserve Fund study therefore includes no allowances for utility-owned transformers.

Outlets and Switches: Local devices including electrical outlets, switches, and mechanical switchgear are assumed to be replaced as required as part of the operating budget, or in conjunction with programs of interior finish renewal or equipment replacement.

Light Fixtures: Light fixtures tend to require replacement as the associated finishes fade and deteriorate, as electrical insulation embrittles and cracks, with corrosion if exposed to exterior moisture, with vandalism, or if desired for aesthetic reasons. The discretion applied to the timing for light fixture replacement, and the quality of materials that are available varies considerably. Programs that are expected to be appropriate given the apparent quality desired are estimated.

Local repairs including replacing ballasts, bulbs, switches or timers are assumed to be managed as part of the operating budget.

Light fixtures in stairwells and service rooms are assumed to be replaced as-needed from operating budgets, as these are generally not included in any aesthetic upgrade plans.

This report is subject to specific limitations. See Appendix E



Smart Metering: Condominiums are not required to implement metering of individual units, but the Board may choose to do so, at its own discretion, without a vote of the owners. Therefore, installing sub-metering would be an upgrade and should not be paid from Reserve.

Telephone and Cable Television Systems: Allowances for replacement of telephone communication wiring or coaxial cable are generally not included in the Reserve Fund. While future re-wiring may be desirable to meet technological advances, this could be considered an upgrade that may not be appropriate to finance through the Reserve Fund. Ownership of these systems can be a complex legal issue, they are generally not considered common elements, but rather the property of other parties. As business and technology continues to evolve, it is possible that replacements will be completed in conjunction with other service agreements, or become unnecessary altogether if alternate wireless systems become available.

12 Human Rights Code

Human Rights Obligations: Recent case law has determined that the Human Rights Code (HRC) has precedence over Building Code and other legislation and in some cases Corporations have been obligated to make major physical changes to the building to cater to disabled persons.

We cannot predict what modifications are likely to be needed, or if the modifications (if required), will be appropriate as a reserve fund expenditure, so no budget allowances are included.

