



**FINAL**  
**Baseline Property Condition**  
**Assessment with Specialist**  
**Reviews of the Mechanical and**  
**Electrical Systems**

958 Broadview Avenue,  
Toronto, Ontario

Prepared for:

**Estonian House Toronto Ltd.**  
958 Broadview Avenue, Unit 102,  
Toronto, ON M4K 2R6

Attention: Mr. Rai Rimmel  
Chair Estonian House

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**Issued to:** Estonian House Toronto Ltd.  
**Contact:** Rai Rimmel  
Chair Estonian House  
**Issued on:** December 11, 2017  
**Pinchin file:** 214595  
**Issuing Office:** 2470 Milltower Court, Mississauga, ON L5N 7W5  
**Primary Contact:** Gavin Johnson, B.Arch.Sc., BSSO, C.E.T.  
Project Manager  
905.363.1422  
[gjohnson@pinchin.com](mailto:gjohnson@pinchin.com)

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Author: 

---

Shawn Atwell  
Building Scientist  
905.363.0678 ext. 1114  
[satwell@pinchin.com](mailto:satwell@pinchin.com)

Reviewer: 

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Majid Milani-Nia, P.Eng.  
Senior Project Manager  
613.592.3387 ext. 1805  
[mmilaninia@pinchin.com](mailto:mmilaninia@pinchin.com)



## EXECUTIVE SUMMARY

Pinchin Ltd. (Pinchin) was retained by Mr. Rai Remmel (Client) to conduct a Baseline Property Condition Assessment (BPCA), subject to the limitations outlined in Section 6.0 of this report. Based on Pinchin’s scope of work this service did not include any specialist review of items such as fire protection and life safety systems, structural components, elevator, etc. As discussed with the Client, this service also includes a specialist review of the mechanical and electrical systems as performed by Pinchin. The municipal address for the property is 958 Broadview Avenue, Toronto, Ontario (Site). Mr. Shawn Atwell of Pinchin, a member of the Pinchin Group of Companies conducted a visual assessment of the Site on November 17, 2017 at which time Pinchin interviewed and was accompanied by Mr. Tõnu Orav, Financial Manager of the Site, hereafter referred to as the Site Representative.

Pinchin was advised by the Client that the purpose of the BPCA was to assess visible deficiencies in relation to the due diligence requirements for the potential sale of the Site.

The Site is an irregular-shaped property approximately 0.99 acres in area and is developed with a multi-tenant, multi-storey commercial/institutional building complete with a bank, offices, a Montessori school, and a banquet hall (Site Building), collectively referred to as “Estonian House Toronto”. The original portion of the Site Building (i.e., Phase 1) was constructed in approximately 1891, has gained a historical designation and has since added three subsequent additions. The addition to the west portion of the Site Building was constructed in approximately 1962 (i.e., Phase 2), the addition to the east portion of the Site Building was constructed in approximately 1975 (i.e., Phase 3) and the addition of the elevator lobby at the northeast portion of the Site Building was constructed in approximately 1990 (i.e., Phase 4). The Site Building possesses an approximant footprint area of 13,400 Square Feet (ft<sup>2</sup>) and total building area of 31,500 ft<sup>2</sup>.

The additions of the Site Building are summarized in the following table:

Designation	Orientation	No. of Storeys (excluding Basement)	Year of Construction
Phase 1	Centre portion of Site Building	3 (excluding penthouse)	~ 1891
Phase 2	West addition of Site Building	1	~ 1962
Phase 3	East addition of Site Building	4	~ 1975
Phase 4	Elevator lobby at northeast portion of Site Building	3	~ 1990

Asphalt paved parking areas and driveways are located adjacent to south elevation of the Site Building and at the west portion of the Site with parking provisions for approximately 66 passenger vehicles. Vehicular access to the Site is provided by an entranceway from Broadview Avenue located at the east perimeter of the Site.



The substructure of the Site Building is constructed with a basement level cast-in-place concrete slab and a combination of multi-wythe brick masonry, concrete block masonry and cast-in-place concrete foundation walls.

The superstructure of the Phase 1 portion of the Site Building is comprised of multi-wythe brick masonry construction, supporting wood floor/roof joists. The superstructure of the Phase 2 portion of the Site Building is comprised of a combination of a wood frame support structure (i.e., columns, beams and joists) and load-bearing concrete block masonry, supporting a “flat-arch construction” floor slab and wood roof decking. The superstructure of the Phase 3 portion of the Site Building is comprised of a combination of steel, wood and cast-in-place concrete constructions (i.e., columns and beams) and load bearing concrete block masonry walls, supporting precast concrete panel flooring and roof decking. The superstructure of the Phase 4 portion of the Site Building could not be verified due to the interior finishes present throughout; however the roof system appears to be wood roof construction.

The exterior walls of the Site Building are comprised primarily of multi-wythe brick masonry noted on each elevation of the Site Building. Architectural block masonry was noted at the base of the north and south elevations serving the Phase 1 portion of the Site Building, while the north elevation of the Phase 2 portion of the Site Building is comprised of concrete block masonry. Areas of cement parging and stucco finish overtop concrete block masonry was noted at select locations on the north and east elevations of the Site Building. The exterior walls serving the Phase 4 portion of the Site Building are comprised of Exterior Insulation and Finishing System (EIFS) and architectural block masonry.

The Site Building structure appears to be in satisfactory condition commensurate with its age and in comparable standing with other similar commercial/institutional properties in the area. Based on our visual assessment, the Site Building appears to have been constructed in general accordance with standard building practices in place at the times of construction. However, it should be noted that most of the building systems are at the end of their service lives, while some components have unknown issues that require further investigation within year 1 of the term of analysis. The longer this work is delayed, the deficiencies may manifest into larger issues that may lead to increased repair/replacement costs.

The assessment did not reveal any visual evidence of major structural failures, soil erosion or differential settlement; however, vertical cracks through the concrete block masonry wall was noted on the north elevation of the Phase 2 portion of the Site Building. Furthermore, a horizontal crack on the cast-in-place concrete beam was noted within the basement level archive room of the Phase 3 portion of the Site Building. As such, Pinchin recommends retaining a Structural Engineer to complete a detailed survey/investigation to determine the cause(s) and extent of the damage and the method of repair, prior to repair work, and to ensure the extent of deterioration is fully understood. Until such time, costs associated with the remedial work necessary cannot be determined and have the potential for significant costs based on results of the assessment. Pinchin has carried an allowance to retain a structural engineer within year 1 of the term of analysis.



No immediate repair requirements have been identified. However, Pinchin recommends addressing the noted deficiencies in a timely manner within year 1 of the term of analysis.

Repair and replacement requirements (under replacement reserves) over the term of analysis (i.e., 10 years) of \$1,322,300 have been identified. As noted during the Site visit, deficiencies relating to the roof systems, wall systems, structural elements, elevator systems, interior finishes, Site features, life safety systems, mechanical and electrical systems were noted. Of particular note, recommendations, repairs and replacements for the following items are included throughout the term of analysis:

- Replacement of the sloped asphalt-shingled, modified bitumen and Built-Up asphalt Roof (BUR) systems serving the Site Building;
- Current and anticipated repairs to the exterior wall systems (i.e., areas of vertical/step cracking and spalling as well as missing/cracked mortar joints, cracked/deteriorated cement parging and deteriorated sections of the metal soffit);
- Repairs and localized replacement of the window and door systems of the Site Building as well as replacement of the cracked/deteriorated perimeter window sealants;
- Perform a structural investigation of the vertical cracks through the concrete block masonry wall on the north elevation of the Phase 2 portion of the Site Building and the horizontal crack on the cast-in-place concrete beam within the basement level archive room;
- A detailed review/survey of the elevator systems to be completed by a qualified elevator consultant;
- Repairs and replacement of the asphalt pavements and anticipated repairs to the cast-in-place concrete walkways;
- Consideration should be taken on conducting a geotechnical specialist review regarding the site drainage and slope to determine its condition as well as an action plan to address any unforeseen events;
- Replacement of the fire shutter door noted within the main kitchen area; and,
- Replacement of the fire alarm and annunciator panels.

Recommendations, repairs and replacements (based on the specialist reviews of the mechanical and electrical systems) of the following items are included throughout the term of analysis

- Allowance for regular maintenance program;
- Installation of thermostatic mixing valves;
- Installation of backflow preventer on the water main entrance line;
- Domestic water distribution – Repair/Partial Replacement



- Cleaning and scoping of sewer lines;
- An infrared scan of the electrical panels and distributions;
- Replacement of the three (3) packaged rooftop HVAC units;
- Replacement of the two (2) A/C units and condensing units;
- Replacement of the two (2) kitchen roof exhausters;
- Replacement of one (1) steam boiler;
- Installation of two (2) make up air units associated with kitchen exhaust;
- Allowance for new controls (e.g. building automation system)
- Main Electrical Service, Panels, and Switchboards Distribution Systems;
- Replacement of the interior lighting at the end of its PUL; and
- Building ventilation upgrades.

Regular maintenance should be conducted on the roof systems, wall systems, interior finishes, mechanical system, electrical and life safety systems to ensure that the Projected Useful Life (PUL) of the major components is realized. Repair costs for the aforementioned items have been included over the term of analysis (i.e., 10 years) included within Appendix I. The specific deficiencies identified during the BPCA and their associated recommendations for repair are described in the main body of the report. These deficiencies should be corrected as part of routine maintenance unless otherwise stated within the report. Costs associated with desired upgrades have not been included.

It is noted that EIFS/stucco is prone to micro cracking which may lead to water infiltration within the wall envelope over time. Pinchin recommends that a regular inspection program be implemented to monitor the condition of the EIFS/stucco and repair any observed deficiencies in a timely manner. In addition, it is recommended that repairs to the window sealants and damaged areas of the EIFS/stucco be completed in a timely manner in order to prevent potential moisture infiltration into the wall systems

The detailed breakdown of all costs for the Site can be found in Appendix I.

Please note that with the list of deficiencies and recommendation that need be addressed, Pinchin would be pleased to assist the Estonian House and their partners with prioritizing these recommendations as part of a further scope of work.

*This Executive Summary is subject to the same standard limitations as contained in the report and must be read in conjunction with the entire report.*



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## 1.0 INTRODUCTION

Pinchin Ltd. (Pinchin) was retained by Mr. Rai Remmel (Client) to conduct a BPCA, subject to the limitations outlined in Section 6.0 of this report. Based on Pinchin's scope of work this service did not include any specialist review of items such as fire protection and life safety systems, structural components, elevator, etc. As discussed with the Client, this service also includes a specialist review of the mechanical and electrical systems as performed by Pinchin. The municipal address for the property is 958 Broadview Avenue, Toronto, Ontario (Site). Mr. Shawn Atwell of Pinchin, a member of the Pinchin Group of Companies conducted a visual assessment of the Site on November 17, 2017 at which time Pinchin interviewed and was accompanied by Mr. Tõnu Orav, Financial Manager of the Site, hereafter referred to as the Site Representative.

Pinchin was advised by the Client that the purpose of the BPCA was to assess visible deficiencies in relation to the due diligence requirements for the potential sale of the Site.

It is noted that Pinchin did not review any previous Baseline Property Condition Assessments or other building reports that have been prepared for the Site.

The results of the BPCA are presented in the following report. This report is subject to the Limitations discussed in Section 6.0. The term of analysis requested by the Client is 10 years.

## 2.0 SCOPE AND METHODOLOGY

The scope of the non-specialist review BPCA included a visual examination (without any intrusive testing or demolition of finishes to observe hidden areas) of the following:

- The building envelope, comprised of the exterior walls, windows, exterior doors and roof systems;
- The structural elements (i.e., walls, beams, columns, slabs, etc.);
- The elevator systems;
- The interior finishes;
- The Site features;
- The standpipe/fire suppression systems; and
- The life safety systems.

The scope for the specialist reviews included a visual examination (without any intrusive testing or demolition of finishes to observe hidden areas) of the following:

- The mechanical systems (i.e., HVAC, domestic hot water, plumbing); and
- The electrical systems.



The object of the BPCA included the following:

- A visual examination of the property in order to assess the condition of the major elements;
- Review of general documentation on the repair/maintenance history of the elements, if available;
- cursory review of previous reports pertaining to the Site Building, if made available by the Site Representative;
- Interviews and discussions with on-Site personnel regarding the repair/maintenance conducted on the Site Building;
- Documentation of observed existing deficiencies observed within the various elements;
- Photographic documentation of various components and observed deficiencies; and
- Compilation of Pinchin's findings in a formal written report including observed deficiencies, together with a list of recommendations for repair/replacement with associated estimated costs for both short and long term.

The report provides:

- A basic description of each of the various major components of the Site Building;
- A list of deficiencies noted with respect to the components examined; and
- Recommendations and cost estimates for the corrections recommended.

Cost estimates provided in this report are preliminary Class "D" and provided only as an indication of the order of magnitude of the remedial work. These values have been arrived at by determining a representative quantity from the visual observations made at the time of our Site visit and by applying current market value unit costs to such quantities and or a reasonable lump sum allowance for the work. More precise cost estimates would require more detailed investigation to define the scope of work. They are not intended to warrant that the final costs will not exceed these amounts or that all costs are covered. The estimates assume the work is performed at one time and do not include costs for potential de-mobilization and re-mobilization if repairs/replacement are spread out over the term of analysis.

All costs are identified in 2017 Canadian Dollars, and do not include consulting fees or applicable taxes. (For consulting fees, Pinchin typically recommends a budget allowance of 10% to 15% of the costs identified).

All cost estimates assume that regular annual maintenance and repairs will be performed to all building elements at the facility. No cost allowance is carried for this regular maintenance.

The cost estimates provided in this report are based on costs of past repairs at similar buildings, recent costing data such as “RS Means Repair and Remodelling Cost Data – Commercial/Residential” and “Hanscomb’s Yardsticks for Costing”, or Pinchin’s professional judgment.

Unless otherwise stated, the replacement costs identified for an element reflects the cost to remove and replace the existing element with the same type of element.

### 3.0 OBSERVATIONS AND COMMENTS

#### 3.1 Site Information



General view of the north elevation of the Site Building.



General view of the south elevation of the Site Building.



General view of the east elevation of the Site Building.



General view of the west elevation of the Site Building.

Table 3.1 - Site Information

<b>Site Occupant/Name</b>	<b>Estonian House Toronto Ltd.</b>		
<b>Site Address</b>	<b>958 Broadview Avenue, Toronto, Ontario</b>		
<i>Existing Land Use Type</i>	Commercial	<i>Primary On-Site Activity</i>	Grand hall, Montessori school, Insurance company, bank and Estonian Consulate
<i>Multi-Tenant/Single Occupant</i>	Multi-Tenant	<i>Number of Units</i>	~ 6
<i>Date First Developed</i>	Unknown	<i>Site Area</i>	~ 0.99 acres
<i>Number of Buildings</i>	One	<i>Building Footprint Area(s)</i>	~ 13,400 ft <sup>2</sup>



Table 3.1 - Site Information

<b>Site Occupant/Name</b>	<b>Estonian House Toronto Ltd.</b>		
<b>Site Address</b>	<b>958 Broadview Avenue, Toronto, Ontario</b>		
<i>Number of Storeys (Excluding Basement)</i>	Phase 1: Three (excluding penthouse) Phase 2: One Phase 3: Four Phase 4: Three	<i>Total Building Area(s)</i>	~ 31,500 ft <sup>2</sup>
<i>Date Building(s) Constructed</i>	~1891	<i>Date Addition(s) Constructed</i>	~ 1962: Phase 2 ~ 1975: Phase 3 ~ 1990: Phase 4
<i>Date Building(s) Renovated</i>	2013 – replacement of select window units	<i>Basement and/or U/G Parking</i>	Basement
		<i>Number of Levels U/G</i>	1
<i>Type of Roof System(s)</i>	Sloped asphalt-shingled roof system Modified bitumen roof system Built-Up asphalt Roof (BUR)	<i>Area of Roof System(s)</i>	<b>Phase 1</b> Sloped asphalt-shingled: ~ 5,500 ft <sup>2</sup> BUR: ~ 500 ft <sup>2</sup> Modified bitumen (north-central portion): ~ 250 ft <sup>2</sup> Modified bitumen (atop gun range fire escape): ~ 60 ft <sup>2</sup> <b>Phase 2</b> Sloped asphalt-shingled: ~ 6,500 ft <sup>2</sup> Modified bitumen: ~ 7,600 ft <sup>2</sup> <b>Phase 3</b> BUR: ~ 2,100 ft <sup>2</sup> <b>Phase 4</b> Sloped asphalt-shingled (upper): ~ 250 ft <sup>2</sup> Sloped asphalt-shingled (lower): ~ 250 ft <sup>2</sup>

Table 3.1 - Site Information

<b>Site Occupant/Name</b>	<b>Estonian House Toronto Ltd.</b>		
<b>Site Address</b>	<b>958 Broadview Avenue, Toronto, Ontario</b>		
<i>Type of Wall Cladding</i>	Multi-wythe brick masonry Architectural block masonry Concrete block masonry Cement parging Stucco finish Exterior Insulation and Finishing System (EIFS)	<i>Types of Doors</i>	IG and SG swing doors within aluminum frames Hollow metal swing doors within metal frames Wood doors within wood and metal frames
<i>Type of Windows</i>	Fixed Insulated Glass (IG) units within aluminum frames Fixed and operable (i.e., horizontally sliding) Single Glazed (SG) units within aluminum frames		
<i>Number of Above Grade Parking Spaces</i>	~ 66 vehicle spaces	<i>Electrical Source</i>	Toronto Hydro
<i>Surface Type</i>	Asphalt pavements Cast-in-place concrete walkway Soft landscaping (i.e. grass, shrubs and trees)	<i>Type of Heating/Cooling</i>	Natural gas-fired Heating, Air Conditioning and Ventilating units Natural gas-fired boiler Electric forced-air baseboard and wall mounted heaters

### 3.2 Roof Systems

The roof systems of the Phase 1, Phase 2 and Phase 4 portions of the Site Building consists primarily of conventionally-designed, sloped asphalt shingled roof systems installed atop rigid thermal insulation atop wood roof decking. Conventionally-designed, “near flat”, modified bitumen roof systems installed atop rigid thermal insulation atop wood roof decking, were noted at the perimeters of the Phase 2 addition of the Site Building and at isolated locations of the Phase 1 portion of the Site Building. The roof system serving the Phase 3 portion of the Site Building consists of a conventionally-designed, “near flat”, BUR system installed atop rigid thermal insulation atop concrete panel roof decking was noted at the east portion of the Site Building. In addition, the rooftop mechanical penthouse noted at the southeast portion of the Phase 1 portion of the Site Building consists of a conventionally-designed, “near flat”, BUR system installed atop rigid thermal insulation atop wood roof decking. Neither the presence of a vapour barrier nor the type or the thickness of the insulation could be ascertained as the scope of work did not include destructive testing.

The details of the roof systems of the Site Building are summarized in the following table:

Designation	Roof Type	Orientation	Age	Roof Area (ft <sup>2</sup> )
Phase 1	Sloped asphalt shingled	Main roof system	Reportedly 25 + years old	~ 5,500 ft <sup>2</sup>
	BUR	Atop penthouse (i.e., tower)	Reportedly 25 + years old	~ 500 ft <sup>2</sup>
	Modified bitumen	North-central portion	Estimated to be 25 + years old	~ 250 ft <sup>2</sup>
	Modified bitumen	Atop gun range fire escape	Estimated to be 25 + years old	~ 60 ft <sup>2</sup>
Phase 2	Sloped asphalt shingled	Atop central portion	Reportedly original (~ 55 years old)	~ 6,500 ft <sup>2</sup>
	Modified bitumen	At perimeters of the rooftop	Reportedly original (~ 55 years old)	~ 7,600 ft <sup>2</sup>
Phase 3	BUR	Main roof system	Original (~ 42 years old)	~ 2,100 ft <sup>2</sup>
Phase 4	Sloped asphalt shingled	Atop 2 <sup>nd</sup> storey elevator shaft	Original (~ 27 years old)	~ 250 ft <sup>2</sup>
	Sloped asphalt shingled	Atop ground level elevator lobby	Original (~ 27 years old)	~ 250 ft <sup>2</sup>

Drainage of the sloped roof systems is provided by surface deflection and is discharged directly at grade via a combination of perimeter eavestroughs and aluminum downspouts. Drainage of the flat roof systems is provided by internal roof drains which presumably drain to the municipal sewer system and also to grade via a combination of PVC piping and plastic downspouts. In addition to the roof drains, penetrations through the roof systems consist of ventilation/combustion stacks, pitch pockets serving conduits, exhaust cabinets, skylights and HVAC curbing.

Access to the BUR systems atop the Phase 1 penthouse and the Phase 3 portion of the Site Building was provided by a walkout door located from the mechanical penthouse. Access to the roof systems atop Phase 2 is provided by a metal fire escape located on the north elevation of the Site Building. A visual inspection of the sloped roof systems serving the Phase 1 and Phase 4 portions of the Site Building were conducted from grade and from the flat roof system areas.

Active roof leaks were reported and noted within various areas of the Site Building, with the most recent repairs completed in approximately 2013.

Table 3.2 outlines the findings of the inspection of the roof systems:

Table 3.2 – Roof Systems	
Findings	Remarks/Recommendations
<b>Major Deficiencies/Findings</b>	
<ul style="list-style-type: none"> <li>Based on discussions with the Site Representative and visual condition of the roof systems at the time of the Site assessment, the sloped asphalt-shingled roof systems serving the Site Building are estimated to be over 25 years old and has exceeded their Projected Useful Life (PUL) with areas of roof leaks, deterioration, aged/worn shingles and an opening through the roof system.</li> </ul>	<ul style="list-style-type: none"> <li>Pinchin has carried allowances for the replacement of the sloped asphalt-shingled roof system serving the Site Building within year 1 of the term of analysis.            Note: The roof system serving the Phase 1 portion of the Site Building is projected to have an increased unit cost due to its historical designation.</li> </ul>
<ul style="list-style-type: none"> <li>Based on discussions with the Site Representative and visual condition of the roof systems at the time of the Site assessment, the modified bitumen roof systems are estimated to be over 25 years old and have exceeded their PUL within areas of roof leaks, wrinkling, aged/deteriorated membrane and seals, moss growth and previously patched areas.</li> </ul>	<ul style="list-style-type: none"> <li>Pinchin has carried allowances for the replacement of the modified bitumen roof systems of the Site Building within year 1 of the term of analysis.            Note: The roof system serving the Phase 1 portion of the Site Building is projected to have an increased unit cost due to its historical designation.</li> </ul>
<ul style="list-style-type: none"> <li>Based on discussions with the Site Representative and visual condition of the roof systems at the time of the Site assessment, the BUR systems serving the Site Building are estimated to be over 25 years old and have exceeded their PUL with areas of roof leaks, asphalt bleed-through and cement deposits.</li> </ul>	<ul style="list-style-type: none"> <li>Pinchin has carried allowances for the replacement of the BUR systems of the Site Building within year 1 of the term of analysis.            Note: The roof system serving the Phase 1 portion of the Site Building is projected to have an increased unit cost due to its historical designation.</li> </ul>
<b>Minor Deficiencies/Findings</b>	
<ul style="list-style-type: none"> <li>Ponding water and acuminated organic debris (i.e., leaves) were noted at various locations of the modified bitumen roof system serving the Phase 2 portion of the Site Building.</li> </ul>	<ul style="list-style-type: none"> <li>Remove the organic debris from atop of the roof system and from the internal roof drains to ensure adequate drainage of the roof system. Monitor the areas of ponding water for roof leaks and repair when required.</li> </ul>
<ul style="list-style-type: none"> <li>Missing roof drain strainers were noted at various locations of the modified bitumen roof system serving the Phase 2 portion of the Site Building.</li> </ul>	<ul style="list-style-type: none"> <li>Replace the missing roof drain strainers to prevent debris from entering the internal roof drains.</li> </ul>
<ul style="list-style-type: none"> <li>Debris (i.e., bricks, extra building material, etc.) were noted at various locations atop the Site Building.</li> </ul>	<ul style="list-style-type: none"> <li>Regularly remove debris from atop the Site Building.</li> </ul>



Table 3.2 – Roof Systems

Findings	Remarks/Recommendations
<ul style="list-style-type: none"> <li>Missing roof drain strainers were noted at various locations of the modified bitumen roof system serving the Phase 2 portion of the Site Building.</li> </ul>	<ul style="list-style-type: none"> <li>Replace the missing roof drain strainers to prevent debris from entering the internal roof drains.</li> </ul>
<ul style="list-style-type: none"> <li>Cracked joint sealants serving the perimeter metal flashing was noted atop the Phase 3 portion of the Site Building.</li> </ul>	<ul style="list-style-type: none"> <li>Replace the cracked perimeter metal flashing joint sealants.</li> </ul>
<ul style="list-style-type: none"> <li>Corrosion on the perimeter metal flashing was noted atop the Phase 3 portion of the Site Building.</li> </ul>	<ul style="list-style-type: none"> <li>Sand, prime and repaint the perimeter metal flashing with a corrosion inhibiting paint.</li> </ul>



General view of the sloped asphalt-shingled roof system noted atop the Phase 1 (i.e., central) portion of the Site Building.



View of an active roof leak noted at the vicinity of the tower portion of Phase 1.



View of the deteriorated asphalt shingles noted at the north portion of the Phase 1, sloped asphalt shingled roof system.



View of a hole through the sloped asphalt roof system noted at the north portion of the Phase 1 portion of the Site Building.



View of the missing asphalt shingles noted at the northwest portion of the sloped asphalt shingled roof system serving the Phase 1 portion of Site Building.



General view of the BUR mechanical penthouse noted atop the Phase 1 portion of the Site Building.



General view of the modified bitumen roof system noted atop the north-central portion of the Phase 1 portion of the Site Building.



General view of the sloped asphalt roof system serving the Phase 2 (i.e., west) portion of the Site Building.



View of the typical worn/aged asphalt roof shingles serving the Phase 2 portion of the Site Building.



General view of the modified bitumen roof system noted at the perimeters of the Phase 2 portion of the Site Building.



View of a roof leak through the modified bitumen roof system into the Grand Hall foyer noted within the Phase 2 portion of the Site Building.



View of the typical cracked seals and worn/aged modified bitumen membrane serving the flat roof areas of Phase 2.



View of wrinkling of the modified bitumen membrane noted at the southeast portion of the modified bitumen roof system serving the Phase 2 portion of the Site Building.



View of the previous patch repairs and debris (i.e., bricks) noted at the south portion of the modified bitumen roof system serving the Phase 2 portion of the Site Building.

Note: The area of ponding water.



View of a missing roof drain strainer and accumulated organic debris (i.e., leaves) noted at the northwest portion of the modified bitumen roof system serving the Phase 2 portion of the Site Building.



View of moss growth noted at the northeast portion of the modified bitumen roof system serving the Phase 2 portion of the Site Building.



General view of the BUR system serving the Phase 3 (i.e., east) portion of the Site Building.



View of asphalt bleed-through noted at the east portion of the BUR system serving the Phase 3 portion of the Site Building.



View of moisture staining on the underside of the concrete panel roof deck (i.e., indicating a previous roof leak) noted within the "Youth Room" on the top floor of the Phase 3 portion of the Site Building.



View of a cement deposit (i.e., used as a temporary leak repair) at the northeast portion of the BUR system serving the Phase 3 portion of the Site Building.



View of the vegetation growth noted at the central portion of the BUR system serving the Phase 3 portion of the Site Building.



View of a cracked joint sealant serving the perimeter metal flashing serving the phase 3 portion of the Site Building.

Note: Areas of corrosion.



General view of the upper sloped asphalt-shingled roof system serving the Phase 4 (i.e., northeast) portion of the Site Building.

Note: The deteriorated asphalt roof shingles.





General view of the lower sloped asphalt-shingled roof system serving the Phase 4 (i.e., northeast) portion of the Site Building.

It has been Pinchin's experience that the PUL of a sloped asphalt-shingled roof system typically ranges between 15 and 25 years, the PUL of a modified bitumen roof system typically ranges between 23 and 25 years, while the PUL of a BUR system typically ranges between 20 and 25 years, depending on the quality of installation and the level to which the roof system has been maintained.

As previously mentioned, based on discussions with the Site Representative and visual condition of the roof systems at the time of the Site assessment, the sloped asphalt-shingled roof systems serving the Site Building are estimated to be over 25 years old and have exceeded their PUL. The roof systems were noted to be in poor condition with areas of roof leaks, deterioration, aged/worn shingles and an opening through the roof system. As such, Pinchin has carried allowances for replacement of the sloped asphalt shingled roof systems year 1 of the term of analysis.

Based on discussions with the Site Representative and visual condition of the roof systems at the time of the Site assessment, the modified bitumen roof systems serving the Site Building are estimated to be over 25 years old and have exceeded their PUL. The roof systems were noted to be in poor condition with areas of roof leaks, wrinkling, aged/deteriorated membrane and seals, moss growth and previously patched areas. As such, Pinchin has carried allowances for replacement of the modified bitumen roof systems within year 1 of the term of analysis.

In addition, based on discussions with the Site Representative and visual condition of the roof systems at the time of the Site assessment, the BUR systems serving the Site Building are estimated to be over 25 years old and have exceeded their PUL. The roof systems were noted to be in poor condition with areas of roof leaks, asphalt bleed-through and cement deposits. As such, Pinchin has carried allowances for replacement of the BUR systems within year 1 of the term of analysis.

It should be noted that the roof systems serving the Phase 1 portion of the Site Building are projected to have an increased unit cost due to their historical designation.

Assuming the roof systems serving the Site Building are replaced, the above-referenced deficiencies are addressed and regular maintenance is performed, the roof systems of the Site Building should perform in a satisfactory manner throughout the term of analysis. Annual walk-on inspections are recommended to ensure the integrity of the roof systems and identify/address required repairs to extend the service life of the roof systems.

### 3.3 Wall Systems

The exterior walls of the Site Building are comprised primarily of multi-wythe brick masonry noted on each elevation of the Site Building. Architectural block masonry was noted at the base of the north and south elevations serving the Phase 1 portion of the Site Building, while the north elevation of the Phase 2 portion of the Site Building is comprised of concrete block masonry. Areas of cement parging and stucco finish overtop concrete block masonry was noted at select locations on the north and east elevations of the Site Building. The exterior walls serving the Phase 4 portion of the Site Building are comprised of EIFS and architectural block masonry.

The window systems of the Site Building are comprised of a combination of fixed and operable (i.e., horizontally sliding) IG and SG units set within aluminum frames. Based on the dates stamped in the inspected window spacers, the majority of the IG units serving Phase 1 and Phase 2 were manufactured in 1979 (i.e., approximately 38 years old), while the IG units serving the basement level and kitchen area of Phase 2 were reportedly replaced in approximately 2013 (i.e., approximately 4 years ago). The IG units serving Phase 4 are reportedly original to construction in 1990 (i.e., approximately 27 years old). The window systems serving the grand hall and foyer areas of Phase 2 consist of fixed SG units within aluminum frames.

The exterior doors serving the main entrances of Phase 2 consist of SG swing doors within aluminum frames, while the main entrance doors for Phase 3 and 4 consist of IG swing doors within aluminum frames. Hollow metal doors within metal frames were observed serving various emergency exits of the Site Building. The interior doors consist mainly of wood doors within wood and metal frames.

Table 3.3 outlines the findings of the inspection of the wall systems:

Table 3.3 – Wall Systems	
Findings	Remarks/Recommendations
<b>Major Deficiencies/Findings</b>	
<ul style="list-style-type: none"> <li>Areas of deterioration (i.e., vertical/step cracking and spalling as well as missing/cracked mortar joints) on the brick and concrete block masonry wall systems were noted on various elevations of the Site Building.</li> </ul>	<ul style="list-style-type: none"> <li>Perform masonry repairs including repairs to the areas of spalled and cracked masonry units and re-pointing of missing/cracked mortar joints. Monitor the affected areas for further deterioration.</li> </ul>

Table 3.3 – Wall Systems	
Findings	Remarks/Recommendations
<b>Minor Deficiencies/Findings</b>	
<ul style="list-style-type: none"> <li>Corroded and missing metal panels serving the soffit were noted on the various elevations of the Phase 1 portion of the Site Building.</li> </ul>	<ul style="list-style-type: none"> <li>Replace the corroded and missing metal panels of the soffit.</li> </ul>
<ul style="list-style-type: none"> <li>Moisture/efflorescence staining on the brick and concrete block masonry wall systems were noted on the north and south elevations of the Phase 2 portion of the Site Building.</li> </ul>	<ul style="list-style-type: none"> <li>Efflorescence is an indication of excess moisture exposure that may shorten the service life of the masonry units. Clean the areas of efflorescence staining and monitor the masonry wall systems for future deterioration.</li> </ul>
<ul style="list-style-type: none"> <li>Cracked/deteriorated cement parging was noted on various elevations of the Site Building.</li> </ul>	<ul style="list-style-type: none"> <li>Repair the areas of cracked/deteriorated cement parging.</li> </ul>
<ul style="list-style-type: none"> <li>A failed IG unit was noted on the south elevation of the Phase 3 portion of the Site Building.</li> </ul>	<ul style="list-style-type: none"> <li>Replace the failed IG window unit.</li> </ul>
<ul style="list-style-type: none"> <li>Cracked/deteriorated perimeter window sealants were noted on various elevations of the Site Building.</li> </ul>	<ul style="list-style-type: none"> <li>Replaced the cracked/deteriorated window perimeter sealants.</li> </ul>



View of vertical/step cracking in the multi-wythe brick masonry wall noted on the south elevation of the Phase 1 portion of the Site Building.



View of step cracking in the multi-wythe brick masonry and architectural block masonry wall noted on the south elevation of the Phase 1 portion of the Site Building.



View of the spalled multi-wythe brick masonry noted on the west elevation of the Phase 1 portion of the Site Building.



View of the missing mortar joints multi-wythe brick masonry noted on the west elevation of the Phase 1 portion of the Site Building.



View of the corroded metal soffit noted at the southwest corner of the Phase 1 portion of the Site Building.



View of missing metal panels serving the soffit noted at the northwest corner of the Phase 1 portion of the Site Building.



View of a vertical crack on the concrete block masonry wall noted on the north elevation of the Phase 2 portion of the Site Building.

Note: Refer to Section 3.4 – Structural Elements



View of step cracking on the concrete block masonry wall noted on the north elevation of the Phase 2 portion of the Site Building.



View of moisture damaged/spalled concrete block masonry noted on the north elevation of the Phase 2 portion of the Site Building.



View of the cracked cement parging and peeling paint noted on the north elevation of the Phase 2 portion of the Site Building.



View of the step cracking on the brick masonry wall noted on the south elevation of the Phase 2 portion of the Site Building.



View of the efflorescence stained brick masonry noted on the south elevation of the Phase 2 portion of the Site Building.



View of the cracks in the cement parking noted on the east elevation of the Phase 3 portion of the Site Building.



View of the failed IG window unit noted on the south elevation of the Phase 3 portion of the Site Building.



View of cracked perimeter window sealant noted on the south elevation of the Phase 3 portion of the Site Building.

In general, the wall, window and door systems of the Site Building were noted to be in satisfactory to fair condition with the exception of the above noted deficiencies. The Site Representative did not report any issues (i.e., moisture infiltration, masonry bowing, etc.) within the wall systems.

The brick and concrete block masonry walls of the Site Building were noted to display areas of vertical/step cracking and spalling as well as missing/cracked mortar joints, cracked/deteriorated cement parging and deteriorated sections of the metal soffit. As such, Pinchin has carried allowances for the on-going repairs to the exterior wall systems throughout the term of analysis.

In addition, Pinchin has carried allowances for repairs and localized replacement of the window and door systems of the Site Building as well as replacement of the cracked/deteriorated perimeter window sealants throughout the term of analysis.

It should be noted that due to the historical building designation of the Phase 1 portion of the Site Building, a higher degree of repairs costs is anticipated.



Assuming that the aforementioned deficiencies are addressed and regular maintenance is performed, the wall, window and door systems of the Site Building should perform in a satisfactory manner throughout the term of the analysis.

It should be noted that due to the fact that the scope of work did not include any intrusive/destructive testing the presence or condition of brick ties behind the masonry walls could not be visually inspected.

In addition, it is noted that EIFS/stucco is prone to micro cracking which may lead to water infiltration within the wall envelope over time. Pinchin recommends that a regular inspection program be implemented to monitor the condition of the EIFS/stucco and repair any observed deficiencies in a timely manner. In addition, it is recommended that repairs to the window sealants and damaged areas of the EIFS/stucco be completed in a timely manner in order to prevent potential moisture infiltration into the wall systems.

### **3.4 Structural Elements**

As outlined in the scope of work, a visual assessment of the condition of the structural elements was carried out on the elements which were visible at the time of the inspection.

The substructure of the Site Building is constructed with a basement level cast-in-place concrete slab and a combination of multi-wythe brick masonry, concrete block masonry and cast-in-place concrete foundation walls.

The superstructure of the Phase 1 portion of the Site Building is comprised of multi-wythe brick masonry construction, supporting wood floor/roof joists. The superstructure of the Phase 2 portion of the Site Building is comprised of a combination of a wood frame support structure (i.e., columns, beams and joists) and load-bearing concrete block masonry, supporting a "flat-arch construction" floor slab and wood roof decking. The superstructure of the Phase 3 portion of the Site Building is comprised of a combination of steel, wood and cast-in-place concrete constructions (i.e., columns and beams) and load bearing concrete block masonry walls, supporting precast concrete panel flooring and roof decking. The superstructure of the Phase 4 portion of the Site Building could not be verified due to the interior finishes present throughout; however the roof system appears to be wood roof construction.

It should be noted that no structural drawings were available for review at the time of the Site visit and that the Site Representative did not report any significant issues relating to structural deficiencies.

Table 3.4 outlines the findings of the inspection of the structural elements:

Table 3.4 – Structural Elements	
Findings	Remarks/Recommendations
<b>Major Deficiencies/Findings</b>	
<ul style="list-style-type: none"> <li>Vertical cracks through the concrete block masonry wall was noted on the north elevation of the Phase 2 portion of the Site Building.</li> </ul>	<ul style="list-style-type: none"> <li>Pinchin recommends retaining a Structural Engineer to complete a detailed survey/investigation to determine the cause(s) and extent of the damage and the method of repairing the vertical cracks in the concrete block masonry wall noted on the north elevation of the Phase 2 portion of the Site Building.</li> </ul>
<ul style="list-style-type: none"> <li>A horizontal crack on the cast-in-place concrete beam was noted within the basement level archive room of the Phase 3 portion of the Site Building.</li> </ul>	<ul style="list-style-type: none"> <li>Pinchin recommends that the survey/investigation also assesses the horizontal crack to determine the cause(s) and extent of the damage and the method of repair.</li> </ul>
<b>Minor Deficiencies/Findings</b>	
<ul style="list-style-type: none"> <li>Corrosion on steel beams was noted on various elevations serving the Phase 3 portion of the Site Building.</li> </ul>	<ul style="list-style-type: none"> <li>Sand, prime and repaint the steel beams with a corrosion inhibiting paint.</li> </ul>



General view of the wood roof joists and decking noted within the gun range of the Phase 1 portion of the Site Building.



General view of the flat arch slab construction noted within the basement level of the Phase 2 portion of the Site Building.



View of a vertical crack on the concrete block masonry wall noted on the north elevation of the Phase 2 portion of the Site Building.



View of a vertical crack on the concrete block masonry wall noted on the north elevation of the Phase 2 portion of the Site Building.



General view of the cast-in-place concrete beam noted within the basement level archive room of the Phase 3 portion of the Site Building.

Note: The horizontal crack in the cast-in-place concrete beam.



View of the corrosion on the steel beam noted on the east elevation of the Phase 3 portion of the Site Building.

Assessment of the original or existing building design, compliance with prior or current Building Code or detection or comment upon concealed structural deficiencies are outside the scope of work. Accordingly, the findings are limited to the extent that the assessment has been made based on a walk-through visual inspection of accessible areas of the structure.

The assessment did not reveal any visual evidence of major structural failures, soil erosion or differential settlement; however, vertical cracks through the concrete block masonry wall was noted on the north elevation of the Phase 2 portion of the Site Building. Furthermore, a horizontal crack on the cast-in-place concrete beam was noted within the basement level archive room of the Phase 3 portion of the Site Building. As such, Pinchin recommends retaining a Structural Engineer to complete a detailed survey/investigation to determine the cause(s) and extent of the damage and the method of repair, prior to repair work, and to ensure the extent of deterioration is fully understood. Until such time, costs associated with the remedial work necessary cannot be determined and have the potential for significant costs based on results of the assessment. Pinchin has carried an allowance to retain a structural engineer within year 1 of the term of analysis.

### 3.5 Underground Parking Garage

The Site Building does not possess an Underground Parking Garage.

Table 3.5 – Underground Parking Garage	
Findings	Remarks/Recommendations
<b>Major Deficiencies/Findings</b>	
• N/A	• N/A
<b>Minor Deficiencies/Findings</b>	
• N/A	• N/A

### 3.6 Vertical Transportation Systems

The following is a brief description of the elevator systems present at the subject building:

<b># of Elevators:</b>	One
<b>Manufacturer:</b>	ThyssenKrupp
<b>Drive System:</b>	Hydraulic
<b>Floors Served</b>	Basement to 2nd
<b>Date Installed:</b>	~ 1990
<b>Date Modernized:</b>	N/A
<b>Capacity:</b>	1160 kg or 16 persons
<b>Function:</b>	Passenger
<b>Alarm:</b>	Yes
<b>Emergency Stop:</b>	Yes
<b>Emergency Phone:</b>	Yes
<b>Emergency Power:</b>	No

Entrances and cab finishes are normally excluded. As long as a “full maintenance” contract is purchased, the only additional costs to the Owner, during the first 15-25 years of use, should be for malicious damage and repairs to the elevator cabs and entrances. It is assumed that repairs required due to “Acts of God” (i.e., flood, fires, etc.) are covered by insurance. The Site Representative reported to Pinchin that the elevator system is under a “regular maintenance” contract that covers ongoing repairs, adjustments and preventive maintenance work. The elevator systems are maintained by “Thyssen-Krupp”, and inspected monthly with the last inspection complete in October 2017.

It was reported to Pinchin by the Site Representative that the construction of the elevator was funded and by the Estonian Credit Union (ECU) under this agreement ECU is responsible for the costs associated with the ongoing operation of the Elevator. The contract is with Thiessen-Krupp and the fees for this service are paid by the ECU. Major work and upgrades would not be covered under this contract.

Table 3.6 outlines the findings of the inspection of the elevator systems:

Table 3.6 – Vertical Transportation Systems	
Findings	Remarks/Recommendations
<b>Major Deficiencies/Findings</b>	
<ul style="list-style-type: none"> <li>The elevator system of the Site Building is reportedly original to the date of installation in approximately 1990 (i.e., ~ 27 years old).</li> </ul>	<ul style="list-style-type: none"> <li>Pinchin recommends a detailed review/survey for the elevator system to be completed within year 1 of the term of analysis by a qualified elevator consultant to determine and better understand the condition of the elevator systems and identify/confirm the need, cost and timing for modernization/upgrading of the elevator systems (i.e., elevator cab, motor, controls, audio/visual, electrical, etc.).</li> </ul>
<b>Minor Deficiencies/Findings</b>	
<ul style="list-style-type: none"> <li>None observed/reported.</li> </ul>	<ul style="list-style-type: none"> <li>None required.</li> </ul>



View of the interior of elevator cab.



View of the hydraulic elevator system located in the basement elevator room.



As the current assessment was performed as a Baseline Property Condition Assessment without Specialist review, our information is solely based on the information and documentation provided as well as the visual appearance of the elevator cab, motor, control, etc.

Based on Pinchin's experience, the components of the elevator system may require modernization, due in part to obsolescence, which are not covered under a typical "Full Maintenance Contract". Additionally, service personnel capable of performing the numerous adjustments necessary to keep this equipment operating properly will become increasingly difficult to find as newer equipment designs become more prominent. Thus, the owner may be faced with significant modernization costs in order to maintain reasonable service.

As previously mentioned, the elevator system of the Site Building is reportedly original to the date of installation in approximately 1990 (i.e., ~ 27 years old) and is reportedly performing in a satisfactory manner. Based on the age of the original components of the elevator system, Pinchin recommends a detailed review/survey for the elevator systems to be completed within year 1 of the term of analysis by a qualified elevator consultant to determine and better understand the condition of the elevator systems and identify/confirm the need, cost and timing for modernization/upgrading of the elevator systems. Pinchin has carried an allowance for the elevator survey within year 1 of the term of analysis.

Due to the fact that the scope of work was based on a visual inspection, Pinchin has attempted to identify and quantify the deficiencies associated with the elevator systems. However, without a specialist review by a qualified elevator consultant, an accurate cost in relation to modernization of the elevator systems cannot be provided.

Assuming the elevator modernization is performed, the full maintenance contract is continued and regular annual maintenance is performed, the elevator systems of the Site Building should continue to perform in a satisfactory manner throughout the term of analysis.

### **3.7 Interior Finishes**

As outlined in the scope of work, the interior finishes within the Site Building were reviewed during the Site assessment.

The floor finishes within the Site Building consist of carpeting, parquet flooring, hardwood, vinyl/ceramic floor tiles noted in various locations of the Site Building, while the floor finishes in the select basement areas and mechanical rooms consists of epoxy coated concrete floor slabs.

The wall finishes within the Site Building generally consist of painted gypsum wall board, plaster, brick masonry and concrete block masonry noted throughout the Site Building.

The ceiling finishes within the Site Building consist of a combination of suspended ceiling assemblies complete with lay-in-tiles, painted gypsum, wood panelling and exposed structural elements (i.e., beams and floor/roof decking) noted throughout the Site Building.



It should be noted that asbestos-containing materials (ACMs) are commonly found in building construction materials (particularly in older buildings constructed prior to 1985). Friable asbestos (friable is defined as a material that can be crumbled, powdered or pulverized by hand pressure) was widely used in sprayed fireproofing until 1973, and in decorative or finishing plasters, and thermal systems insulation until the early 1980s. Non-friable or manufactured asbestos products were widely used in building construction including in vinyl floor tiles, sheet flooring, ceiling tiles, pipe gaskets, roofing materials, asbestos cement boards, and numerous other products until the mid-1980s. A very limited number of non-friable asbestos products in limited quantities are still in use currently in building construction. The application of friable asbestos was banned by Ontario Regulation 654/85, which came into effect March 1985. On November 1, 2005, this regulation was most recently updated and changed to Ontario Regulation 278/05.

Given the year of construction of the Site Building (i.e., approximately 1891), there is a potential for friable and non-friable ACMs to be present in the Site Building. Pinchin did not conduct an asbestos survey as part of this BPCA, nor was any destructive or intrusive sampling or inspection conducted as part of this BPCA. The Site Representative advised Pinchin that no asbestos surveys have been previously conducted at the Site, and that an Asbestos Management Program (AMP) has not been developed for or implemented at the Site. In accordance with Ontario Regulation 278/05, an asbestos survey should be performed in buildings that are known or suspected of containing ACMs. If an asbestos survey confirms the presence of ACMs, an AMP should be developed and implemented, as per the requirements of Ontario Regulation 278/05.

The potential presence of ACMs could result in management issues and future costs if renovation or demolition activities are undertaken at the Site. The extent of such potential issues could not be assessed as part of this BPCA.

Table 3.7 outlines the findings of the inspection of the interior finishes:

Table 3.7 – Interior Finishes	
Findings	Remarks/Recommendations
<b>Major Deficiencies/Findings</b>	
<ul style="list-style-type: none"> <li>None observed/reported.</li> </ul>	<ul style="list-style-type: none"> <li>None required.</li> </ul>
<b>Minor Deficiencies/Findings</b>	
<ul style="list-style-type: none"> <li>Cracked and deteriorated vinyl and ceramic floor tiles were noted at various locations of the Site Building.</li> </ul>	<ul style="list-style-type: none"> <li>Replace the cracked/deteriorated vinyl/ceramic floor tiles.</li> </ul>
<ul style="list-style-type: none"> <li>Deteriorated epoxy finish of the concrete floor slab was noted in the basement level of the phase 3 portion of the Site Building.</li> </ul>	<ul style="list-style-type: none"> <li>Re-apply the epoxy coat to the concrete floor slab.</li> </ul>



Table 3.7 – Interior Finishes	
Findings	Remarks/Recommendations
<ul style="list-style-type: none"> <li>Water damaged/stained interior finishes were noted at various locations within the Site Building.</li> </ul>	<ul style="list-style-type: none"> <li>Determine and repair the sources of moisture infiltration and replace the damaged/stained interior finishes.</li> </ul>
<ul style="list-style-type: none"> <li>Localized step cracking brick and concrete block walls were noted at various locations of the Site Building.</li> </ul>	<ul style="list-style-type: none"> <li>Seal/repair the step cracking and monitor the affected areas for further cracking.</li> </ul>
<ul style="list-style-type: none"> <li>Given the year of construction of the Site Building (i.e., ~ 1891), there is a potential for friable and non-friable ACMs to be present in the Site Building. The Site Representative advised Pinchin that no asbestos surveys have been previously conducted at the Site, and that an AMP has not been developed for or implemented at the Site.</li> </ul>	<ul style="list-style-type: none"> <li>An asbestos survey should be performed in buildings that are known or suspected of containing ACMs. If an asbestos survey confirms the presence of ACMs, an AMP should be developed and implemented.</li> </ul>



General view of the interior finishes noted within a typical corridor in the Phase 1 portion of the Site Building.



General view of the interior finishes noted within the Grand Hall foyer in the Phase 2 portion of the Site Building.



General view of the youth room located in the Phase 3 portion of the Site Building.



View of the cracked/deteriorated vinyl floor tiles noted in the kitchen area of the Phase 2 portion of the Site Building.



View of deteriorated vinyl floor tile noted within a basement level classroom in the Phase 2 portion of the Site Building.



View of the deteriorated epoxy finished floor slab noted in the basement level of the Phase 3 portion of the Site Building.



View of the moisture damaged gypsum wall noted within the kitchen area of the Phase 2 portion of the Site Building.



View of step cracking on the concrete block masonry wall noted within the youth room located in the Phase 3 portion of the Site Building.



View of the water stained ceiling tiles and brick masonry noted within the tower of the Phase 1 portion of the Site Building.



View of the water stained gypsum ceiling noted in a corridor of the Phase 3 portion of the Site Building.

The interior finishes were generally noted to be in satisfactory condition with the exception of the above-referenced deficiencies. Pinchin has carried allowances for the on-going repairs of the interior finishes throughout the term of analysis.

Assuming that the above-referenced deficiencies are addressed and regular maintenance is performed, the interior finishes should perform in a satisfactory manner throughout the term of analysis. Costs associated with desired upgrades have not been carried.

### 3.8 Site Features

The Site is an irregular-shaped property, approximately 0.99 acres in area. The Site Building occupies approximately 15% of the Site. Asphalt paved parking areas and driveways are located adjacent to south elevation of the Site Building and at the west portion of the Site with parking provisions for approximately 66 passenger vehicles. Vehicular access to the Site is provided by an entranceway from Broadview Avenue located at the east perimeter of the Site.



Areas of soft landscaping (i.e., grass, shrubs, trees, etc.) were noted at the perimeters of the Site. Cast-in-place concrete walkways were noted adjacent to the north, south and west elevations of the Site Building, while steel fire escape was noted on the north elevation of the Site Building.

Drainage of the Site pavements is provided by surface deflection and is sloped to the ravine adjacent to the west portion of the Site. Consideration should be taken on conducting a geotechnical specialist review regarding the site drainage and slope to determine its condition as well as an action plan to address any unforeseen events.

Topographic maps for the area were reviewed for the Site and the nearest body of water is the Lower Don River, located approximately 360 metres northwest of the Site. As such, is not inferred to be located within a flood plain. In addition, Pinchin has contacted the Toronto Region Conservation Authority (TRCA) to confirm if the Site Building is situated within a designated flood plain. Based on the information received from the TRCA, the Site is not currently located within the Regional Storm flood plain.

Table 3.8 outlines the findings of the inspection of the Site features:

Table 3.8– Site Features	
Findings	Remarks/Recommendations
<b>Major Deficiencies/Findings</b>	
<ul style="list-style-type: none"> <li>The asphalt paved parking area was noted to possess area of deterioration, linear/alligator cracking, potholes and depressions.</li> </ul>	<ul style="list-style-type: none"> <li>Pinchin has carried allowances for the on-going repairs and replacement of the asphalt pavements throughout the term of analysis.</li> </ul>
<b>Minor Deficiencies/Findings</b>	
<ul style="list-style-type: none"> <li>Localized cracked and spalled areas of the cast-in-place concrete walkways were noted at various locations of the Site.</li> </ul>	<ul style="list-style-type: none"> <li>Pinchin has carried allowances for the anticipated repairs of the cast-in-place concrete walkways throughout the term of analysis.</li> </ul>
<ul style="list-style-type: none"> <li>Drainage of the Site pavements is provided by surface deflection and is sloped to the ravine adjacent to the west portion of the Site.</li> </ul>	<ul style="list-style-type: none"> <li>Consideration should be taken on conducting a geotechnical specialist review regarding the site drainage and slope to determine its condition as well as an action plan to address any unforeseen events.</li> </ul>



General view of the asphalt paved parking area located at the west portion of the Site.



General view of the asphalt paved driveway located at the south portion of the Site.



View of the deteriorated asphalt pavement noted at the west portion of the Site.



View of alligator cracking in the asphalt pavement noted at the west portion of the Site.



View of alligator cracking in the asphalt paved parking area noted at the west portion of the Site.



View of a depression in the asphalt paved parking area noted at the west portion of the Site.



View of a crack in the cast-in-place concrete walkway noted adjacent to the north elevation of the Site Building.



View of the spalled cast-in-place concrete walkway noted adjacent to the south elevation of the Site Building.

The Site features were noted to be in satisfactory condition with the exception of the above referenced deficiencies. Pinchin has carried allowances for the repairs and replacement of the asphalt pavements as well as the anticipated repairs of the cast-in-place concrete walkways throughout the term of analysis.

Assuming that regular maintenance is performed, the Site features should perform in a satisfactory manner throughout the term of analysis. Assessment of or comment upon concealed deficiencies and any buried/concealed utilities or components are outside the scope of work.

### 3.9 Mechanical Systems

#### Major Service Providers

The following providers serve the subject property:

Water	City of Toronto
Electric	Toronto Hydro
Sewer	City of Toronto





Natural Gas	Enbridge
Police	Metropolitan Toronto Police Services
Fire	City of Toronto Fire and Emergency Services

**3.9.1 Heating, Ventilation and Air Conditioning (HVAC)**

Please refer to Appendix II for the complete findings of the specialist review of the heating, ventilation and air conditioning systems.

**3.9.2 Plumbing**

Please refer to Appendix II for the complete findings of the specialist review of the plumbing systems.

**3.9.3 Fire Protection**

Fire protection within the Site Building consists of a standpipe system consisting of fire hose cabinets accompanied with chemically charged ABC-class fire extinguishers noted on each floor of the east portion of the Site Building.

Fire protection within the remaining portions of the Site Building is provided by ABC-class dry chemical fire extinguishers located at strategic locations throughout the Site Building. The fire extinguishers inspected were generally noted to be charged to sufficient levels.

Fire protection within the kitchen areas are provided by a wet chemical suppression systems installed above the cooking ranges and AK-class fire extinguishers. It was reported that the fire suppression equipment of the cooking ranges was installed in early 2017.

The fire suppression of the Site Building is reportedly inspected monthly in-house and also by “Classic Fire Protection” in March 2017. In addition, a municipal fire hydrant was noted at the east portion of the Site.

Table 3.9 outlines the findings of the inspection of the mechanical systems:

Table 3.9 – Mechanical Systems (including HVAC, Plumbing, and Fire Protection)	
Findings	Remarks/Recommendations
<b>Major Deficiencies/Findings</b>	
<ul style="list-style-type: none"> <li>Please refer to Appendix II for the complete findings of the specialist review of the HVAC and plumbing systems.</li> </ul>	<ul style="list-style-type: none"> <li>Please refer to Appendix II for the complete findings of the specialist review of the HVAC and plumbing systems.</li> </ul>

Table 3.9 – Mechanical Systems (including HVAC, Plumbing, and Fire Protection)

Findings	Remarks/Recommendations
<b>Minor Deficiencies/Findings</b>	
<ul style="list-style-type: none"> <li>The fire shutter door in the main kitchen area is reportedly over 30 years old and appears to be in-operable/out-dated.</li> </ul>	<ul style="list-style-type: none"> <li>Pinchin has carried an allowance to replace the fire shutter door within year 1 of the term of analysis.</li> </ul>



View of a typical fire hose cabinet complete with fire extinguisher noted in the east portion of the Site Building.



View of the fire suppression equipment noted above the cooking ranges.



View of the fire suppression equipment noted within the kitchen.



View of the fire hydrant noted at the east portion of the Site.



View of the fire shutter noted within the main kitchen area.

The fire suppression equipment of the Site Building was generally noted to be in serviceable condition with the exception of the above noted deficiency.

Assuming that regular maintenance is performed, the mechanical systems of the Site Building should perform in a satisfactory manner throughout the term of analysis.



### 3.10 Electrical Systems

#### 3.10.1 Electrical Power

Please refer to Appendix II for the complete findings of the specialist review of the electrical distribution systems of the Site Building.

#### 3.10.2 Emergency Electrical Power

There is reportedly no emergency backup power for the Site Building.

#### 3.10.3 Fire Alarm System and Life Safety

The fire alarm system serving the Site Building consists of a multi-zone, single-stage system complete with a “Notifier System 500” fire alarm control panel located in the basement level main electrical room, which is connected to an annunciator panel located in the ground floor elevator lobby. Based on review of the data tags of the fire alarm panel, fire alarm and annunciator panels were installed in approximately 1996 (i.e., approximately 21 years old). The fire alarm system reportedly monitors flow control sensors within the standpipe system as well as hard-wired heat/smoke detectors and manual pull stations located throughout the Site Building. The fire alarm system is reportedly not monitored by an independent monitoring company or regularly inspected.

Emergency lighting and illuminated exit signage is provided by wall and ceiling mounted battery-powered units located throughout the Site Building and within the vicinity of the exits.

Table 3.10 outlines the findings of the inspection of the electrical systems:

Table 3.10 – Electrical Systems (including Electrical Power and Fire Alarm and Life Safety)	
Findings	Remarks/Recommendations
<b>Major Deficiencies/Deterioration</b>	
<ul style="list-style-type: none"> <li>The fire alarm panel is approximately 21 years old and has reached its PUL. The device is reportedly obsolete and is no longer manufactured and parts are becoming difficult to find.</li> </ul>	<ul style="list-style-type: none"> <li>Pinchin has carried an allowance for the replacement of the main fire alarm and annunciator panels within year 1 of the term of analysis.</li> </ul> <p>Note: Wiring and end devices are not budgeted to be replaced.</p>
<b>Minor Deficiencies/Deterioration</b>	
<ul style="list-style-type: none"> <li>Please refer to Appendix II for the complete findings of the specialist review of the electrical distribution systems of the Site Building.</li> </ul>	<ul style="list-style-type: none"> <li>Please refer to Appendix II for the complete findings of the specialist review of the electrical distribution systems of the Site Building.</li> </ul>



View of the fire alarm control panel noted in the basement level electrical room.



View of the annunciator panel located in the ground floor elevator lobby.



View of the typical illuminated exit signage and emergency lighting noted throughout the Site Building.



View of a typical manual pull station noted at strategic locations throughout the Site Building.

It has been Pinchin's experience that the PUL of a fire alarm panel typically ranges between 20 and 25 years depending on the quality of the unit and the level to which the unit has been maintained. As noted above, the fire alarm panel and annunciator panels within the Site Building were manufactured in 1996 (i.e., approximately 21 years old) and have reached their PUL. As such, Pinchin has carried an allowance for replacement of the fire alarm and annunciator panels within year 1 of the term of analysis (wiring and end devices are not budgeted to be replaced).

Assuming that the fire alarm and annunciator panels are replaced and regular maintenance is performed, the life safety systems of the Site Building should perform in a satisfactory manner throughout the term of the analysis.

#### 4.0 KNOWN VIOLATIONS TO CODE

It was reported to Pinchin by the Site Representative that no outstanding violations from the Building Department existed pertaining to the property. Compliance with the National Building Code (NBC) and National Fire Code (NFC) was not reviewed as it was beyond the scope of this survey.

#### 5.0 CONCLUSIONS AND RECOMMENDATIONS

Based on Pinchin's review of the property, conducted on November 17, 2017, the Site Building appears to be in satisfactory condition commensurate with its age and in comparable standing to other similar commercial properties in the area. Based on our visual assessment, the Site Building appears to have been constructed in general accordance with standard building practices in place at the times of construction. However, it should be noted that most of the building systems are at the end of their service lives, while some components have unknown issues that require further investigation within year 1 of the term of analysis. The longer this work is delayed, the deficiencies may manifest into larger issues that may lead to increased repair/replacement costs.



The assessment did not reveal any visual evidence of major structural failures, soil erosion or differential settlement; however, vertical cracks through the concrete block masonry wall was noted on the north elevation of the Phase 2 portion of the Site Building. Furthermore, a horizontal crack on the cast-in-place concrete beam was noted within the basement level archive room of the Phase 3 portion of the Site Building. As such, Pinchin recommends retaining a Structural Engineer to complete a detailed survey/investigation to determine the cause(s) and extent of the damage and the method of repair, prior to repair work, and to ensure the extent of deterioration is fully understood. Until such time, costs associated with the remedial work necessary cannot be determined and have the potential for significant costs based on results of the assessment. Pinchin has carried an allowance to retain a structural engineer within year 1 of the term of analysis.

No immediate repair requirements have been identified. However, Pinchin recommends addressing the noted deficiencies in a timely manner within year 1 of the term of analysis.

As noted during the Site visit, deficiencies relating to the As noted during the Site visit, deficiencies relating to the roof systems, wall systems, structural elements, elevator systems, interior finishes, Site features, life safety systems, mechanical and electrical systems were noted. Of particular note, recommendations, repairs and replacements for the following items are included throughout the term of analysis:

- Replacement of the sloped asphalt-shingled, modified bitumen and BUR systems serving the Site Building;
- Current and anticipated repairs to the exterior wall systems (i.e., areas of vertical/step cracking and spalling as well as missing/cracked mortar joints, cracked/deteriorated cement parging and deteriorated sections of the metal soffit);
- Repairs and localized replacement of the window and door systems of the Site Building as well as replacement of the cracked/deteriorated perimeter window sealants;
- Perform a structural investigation of the vertical cracks through the concrete block masonry wall on the north elevation of the Phase 2 portion of the Site Building and the horizontal crack on the cast-in-place concrete beam within the basement level archive room;
- A detailed review/survey of the elevator systems to be completed by a qualified elevator consultant;
- Repairs and replacement of the asphalt pavements and anticipated repairs to the cast-in-place concrete walkways;
- Consideration should be taken on conducting a geotechnical specialist review regarding the site drainage and slope to determine its condition as well as an action plan to address any unforeseen events;

- Replacement of the fire shutter door noted within the main kitchen area; and,
- Replacement of the fire alarm and annunciator panels.

Recommendations, repairs and replacements (based on the specialist reviews of the mechanical and electrical systems) of the following items are included throughout the term of analysis

- Allowance for regular maintenance program;
- Installation of thermostatic mixing valves;
- Installation of backflow preventer on the water main entrance line;
- Domestic water distribution – Repair/Partial Replacement
- Cleaning and scoping of sewer lines;
- An infrared scan of the electrical panels and distributions;
- Replacement of the three (3) packaged rooftop HVAC units;
- Replacement of the two (2) A/C units and condensing units;
- Replacement of the two (2) kitchen roof exhausters;
- Replacement of one (1) steam boiler;
- Installation of two (2) make up air units associated with kitchen exhaust;
- Allowance for new controls (e.g. building automation system)
- Main Electrical Service, Panels, and Switchboards Distribution Systems;
- Replacement of the interior lighting at the end of its PUL; and
- Building ventilation upgrades.

Regular maintenance should be conducted on the roof systems, wall systems, structural elements, elevator systems, interior finishes, Site features and the mechanical/electrical systems to ensure that the PUL of the major components is realized. Repair costs for the aforementioned items have been included over the term of the analysis (i.e., 10 years) included within Appendix I. The specific deficiencies identified during the BPCA and their associated recommendations for repair are described in the main body of the report. These deficiencies should be corrected as part of routine maintenance unless otherwise stated within the report. Costs associated with desired upgrades have not been carried.

It is noted that EIFS/stucco is prone to micro cracking which may lead to water infiltration within the wall envelope over time. Pinchin recommends that a regular inspection program be implemented to monitor the condition of the EIFS/stucco and repair any observed deficiencies in a timely manner. In addition, it is recommended that repairs to the window sealants and damaged areas of the EIFS/stucco be completed in a timely manner in order to prevent potential moisture infiltration into the wall systems.





Please note that with the list of deficiencies and recommendation that need be addressed, Pinchin would be pleased to assist the Estonian House and their partners with prioritizing these recommendations as part of a further scope of work.

## 6.0 TERMS AND LIMITATIONS

This work was performed subject to the Terms and Limitations presented or referenced in the proposal for this project.

Information provided by Pinchin is intended for Client use only. Pinchin will not provide results or information to any party unless disclosure by Pinchin is required by law. Any use by a third party of reports or documents authored by Pinchin or any reliance by a third party on or decisions made by a third party based on the findings described in said documents, is the sole responsibility of such third parties. Pinchin accepts no responsibility for damages suffered by any third party as a result of decisions made or actions conducted. No other warranties are implied or expressed.

In accordance with the proposed scope of work, no physical or destructive testing or design calculations were conducted on any of the components of the buildings. Assessment of the original or existing building design, or detection or comment upon concealed structural deficiencies and any buried/concealed utilities or components are outside the scope of work. Similarly the assessment of any Post Tension reinforcing is not included in the scope of work. Determination of compliance with any Codes is beyond the scope of this Work. The Report has been completed in general conformance with the ASTM Designation: E 2018 – 15 Standard Guide for Property Condition Assessments: Baseline Property Condition Assessment Process.

It should be noted that Pinchin has attempted to identify all the deficiencies required by this Standard associated with this project. Pinchin does not accept any liability for deficiencies that were not within the scope of the investigation.

As indicated above the personnel conducting the building assessment, where applicable, have performed a non-specialist review of the building and all associated finishes and related systems including the elevator, mechanical and electrical (including fire alarm and life safety) systems, Site features, etc. The personnel conducting the assessment are knowledgeable of building systems and construction, but not technical specialists in each of these fields. The intent of Pinchin's comments on these systems are for the sole purpose of identifying areas where Pinchin has observed a noteworthy condition which will lead to a likely significant expenditure during the term of the assignment and/or where Pinchin would recommend that the Client consider a further, more detailed investigation. The budget costs for remedial work for each specific item has been provided to the best of our ability and will provide an order of magnitude cost for the individual item and the overall possible remedial work. Our experience has shown that the costs that Pinchin have provided are appropriate and of reasonable accuracy for the purpose intended.



It should be noted that the budget cost or reserve costs for any specific item may vary significantly based on the fact that the schedule or phasing of the future remedial work is unknown at this time, the impact on building operations of this remedial work is unknown at this time and that no intrusive inspection or detailed design work is included in the BPCA. If a more accurate, detailed or documented reserve cost is required at this time the Client should request Pinchin to provide the additional proposal to provide a more accurate cost estimate.

It should be noted that recommendations and estimates outlined in this report do not include allowances for future upgrading of components pertaining to Client or tenant fit-up that may be necessary or required by Authorities Having Jurisdiction (AHJ).

The assessment is based, in part, on information provided by others. Unless specifically noted, Pinchin has assumed that this information was correct and has relied on it in developing the conclusions.

Due to the fact that the scope of the work did not include for destructive testing, Pinchin could not ascertain whether Phenolic insulation was present within the roof systems at the time of the Site visit.

It is possible that unexpected conditions may be encountered at the Site that have not been explored within the scope of this report. Should such an event occur, Pinchin should be notified in order to determine if we would recommend that modifications to the conclusions are necessary and to provide a cost estimate to update the report.

The inspection of the interior of ductwork or associated components was beyond the scope of work. It should be noted that the heating and cooling duct work within the Site Building may contain interior insulation. The Site Representative was unaware of the presence of insulation within the duct work within the Site Building. It is Pinchin's experience that interior insulation within duct work is prone to deterioration or development of mould which may require removal of the insulation. In the case where interior insulation is present within the duct work, Pinchin recommends that the duct work insulation be inspected for the presence of mould.

Due to the concealed nature of the plumbing system the condition of the risers could not be verified.

Environmental Audits or the identification of designated substances, hazardous materials, PCBs, insect/rodent infestation, concealed mould and indoor air quality are excluded from this BPCA report.

Further to the aforementioned, determination of the presence of asbestos containing material within the building such as drywall joint compound or the lead content within the older paint finishes was beyond the scope of work.



This report presents an overview on issues of the building condition, reflecting Pinchin's best judgment using information reasonably available at the time of Pinchin's review and Site assessment. Pinchin has prepared this report using information understood to be factual and correct and Pinchin is not be responsible for conditions arising from information or facts that were concealed or not fully disclosed to Pinchin at the time of the Site assessment.

214595\_FINAL\_BPCA Report w. Specialist Review of the Mech. & Elec. Systems\_958 Broadview Avenue, Toronto, ON\_Dec. 11, 2017.docx

Template: Master Report for Baseline PCA with Specialist Reviews Single Office Building, PCA, September 12, 2017

**APPENDIX I**

**Table 1 – Summary of Anticipated Expenditures**

ITEM	Projected Useful Life (years)	Effective Age (years)	Remaining Projected Useful Life (years)	Quantity	Unit	Unit Cost	Total Cost	Immediate Costs	Replacement Reserve Costs											
									2018 1 yr Cost	2019 2 yr Cost	2020 3 yr Cost	2021 4 yr Cost	2022 5 yr Cost	2023 6 yr Cost	2024 7 yr Cost	2025 8 yr Cost	2026 9 yr Cost	2027 10 yr Cost	1 - 10 Year Total	
<b>Code Compliance, Consulting and ADA</b>																				
Life Safety & Code Compliance																				
Follow-up Recommendations																				
General ADA Accessibility																				
<b>Table 3.2 - Roof Systems</b>																				
Roof Structures and Roofing (Repairs)	Varies	Varies	Varies	1	LS	\$15,000	\$15,000							\$5,000		\$5,000		\$5,000		\$15,000
Roof Structures and Roofing (Phase 1 - Replacement of the Sloped Asphalt-Shingled Roof System)	15-25	25 +	-	5,500	SF	\$20	\$110,000		\$110,000											\$110,000
Roof Structures and Roofing (Phase 1 - Replacement of the Modified Bitumen Roof Systems)	23-25	25 +	-	310	SF	\$30	\$9,500		\$9,500											\$9,500
Roof Structures and Roofing (Phase 1 - Replacement of the BUR System)	20-25	25 +	-	500	SF	\$25	\$12,500		\$12,500											\$12,500
Roof Structures and Roofing (Phase 2 - Replacement of the Sloped Asphalt-Shingled Roof Systems)	15-25	55	-	6,500	SF	\$10	\$65,000		\$65,000											\$65,000
Roof Structures and Roofing (Phase 2 - Replacement of the Modified Bitumen Roof System)	23-25	55	-	7,600	SF	\$15	\$114,000		\$114,000											\$114,000
Roof Structures and Roofing (Phase 3 - Replacement of the BUR System)	20-25	42	-	2,100	SF	\$20	\$42,000		\$42,000											\$42,000
Roof Structures and Roofing (Phase 4 - Replacement of the Sloped Asphalt-Shingled Roof Systems)	15-25	27	-	500	SF	\$20	\$10,000		\$10,000											\$10,000
<b>Table 3.3 - Wall Systems</b>																				
Exterior Walls (Repairs)	Varies	Varies	Varies	1	LS	\$180,000	\$180,000		\$100,000			\$20,000				\$20,000			\$40,000	\$180,000
Exterior Windows & Doors (Repairs and Localized Replacements - Below Threshold)	Varies	Varies	Varies	1	LS	\$30,000	\$30,000		\$5,000			\$5,000				\$10,000			\$10,000	\$30,000
<b>Table 3.4 - Structural Elements</b>																				
Foundations	Varies	Varies	Varies																	
Superstructure (Structural Investigation of the Vertically crack Concrete Block Masonry Wall and Concrete Beam)	Varies	Varies	Varies	1	LS	\$3,500	\$3,500		\$3,500											\$3,500
<b>Table 3.5 - Underground Parking Garage</b>																				
Parking Garage	N/A	N/A	N/A																	
<b>Table 3.6 - Vertical Transportation</b>																				
Elevator Systems (Elevator Survey)	Varies	Varies	Varies	1	LS	\$2,500	\$2,500		\$2,500											\$2,500
<b>Table 3.7 - Interior Finishes</b>																				
Interior Finishes (Localized Repairs)	Varies	Varies	Varies	1	LS	\$27,500	\$27,500		\$7,500			\$5,000			\$5,000				\$10,000	\$27,500
Furniture																				
Appliances																				
<b>Table 3.8 - Site Features</b>																				
Utilities																				
Asphalt Pavements Repairs & Replacement)	Varies	Varies	Varies	1	LS	\$60,000	\$60,000		\$20,000	\$20,000				\$10,000			\$10,000			\$60,000
Concrete Walkway (Anticipated Repairs)	Varies	Varies	Varies	1	LS	\$12,500	\$12,500					\$5,000						\$7,500		\$12,500
<b>Table 3.9 - Mechanical Systems</b>																				
Building Mechanical Systems (Repair Program)(Cost may vary based on existing conditions)	Varies	Varies	Varies	1	LS	\$50,000	\$50,000		\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$50,000
Building HVAC (Replacement of the three (3) packaged rooftop HVAC units)	Varies	Varies	Varies	1	LS	\$83,300	\$83,300			\$27,000	\$27,000	\$29,300								\$83,300
Building HVAC (Replacement of the two (2) A/C units and condensing units)	Varies	Varies	Varies	1	LS	\$38,000	\$38,000		\$19,000				\$19,000							\$38,000
Building HVAC (Replacement of the two (2) kitchen roof exhausters)	Varies	Varies	Varies	1	LS	\$19,000	\$19,000		\$10,000	\$9,000										\$19,000
Building HVAC (Replacement of one (1) steam boiler)	Varies	Varies	Varies	1	LS	\$29,000	\$29,000		\$29,000											\$29,000
Building HVAC (Replacement/Repair of domestic water distribution)	Varies	Varies	Varies	1	LS	\$150,000	\$150,000		\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$150,000
Building HVAC (Installation of two (2) make up air units associated with kitchen exhaust. Note: No allowances for structural upgrades were considered)	Varies	Varies	Varies	1	LS	\$70,000	\$70,000		\$70,000											\$70,000
Building Plumbing & Hot Water (Thermostatic Mixing Valves)	Varies	Varies	Varies	1	LS	\$2,000	\$2,000		\$2,000											\$2,000
Building Plumbing (Installation of backflow preventer on the water main entrance line)	Varies	Varies	Varies	1	LS	\$5,000	\$5,000		\$5,000											\$5,000
Building Plumbing (Cleaning and scoping of sewer lines)	Varies	Varies	Varies	1	LS	\$6,000	\$6,000		\$6,000											\$6,000
Building Plumbing (Remove/protect existing steam and water pipes in the electrical room)	Varies	Varies	Varies	1	LS	\$10,000	\$10,000		\$10,000											\$10,000
Fire Protection - Replacement of the Fire Shutter Door	Varies	Varies	Varies	1	LS	\$4,000	\$4,000		\$4,000											\$4,000
<b>Table 3.10 - Electrical Systems</b>																				
Electrical Systems (Infrared scan of the electrical panels and distributions)	Varies	Varies	Varies	1	LS	\$7,000	\$7,000		\$7,000											\$7,000
Electrical Systems (Replacement and repair of the main electrical service, panels, and switchboards distribution systems)	Varies	Varies	Varies	1	LS	\$130,000	\$130,000		\$40,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$130,000
Fire Alarm System & Life Safety (Replacement of the Fire Alarm Control and Annunciator Panels)	20-25	21	0-4	1	LS	\$25,000	\$25,000		\$25,000											\$25,000
<b>TOTALS (Uninflated)</b>							\$1,322,300	\$0	\$748,500	\$86,000	\$57,000	\$94,300	\$64,000	\$30,000	\$70,000	\$40,000	\$42,500	\$90,000	\$1,322,300	
			Inflation Rate 2.5%						1.00	1.025	1.050	1.075	1.100	1.125	1.150	1.175	1.200	1.225		
<b>TOTALS (Inflated)</b>									\$748,500	\$88,150	\$59,850	\$101,373	\$70,400	\$33,750	\$80,500	\$47,000	\$51,000	\$110,250	\$1,390,773	

Term of Analysis **10**  
 Total Square Footage Within the Site Building **31,500**

Average Cost per Square Foot per Year (Uninflated)	\$4.20
Average Cost per Square Foot per Year (Inflated)	\$4.42

LS - Lump Sum  
 SF - Square Foot  
 EA - Each (per unit component)  
 LF - Lineal Foot

**APPENDIX II**  
**Specialist Review of Mechanical and Electrical Systems**



**FINAL**  
**Condition Assessment of  
the Mechanical and  
Electrical Systems**

958 Broadview Avenue, Toronto,  
ON

Prepared for:

**Estonian House Toronto Ltd.**

958 Broadview Avenue  
Toronto, Ontario, M4K 2R6

Attention: Mr. Rai Rimmel  
Chair Estonian House

December 15, 2017

Pinchin File: 214595.001



**Issued to:** Estonian House Toronto Ltd.  
**Contact:** Mr. Rai Remmel  
Chair Estonian House  
**Issued on:** December 15, 2017  
**Pinchin File:** 214595.001  
**Issuing Office:** 2470 Milltower Court,  
Mississauga, ON L5N 7W5  
**Primary Contact:** Paul Frasie, Senior Project  
Manager



Author: 

---

Paul Frasie, M.Eng., LEED Green Associate  
Senior Project Manager, Building Science & Sustainability  
905.363.1457  
[pfrasie@pinchin.com](mailto:pfrasie@pinchin.com)

Reviewer: 

---

Charles Evancio, P.Eng.  
Operation Manager & Regional Practice Leader, Building Science &  
Sustainability  
204.452.0983, ext 2238  
[cevancio@pinchin.com](mailto:cevancio@pinchin.com)





## EXECUTIVE SUMMARY

Pinchin Ltd. (Pinchin) was retained by Estonian House Toronto Ltd. (Client) to conduct a condition assessment of the mechanical and electrical systems of 958 Broadview Avenue, Toronto, Ontario, subject to the limitations outlined in Section 6.0 of this report. The municipal address for the property is 958 Broadview Avenue, Toronto, ON (Site). Paul Frasier and Frank Savage, of Pinchin, conducted a visual assessment of the Site on November 17, 2017, at which time Pinchin interviewed and was accompanied by Tõnu Orav, Financial Manager of the Site (Site Representative).

It was reported to Pinchin that there is no budget associated with ongoing regular maintenance of the major components of the Site Building, which should be carried as part of the annual operating budget for the Site. The importance of an effective maintenance program cannot be overlooked because it plays such an important role in the effectiveness of Site Building equipment. The term of analysis requested by the Client was 10 years.

The Site is an irregular-shaped property approximately 0.99 acres in area and is developed with a multi-tenant, multi-storey commercial/institutional building complete with a bank, offices, a Montessori school, and a banquet hall (Site Building), collectively referred to as “Estonian House Toronto”. The original portion of the Site Building (i.e., Phase 1 – Middle Building) was constructed in approximately 1891, has gained a historical designation and has since added three subsequent additions. The addition to the West portion of the Site Building was constructed in approximately 1962 (i.e., Phase 2 – Rear Building), the addition to the east portion of the Site Building was constructed in approximately 1975 (i.e., Phase 3 – Front Building) and the addition of the elevator lobby at the northeast portion of the Site Building was constructed in approximately 1990 (i.e., Phase 4).

## RECOMMENDATIONS

Repair/replacement of the following is recommended in the next ten years (2017-2026):

- Allowance for regular maintenance program;
- Installation of thermostatic mixing valves;
- Installation of backflow preventer on the water main entrance line;
- Domestic water distribution – Repair/Partial Replacement
- Cleaning and scoping of sewer lines;
- An infrared scan of the electrical panels and distributions;
- Replacement of the three (3) packaged rooftop HVAC units;
- Replacement of the two (2) A/C units and condensing units;



**Condition Assessment of the Mechanical and Electrical Systems**

958 Broadview Avenue, Toronto, ON  
Estonian House Toronto Ltd.

December 15, 2017  
Pinchin File: 214595.001  
FINAL

- Replacement of the two (2) kitchen roof exhausters;
- Replacement of one (1) steam boiler;
- Installation of two (2) make up air units associated with kitchen exhaust;
- Allowance for new controls (e.g. building automation system)
- Main Electrical Service, Panels, and Switchboards Distribution Systems;
- Replacement of the interior lighting at the end of its PUL; and
- Building ventilation upgrades.



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## 1.0 INTRODUCTION

Pinchin Ltd. (Pinchin) was retained by Estonian House Toronto Ltd. (Client) to conduct a condition assessment of the mechanical and electrical systems of 958 Broadview Avenue, Toronto, Ontario, subject to the limitations outlined in Section 6.0 of this report. The municipal address for the property is 958 Broadview Avenue, Toronto, ON (Site). Paul Frasier and Frank Savage, of Pinchin, conducted a visual assessment of the Site on November 17, 2017, at which time Pinchin interviewed and was accompanied by Mr. Tõnu Orav, Financial Manager of the Site (Site Representative).

## 2.0 NOMENCLATURE

AHU	- Air Handling Unit
RTU	- Roof Top Unit
MAU	- Makeup Air Unit
HRV	- Heat Recovery Ventilator
ERV	- Energy Recovery Ventilator
UV	- Unit Ventilator
EF	- Exhaust Fan
ft <sup>2</sup>	- Square Feet
m <sup>2</sup>	- Square Meters
psi	- Pounds per Square Inch
MBH	- 1000 British Thermal Units per Hour
HVAC	- Heating, Ventilation, and Air Conditioning
LPF	- Litres per Flush
LED	- Light Emitting Diode
M/N	- Model Number
PUL	- Projected Useful Life
S/N	- Serial Number
YOM	- Year of Manufacture
WSHP	- Water Source Heat Pump



### 3.0 SCOPE OF WORK

The condition assessment of the mechanical and electrical systems included a visual assessment of the following components:

- Heating, ventilation, air conditioning, controls, domestic hot water systems, plumbing; and
- Power distribution and lighting systems.

The scope for the specialist reviews included a visual examination (without any intrusive testing or demolition of finishes to observe hidden areas) of the following:

- Mechanical systems; and
- Electrical systems.

The object of the condition assessment of the mechanical, and electrical systems included the following:

- A visual examination of the property in order to assess the condition of the major elements;
- Review of general documentation on the repair/maintenance history of the elements, if available;
- cursory review of previous reports pertaining to the Site Building, if made available by the Site Representative;
- Interviews and discussions with on-Site personnel regarding the repair/maintenance conducted on the Site Building;
- Documentation of observed existing deficiencies observed within the various elements;
- Photographic documentation of various components and observed deficiencies; and
- Compilation of Pinchin's findings in a formal written report including observed deficiencies, together with a list of recommendations for repair/replacement with associated estimated costs for both short and long term.

The report provides:

- A basic description of each of the various major components of the Site Building;
- A list of deficiencies noted with respect to the components examined; and
- Recommendations and cost estimates for the corrections recommended.

Cost estimates provided in this report are preliminary Class "D" and provided only as an indication of the order of magnitude of the remedial work. These values have been arrived at by determining a representative quantity from the visual observations made at the time of our Site visit and by applying



current market value unit costs to such quantities and or a reasonable lump sum allowance for the work. More precise cost estimates would require more detailed investigation to define the scope of work. They are not intended to warrant that the final costs will not exceed these amounts or that all costs are covered. The estimates assume the work is performed at one time and do not include costs for potential de-mobilization and re-mobilization if repairs/replacement are spread out over the term of analysis.

All costs are identified in 2017 Canadian Dollars, and do not include consulting fees or applicable taxes. (For consulting fees, Pinchin typically recommends a budget allowance of 10% to 15% of the costs identified).

All cost estimates assume that regular annual maintenance and repairs will be performed to all building elements at the facility. No cost allowance is carried for this regular maintenance.

The cost estimates provided in this report are based on costs of past repairs at similar buildings, recent costing data such as "RS Means Repair and Remodelling Cost Data – Commercial/Residential" and "Hanscomb's Yardsticks for Costing", or Pinchin's professional judgment.

Unless otherwise stated, the replacement costs identified for an element reflects the cost to remove and replace the existing element with the same type of element.

#### **4.0 MECHANICAL SYSTEMS**

The following observations and comments provide an assessment of the current condition of various major components, estimated time frames and opinions of the probable costs for capital repairs or replacement within the next ten years (2017-2026).

#### **4.1 Plumbing**

##### *4.1.1 Plumbing Fixtures*

Plumbing fixtures are in the common area washrooms, janitor closet area, kitchen areas of the facility. The majority of common area washrooms contain manually operated floor mounted tank type toilets, wall mounted manual flush urinals, and wall mounted as well as counter mounted lavatories, with manually operated tap sets. Some of the lavatory faucets are sensor activated. Stainless steel sinks complete with manually operated taps are provided for the kitchen area(s).

The plumbing fixtures are of various ages and variable condition. No significant operational deficiencies were reported or observed at the time of the assessment. These styles of toilets and lavatories typically have a Projected Useful Life (PUL) of 20 years or more.

Based on age and observed conditions, a planned replacement program of plumbing fixtures should be considered as part of the maintenance program. Also, replacement can be deferred with careful

monitoring, repair, and partial replacement. A cost has not been included during the term of analysis as part of the than routine maintenance.



View of counter mounted lavatories – Basement Phase 1.



View of typical floor mounted toilet - Basement Phase 1. .



View of sink and floor mounted toilet – Phase 3 Building.



Single compartment stainless steel kitchen sink in the Kitchen area – Phase 1.





Single compartment stainless steel kitchen sink in the Kitchen area – Phase 2.

#### 4.1.2 Domestic Water Distribution

The building is serviced by a 2-inch water line that enters the Site Building from the common washrooms basement of Phase 1. The incoming water service is equipped with a water meter which is wired to a remote readout. It did not appear as though the water line is protected by a back flow preventer, which should be rectified. An allowance has been presented to install a backflow preventer in the near term. Backflow prevention assemblies should be tested annually by a certified tester as part of routine maintenance.

The majority of the domestic water distribution is either concealed behind interior finishes or encapsulated behind walls and floor. Where observed, the domestic water distribution was copper/brass pipe style piping.

Due to the age of the building a hazardous assessment should be considered prior to commencement of any pipe repair/replacement work. Anticipated costs for asbestos abatement work have not been included.

Based on age and reported conditions a program for complete replacement of domestic water supply and distribution should be considered. Complete replacement can be deferred with careful monitoring, repair, and partial replacement. Allowances have been provided to replace the domestic water supply and distribution system first in the Phase 1 Building, followed by the Phase 2 Building, and Phase 3 Building. Normal life expectancy is between 30-35 years. Note: Some of the distribution systems are interconnected between the buildings.



Domestic water line entering building in the basement of Phase 1. Incoming water service is not protected by a backflow preventer.



View of existing distribution water lines.



Under counter metal braided sink water supply lines.

#### 4.1.3 Domestic Hot Water Heaters

Domestic hot water for the Site Buildings is provided by one (1) rental gas fired domestic hot water (DHW) tank. The DHW tank was replaced two (2) years ago by the rental company and is located in the Mechanical Room of basement Phase 1 building. The domestic hot water heating systems appear to be performing as intended.

The domestic hot water tank needs to have thermostatic mixing valves, as per building code requirements.



Existing DHW tank located in the mechanical room. No thermostatic mixing valve was observed.

#### 4.1.4 Sanitary Waste

The Site Building is connected to the municipal sanitary system and it appears to be a combined sewer system. (Note: Combined sewer accepts storm water and sanitary water/sewage). The majority of the sanitary waste system is either concealed behind interior finishes or encapsulated behind walls and floors. Where exposed, the sanitary waste piping is cast-iron and brass. The lavatory drain pipes are chrome plated metal or copper metal. There has been some sewer repair/replacement work carried out at the facility.

Cast iron drainage piping typically has a PUL of 40-45 years. ABS and PVC drainage piping typically have a PUL of 25-30 years.

It appears the sanitary and storm waste systems are working as intended. However, because the waste system passed the projected useful life (i.e. age of the building), it is strongly recommended that the sewer lines be scoped with a video camera to determine the actual condition followed by the power flush. Allowances have not been provided to replace the sanitary and storm water removal systems during the term of analysis. However, the replacement should be phased and the cost needs to be updated after the sewer lines are scoped.

The Site Representative reported that the grease interceptors associated with the two (2) kitchens, are cleaned every three (3) months.

The flat roof is drained by a series of roof drains connected to interior rain leaders. We recommend bi-annual roof inspections to make sure the roof drain flashings are watertight and the strainers are not clogged with debris or missing. It is also recommended that the sewer lines be cleaned on a regular planned schedule of every 3-5 years. The other part of the roof is drained through downspouts.

Also, because in some areas of the flat roof the water is ponding we recommend the inspection of the roof sloping and number/location of the roof drains. Ponding on flat roofs has a number of implications including reduced life expectancy of the roof, structural damage, leakage and possible vegetation growth.



View of sanitary waste located in the basement.



View of clogged roof drain (Roof Phase 3).



View of the area of the flat roof where the water is ponding (Roof Phase 2).



Grease Interceptor Kitchen – Basement Phase 2.



Grease Interceptor Kitchen – Phase 1 (located in the basement).

## 4.2 Mechanical

### 4.2.1 Gas Supply System

There are two (2) gas line services for the Site Building. Natural gas is distributed to the rooftop HVAC units, gas fired steam heating boilers, kitchen equipment, and gas fired domestic hot water heater.

No significant deficiencies were reported or observed at the time of the assessment. However, HVAC equipment connections such as drip legs shall be upgraded.

Significant replacement of the gas supply system is not anticipated during the evaluation period, provided it is well maintained and protected. It is recommended that the gas lines on the roof be cleaned and painted on a regularly scheduled basis, as part of general maintenance because it starts to rust.



View of one natural gas service.



View of drip legs connection that has to be upgraded.



View of rusted gas line on the roof.

#### 4.2.2 Heating, Ventilation, Air Conditioning, and Refrigeration (HVAC&R) System

In general, heating is provided by a combination of electric baseboard heaters, steam and hot water boilers plant that serve perimeter heating units, and RTU units.

The Site Building consists of four different heating systems.

The basic design for the Phase 1 facility heating system is perimeter steam radiators. The steam service is provided by one (1) original gas fired steam boiler, which is located in the Boiler Room in the Basement area. The boilers are pressure related and are not controlled by thermostat. An allowance has been provided to replace the steam boiler in the near term. No boiler treatment has been used. The heating pipe system is original to the building and requires immediate attention/replacement. Not having the mechanical drawings it is very hard to estimate the cost of steam piping replacement. More intrusive testing/measurements are recommended. Note: If the steam boiler plant is replaced, the steam distribution system would have to be replaced.

Ventilation and cooling in some areas (i.e. Chrystal Hall) is provided by an A/C Unit located in the ceiling space. Note: No access to the unit was provided. The condensing unit associated with the A/C unit is located outside the building and is utilizing R-22 refrigerant. A provision to replace the A/C unit has been included. Ventilation is not provided in all areas.

There is no ventilation (i.e. make up air) provided for the commercial kitchen in both buildings. The commercial kitchens need to have their own ventilation, as per building code. The make-up air system should be interlocked with the commercial kitchen exhaust hood system. This fact should be rectified. An allowance has been provided. The make-up air is sized based on the exhaust system and Pinchin has not received any information in this regard. Note: Pinchin approximates the size of the make-up air units based on the length of the commercial kitchen exhaust hood.

The heating for the Phase 2 Building is provided by two (2) hot water boiler(s) through perimeter radiators, located in some areas of the facility such as classrooms and Grand Hall. The boilers are located in the Boiler Room in the basement area. It was reported that the boilers are original to the building and were refurbished last year (2016). A provision to replace the boilers has not been included in



the cost table. Consideration should be given to replacing the existing boilers with more energy efficient ones. No boiler water treatment has been used.

The cooling and ventilation for the Grand Hall is provided by a gas fired roof top unit (RTU). The temperature is controlled by a local thermostat. The HVAC equipment is utilizing R22 refrigerant. No ventilation is provided in all areas.

The cooling and ventilation for the Café Kitchen is provided by an A/C Unit located in the ceiling space. The unit is currently in disrepair, and was not working during the walk-through. The Site Representative confirmed that it has not been functioning for at least the last three (3) years. Note: No access to the unit was provided.

The heating for the Phase 3 Building is provided by electric baseboard heaters controlled by build in thermostats. Based on age and reported conditions, no significant capital expenditures, other than routine maintenance, are anticipated during the evaluation period. A provision to replace electrical heating system has not been included in the cost table. Consideration should be given to replacing the existing system with more energy efficient equipment.

The cooling and ventilation for the Credit Union located on the 3<sup>rd</sup> floor and Gallery Room located on the 2<sup>nd</sup> floor are provided by the two RTU(s). Cooling for the offices is provided by windows units and A/C split system. No ventilation is provided to the offices, attic, basement, etc. This fact needs to be rectified.

Based on age and existing conditions the heating and cooling system do not function properly. This is even more visible at “extreme” weather conditions. According to the site representative in this time of the year when it was extremely cold, the temperature inside the Credit Union Branch was very low. They rely on electric baseboard heaters and because of too much load the fuses started to blow.

Thermal comfort and ventilation needs are met by supplying conditioned air, which is a blend of outdoor and recirculated air that has been filtered, heated or cooled, and sometimes humidified or dehumidified. The existing HVAC system does not provide the thermal comfort and ventilation needs. Ventilation upgrades need to be considered for the entire Site Building.

Boilers specifications based on a review of the data plates are listed in Table 4.2.2.1.

**Table 4.2.2.1 Boilers**

Equip. Location	Area Served	Make	M/N	S/N	YOM	Heating Capacity	Notes
Boiler Room	Phase 1 Building	Weil-McLain	-	6474660	-	760 MBH	Gas Fired Steam Boilers (15 psi)
Boiler Room	Phase 2 Building	RBI	420E02	10989006		400MBH	Two (2) existing boilers

Natural gas fired steam boilers typically have a PUL of 25-30 years. Based on age and observed conditions (e.g. no water treatment, no proper maintenance, etc.) the boilers and associated equipment require replacement during the term of analysis.

Note: The inspection of the interior of boilers, heat exchanger, pressure vessels, equipment, or associated components was beyond the scope of the work.



View of steam boiler (Phase 1).



View of the hot water boilers (Phase 2).





View the existing heating piping (Phase 2).



View the existing heating piping (Phase 1).

HVAC Unit specifications based on a review of the data plates are listed in Table 4.2.2.2.

**Table 4.2.2.2 Packaged Rooftop HVAC Unit Name Plate Data**

Ref. No.	Area Served	Make	M/N	S/N	YOM	Cooling Capacity (Tons)	Heating Input (MBH)	Factory Charged
A/C-1	Phase 1 Chrystal Hall	-	No info available	-	-	-	-	R22
A/C-2	Phase 2 Café Kitchen	-	No info available	-	-	-	-	R22
RTU-1	Phase 2 Chrystal Hall	Lennox	GCS16-240-375-1J	5605E 06269	-	-	375	R22
RTU-2	Credit Union, Gallery Room	Trane	G-THFD	621402	-	-	-	R22
RTU-3	Credit Union, Gallery Room	T-CLASS	TCA150S2 BN1J	5604C0 7632	-	-	-	R22

Rooftop heat/cool units typically have a PUL of 20-25 years but often can operate well past their PUL with regular maintenance and service work as required. Based on age and observed conditions, a provision to replace the HVAC units has been included in the cost table.

Additionally, all the HVAC equipment is utilizing R-22 refrigerant. R-22 is part of a group of refrigerants that are due to be phased out as part of the Montreal Protocol on Substances that Deplete the Ozone Layer. Production of R-22 refrigerant in use at this facility is on track for a 99.5% phase out by 2020, and a 100% phase out by 2030. This means R-22 refrigerant is becoming more difficult to find, more expensive to purchase, and equipment which operates on R-22 will become more difficult to operate, repair or replace as manufacturers move to equipment using newer refrigerants.

It is also recommended that the amount of fresh air (i.e. minimum economizer damper position) to be confirmed. We also recommend using CO<sub>2</sub> using CO<sub>2</sub> as an indication of occupancy level to bring in only the required fresh air, ie demand controlled ventilation.



View of rooftop HVAC units (RTU-1 Phase 2 Chrystal Hall).



View of Control Thermostat for RTU-1



View of the A/C Unit for Café Kitchen which is currently in disrepair.



View of rooftop HVAC units (Phase 3).



View of rooftop HVAC units (Phase 3).



View of steam radiator.



View of hot water radiator.



View of electric baseboard heaters.

#### 4.2.3 Air Distribution, Heating & Cooling – Duct System

A system of ductwork and air diffusers distributes air to the various areas of the facility served by the rooftop units. The majority of the ductwork is concealed behind interior finishes.

No significant deficiencies were observed at the time of the assessment.

Ductwork is known to have a PUL of 47 years. Based on age and reported conditions, no significant capital expenditures, other than routine maintenance, are anticipated during the evaluation period.

However, kitchen exhaust ductwork has to be reviewed, since the existing ductwork is rusted and not welded as per existing codes and standards requirements.

For the sound attenuation requirements, the ductwork might have insulation on the inside. Also, on the outside, the insulation might contain asbestos. Both situations need to be confirmed.

#### 4.2.4 Exhaust System

The Site Building's exhaust system consists of various exhaust fans for washrooms, kitchen, storage, and some common areas. The exhaust fans are vented to the atmosphere through the exterior walls or through the roof. The fans were observed to be in serviceable condition.



View of the kitchen exhaust fan (Phase 1).



View of the kitchen exhaust fan (Phase 2).



View of typical general exhaust.

The rooftop mounted exhaust fans should be complete with disconnect switches.

Similar exhaust fans are known to have a PUL of 15 years. Based on age and observed conditions, a provision to replace the roof exhausters have been included in the cost table.

#### 4.2.5 Controls

The Site Building consists of four different heating systems and only the roof top units are controlled by their own thermostat. The other heating/cooling systems do not have the capabilities to be controlled (e.g. the steam boilers are pressure related and are not controlled by thermostat, electric baseboard heaters are controlled by build in thermostats, etc.).

For instance, in the loan interview room, board room and back offices of the Credit Union the heat is provided by the radiators. Because this system has no temperature control the radiators are off during the night. This means it is very cold in the morning. The site representative informed Pinchin that the radiators cannot be left ON during the night.

Pinchin recommends to review the entire control system. If the mechanical equipment will be replaced/upgraded, the installation of a Building Automation System (BAS) might be considered. BAS provides more accurate HVAC systems control. As part of the controls we also recommend that all existing/new RTUs be complete with controllers to determine the heating and cooling mode, and fans will be set up to run continuously during occupied mode and cycle ON-OFF during unoccupied mode. In the area where are more than one system such as RTU and boilers, those systems should be integrated.

Note: There are incentives available from utility companies for mechanical equipment/controls replacement.

### 4.3 Electrical

#### 4.3.1 Main Electrical Service and Switchboards

The building appears to have three (3) electrical services (Phase 1 & Phase 2, Phase 3 electrical heating system, Credit Union 2<sup>nd</sup> floor) and all of them are coming into the Electrical Room located in the Basement of Phase 1. The distribution transformer is located in the Clock Room (Basement Phase 2). The building electrical panels appear to be 120/240/600V panels of various sizes and ages, and the distribution system is comprised of 120/240/600 switchboards, distribution boards, branch circuit panel boards and circuitry. Branch wiring is provided to sub-panels, lighting, receptacles, and mechanical loads. The majority of the wiring is concealed behind the walls and floors, and other interior finishes. Also, it was reported that in some areas the wiring might not be protected by electrical tubing, also called "open wiring"; this condition needs to be confirmed.

Steam and water pipes are running unprotected into the electrical room. This fact is at high risk and has to be rectified. The pipes have to be protected and/or relocated.

Based on age of the building and observed conditions, it is strongly recommended that the electrical distribution service be reviewed in its entirety. It is recommended an infrared thermographic technology be completed on the electrical distribution network and electrical panels at the facility every three (3) years (or more frequent if required by insurance) as part of regular scheduled maintenance to check for any issues related to overloading, loose connections, or related issues; preventive maintenance should continue to be considered/carried out, as well. This practice of infrared scan should be carried out as part of routine operation and therefore the cost is not included in this report. It was reported that an Infrared Scan of the electrical system has not been completed at the facility.



View of electrical disconnect located in the first basement electrical room.



View of breaker located in the electrical room.



View of distribution transformer.



View of steam and water pipes which are running unprotected into the electrical room.



View of electrical distribution sub-panel.



View of electrical disconnect.

Based on age and observed conditions, it is anticipated that major expenditures would be required beyond normal maintenance during the term of analysis of this report. However, it is recommended that an infrared scan be carried out to confirm these conditions. Also we recommend that the interior distribution transformers to be verified as part of regular scheduled maintenance. The necessity of replacement shall be confirmed by an authorized electrician.

#### 4.3.2 Branch Wiring

Branch wiring consists of switches, receptacles, equipment connections, conduit and wire. The majority of the branch wiring is concealed behind interior finishes. Where exposed wiring was observed to be installed in liquid tight flex cables or EMT conduit.



Electrical liquid tight flex cabling and conduit installation.



Electrical conduit installation.

Based on age and reported conditions, significant capital expenditures are anticipated during the evaluation period. As previously mentioned, Pinchin recommends that the electrical system be inspected, in addition to the infrared scanning.

#### 4.3.3 Lighting Equipment – Interior Lighting

The interior fixtures is predominantly provided by T8 linear fluorescent lamps. Also there are pendant mounted fixtures with compact fluorescent bulbs, strip single bulb T5 fixtures, surface mounted fixtures, as well as some pot light fixtures.

Majority of interior lighting is controlled manually. A very limited number of fixtures have been placed on motion sensors which deactivate the light if there is no activity near them.





View of the typical T8 fluorescent lighting fixtures.



View of the fixtures observed in common area.



View of pot light fixtures.

The projected useful life of T8 and T5 lighting (specifically the ballasts) is 25,000 hours. LED fixtures typically have a useful life of 50,000 hours. Based on an annual estimated usage of 4,500 hours, the interior lighting is likely to reach the end of its PUL during the evaluation period (2017 to 2026). It is assumed the age of the existing lighting fixtures and lamps is approximately the age of the facility.

Pinchin recommends replacing the interior lighting at the end of its PUL. A provision to replace the interior lighting has not been included in the cost table. Consideration should be given to replacing the existing lamps with more energy efficient interior lighting.

#### 4.3.4 Lighting Equipment – Exterior Lighting

Exterior lighting consists of building general lighting, pole mounted parking lot lighting, and exterior sign lighting. Exterior wall mounted lighting fixtures are installed along the sides and rear of the building, and appear to be equipped with metal halide bulbs. The pole mounted parking lot lighting fixtures appear to be

equipped with metal halide bulbs. It is assumed with exterior signs along the front of the building are fluorescent bulb fixtures.



Pole mounted parking lot lighting fixture.



Exterior wall mounted general lighting.

Based on observed and reported conditions, it is not anticipated that major expenditures are required, other than routine maintenance and repairs, during the term of analysis of this report.

#### 4.3.5 Other Electrical Systems - Diesel Generator

There is no emergency generator or fuel storage system installed in the Site Building.

## 5.0 SUMMARY OF MECHANICAL AND ELECTRICAL SYSTEMS RECOMMENDATIONS

The following table provides a summary of the recommendations with estimated costs. Note that these costs estimates are preliminary Class "D" and are subject to change depending on the final scope of work, details and specifications and variations with market based pricing.



**Table 5.0: Summary of Mechanical and Electrical Systems Recommendations**

<b>Immediate Costs (&lt;12 months)</b>	
Thermostatic Mixing Valves	\$2,000.00
Installation of backflow preventer on the water main entrance line	\$5,000.00
Cleaning and scoping of sewer lines	\$6,000.00
Infrared scan of the electrical panels and distributions	\$7,000.00
Remove/protect existing steam and water pipes in the electrical room	\$10,000.00
<b>Required Costs (years 1 to 10)</b>	
Replacement of the three (3) packaged rooftop HVAC units	\$83,300.00
Replacement of the two (2) A/C units and condensing units;	\$38,000.00
Replacement of the two (2) kitchen roof exhausters;	\$19,000.00
Replacement of one (1) steam boiler;	\$49,000.00
Replacement of steam heating pipe system	\$100,000.00(*)
Replacement/Repair of domestic water distribution	\$150,000.00(*)
Replacement and repair of the main electrical service, panels, and switchboards distribution systems;	\$130,000.00(*)
Installation of two (2) make up air units associated with kitchen exhaust. <u>Note:</u> No allowances for structural upgrades were considered.	\$70,000.00(**)
Building ventilation upgrades.	\$0.00(**)
Controls	\$0.00(**)
Replacement of the interior lighting at the end of its PUL	\$0.00(***)
<b>Total (Uninflated)</b>	<b>\$669,300.00</b>
(*) This price needs to be upgraded. More intrusive testing/measurements are recommended. (**) This is a recommended code upgrade. (***) This is a recommended replacement.	

**6.0 TERMS AND LIMITATIONS**

This work was performed subject to the Terms and Limitations presented or referenced in the proposal for this project.



Information provided by Pinchin is intended for Client use only. Pinchin will not provide results or information to any party unless disclosure by Pinchin is required by law. Any use by a third party of reports or documents authored by Pinchin or any reliance by a third party on or decisions made by a third party based on the findings described in said documents, is the sole responsibility of such third parties. Pinchin accepts no responsibility for damages suffered by any third party as a result of decisions made or actions conducted. No other warranties are implied or expressed.

In accordance with the proposed scope of work, no physical or destructive testing or design calculations were conducted on any of the components of the building. Assessment of the original or existing building design, or detection or comment upon concealed structural deficiencies and any buried/concealed utilities or components are outside the scope of work. Similarly the assessment of any Post Tension reinforcing is not included in the scope of work. Determination of compliance with any Codes is beyond the scope of this Work. The Report has been completed in general conformance with the ASTM Designation: E 2018 – 08 Standard Guide for Property Condition Assessments: Baseline Property Condition Assessment Process.

It should be noted that Pinchin has attempted to identify all the deficiencies required by this Standard associated with this project. Pinchin does not accept any liability for deficiencies that were not within the scope of the investigation.

As indicated above the personnel conducting the building assessment, where applicable, have performed a specialist review of the mechanical and electrical (including fire alarm and life safety) systems.

The intent of Pinchin's comments on these additional systems are for the sole purpose of identifying areas where Pinchin has observed a noteworthy condition and/or where Pinchin would recommend that the Client consider a further, more detailed investigation. The budget costs for remedial work for each specific item has been provided to the best of our ability and will provide an order of magnitude cost for the individual item and the overall possible remedial work. Our experience has shown that the costs that Pinchin have provided are appropriate and of reasonable accuracy for the purpose intended. It should be noted that the budget cost or reserve costs for any specific item may vary significantly based on the fact that the schedule or phasing of the future remedial work is unknown at this time, the impact on building operations of this remedial work is unknown at this time and that no intrusive inspection or detailed design work is included. If a more accurate, detailed or documented reserve cost is required at this time the Client should request Pinchin to provide the additional proposal to provide a more accurate cost estimate.

The assessment is based, in part, on information provided by others. Unless specifically noted, Pinchin has assumed that this information was correct and has relied on it in developing the conclusions.

It is possible that unexpected conditions may be encountered at the Site that have not been explored within the scope of this report. Should such an event occur, Pinchin should be notified in order to



determine if we would recommend that modifications to the conclusions are necessary and to provide a cost estimate to update the report.

The inspection of the interior of ductwork or associated components was beyond the scope of work. It should be noted that the heating and cooling duct work within the Site Building may contain interior insulation. The Site Representative was unaware of the presence of insulation within the duct work within the Site Building. It is Pinchin's experience that interior insulation within duct work is prone to deterioration or development of mould which may require removal of the insulation. In the case where interior insulation is present within the duct work, Pinchin recommends that the duct work insulation be inspected for the presence of mould.

Due to the concealed nature of the plumbing system the condition of the risers could not be verified.

Environmental audits or the identification of designated substances, hazardous materials insect/rodent infestation, mould and indoor air quality are excluded from this report.

Further to the aforementioned, determination of the presence of asbestos containing material within the building such as drywall joint compound or the lead content within the older paint finishes was beyond the scope of work.

This report presents an overview on issues of the condition of the Site Building's mechanical electrical, and fire and life safety systems, reflecting Pinchin's best judgment using information reasonably available at the time of Pinchin's review and Site assessment. Pinchin has prepared this report using information understood to be factual and correct and shall not be responsible for conditions arising from information or facts that were concealed or not fully disclosed to Pinchin at the time of the Site assessment.

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