Region of Waterloo

BUILDING CONDITION ASSESSMENT

THE REGION OF WATERLOO

Kitchener Housing
25 JOSEPH ST., Kitchener, ON N2G 4X6

WalterFedy Project No.: 2022-0134
The Region of Waterloo Project No.: C2022-04

November 22, 2022

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WalterFedy Project No.: 2022-0134

November 22, 2022

Rhonda Wadel
Housing Asset Administrator
99 Regina St. S., 4th Floor
Waterloo, N2J 4V6

Dear Ms. Rhonda Wadel,

RE: **The Region of Waterloo: Building Condition Assessment**
25 JOSEPH ST., Kitchener, ON N2G 4X6

WalterFedy is pleased to submit this Building Condition Assessment to The Region of Waterloo. This report encompasses the originally agreed upon scope, as outlined in our response to C2022-04 for the Kitchener Housing located at 25 JOSEPH ST. in Kitchener.

This report was completed with the data supplied by The Region of Waterloo, and that collected during our site visit, as well as engineering judgement and various analysis tools to arrive at the final recommendations.

All of which is respectfully submitted,

WALTERFEDY

Marlen Aleman, LEED GA, FMP
Team Leader
Asset and Facilities Management Solutions

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519-576-2150 ext. 211

TABLE OF CONTENTS

GLOSSARY OF TERMS AND DEFINITIONS

Action Repeat Interval This means the time interval in which the recommended action needs to be repeated. For lifecycle replacement, the repeat interval is usually equal to the normal life expectancy of the component. For regular maintenance recommendations, the repeat interval is determined based on the existing condition, consultant's professional opinion, and staff/tenant's reports.

Action Cost This is the estimated cost of the action recommended, repairs and/replacement, derived from the market or building cost services, which publish construction and remodeling costs on an annual basis. Replacement cost estimates are generally based on local material costs, union labor costs and normal construction conditions.

Action Description This provides the details of the work recommended to be undertaken.

Action Year This indicates the year in which the action recommended should be undertaken.

FCI Facility Condition Index

Overall Condition This identifies the overall condition of the entire element/system. For example, a new flat roof is in good overall condition, but there may be localized minor damage to the roof membrane, drainage, or flashing, etc. The observed minor defect will not affect the good overall condition.

Replacement Cost These are unit cost estimates of various building components, derived from the market or building cost services, which publish construction and remodeling costs on an annual basis. Replacement cost estimates are generally based on local material costs, union labour costs and normal construction conditions. The represent the costs of major repairs or replacements at the current prices and under current conditions

Reserve Fund Study (RFS) This is a study for future funding of the reserve fund that the board determines will ensure that, within a prescribed period of time and in accordance with the prescribed requirements, the fund will be adequate for the purpose for which it was established.

SF Square Footage

Year Installed This date indicates the timing of the installation of the element. It is noted that this date will vary for elements throughout the facility.

1 EXECUTIVE SUMMARY

1.1 General Information

Table 1 - Facility Background Information

Facility Name:	Kitchener Housing
Location:	25 JOSEPH ST., Kitchener
Facility Type:	Apartment
Facility Description:	Apartment Tower with 100 units.
Number of Units:	100
Number of Units Assessed:	10
Date of Site Visit:	Jun. 21, 2022
Assessor 1:	Peter Downar
Assessor 2:	
Construction Year:	1910
Building Age (years):	112
Estimated Current Replacement Cost:	$28,000,000 at $350 per SF
Number of Floors (above grade):	8
Number of Floors (below grade):	1
Number of Elevators:	2
Estimated Window Area (SF):	9,300
Window / Wall Percentage:	7.00%
Site Area (SF):	100,000
Building Footprint (SF):	12,000
Building Gross Area (SF):	80,000
Percent of Site Coverage:	12.00%
Estimated Permeable Site Area (SF):	20,000
Percentage Permeable Site:	20.00%
FCI (2022):	0.00% - Good
FCI – Next ten (10) years:	12.64% - Poor

1.2 Annual Investment Projections

The study timeline for this report spans from 2022 to 2052. Annual investment on maintenance, repair and end-of-life replacement of building components will be required over the next thirty (30) years in order to ensure the building lifecycle is maximized and it remains in safe condition for the users of the building.

The annual expenditure forecast in each year is not constant due to different remedial actions that have been identified, and differing lifecycles for different equipment types. Therefore, WalterFedy provides annual average, maximum annual investment, and total forecast investment value over the study period, as listed in the tables below where the dollar amounts are expressed in 2022 costs without inflation:

Capital Cost Forecast (Lifecycle Replacement)

Average Annual Expenditure [$]	$439,485
Maximum Annual Expenditure [$]	$1,290,100
Total 30-Year Expenditure [$]	$13,624,050

**2022 dollars without inflation*

Repair Cost Forecast

Average Annual Expenditure [$]	$20,581
Maximum Annual Expenditure [$]	$89,250
Total 30-Year Expenditure [$]	$638,000

**2022 dollars without inflation*

1.3 General Summary

The report identifies and makes lifecycle repair/replacement recommendations for deficiencies visually identified while on-site on June 21, 2022. Within the property condition assessment methodology, each major component was assessed for condition, based on a visual review, while factoring in component history, current maintenance practices, and time since the last major replacement/repair. The assessed condition of the component is then compared against industry-accepted "expected useful life" values for each component type. An inventory of needs was then developed based on age, condition, and the relative impact that failure of that particular component represents for the building.

1.4 Structural Summary

The original foundation is comprised of parged clay brick masonry foundation walls extending below grade, a poured concrete basement floor slab, and poured concrete footings extending below grade. The foundation of the addition is comprised of precast concrete foundation walls extending below grade, a poured concrete foundation floor slab and poured concrete footings extending below grade. The basement level of the addition is an underground parking garage which provides parking for the tenants. The floor of the parking garage is the poured concrete foundation slab. The superstructure of the original building is comprised of cast-in-place concrete floor slabs and clay brick masonry structural walls. The superstructure of the addition is comprised of precast concrete floor slabs and concrete block structural walls. Units on the second, fourth, fifth, sixth, and seventh floors of the addition are each equipped with two precast concrete balconies. The balconies are topped with concrete pavers and equipped with painted metal guardrails.

1.5 Architectural: Exterior Elements Summary

The exterior walls of the original building are clad with clay and stone brick masonry. The majority of the addition's exterior walls are clad with clay brick masonry. A portion of the addition's exterior walls is clad with aluminum siding. A portion of the addition's exterior walls is clad with an EIFS (Exterior Insulation Finish System). The windows in the original building are comprised of wood-framed units in a punched configuration with vertical sliders. The windows in the addition are comprised of aluminum-framed units in a punched configuration with casement and fixed units. There are two portions of aluminum-framed exterior glazing located on the exterior wall of two staircases. The main entrances into the original building are provided by twelve (12) solid-wood glazed exterior doors. There are a pair of hollow-metal service doors which provide access to the original building. There is a pair of aluminum-framed glazed entrance doors which provide entry to the addition. Additional entry into the newer section of the building is provided by hollow-metal doors with or without inset glazing. The ground-level units of the addition are accessed through hollow-metal glazed doors. Entry onto the unit balconies is provided by aluminum-framed glazed balcony doors. Additionally, the ground-level unit patios are accessed through aluminum-framed glazed sliding doors. There

are two aluminum overhead doors which provide access to the parking garage. Additionally, the addition's garage room is also equipped with an aluminum overhead door.

A portion of the original building's roof is clad with a BUR (Built-Up Roofing) system. A portion of the original building's roof is clad with slate roofing. The addition's roof is clad with a BUR (Built-Up Roofing) system. There are three (3) wood-framed skylights located on the roof of the original building.

1.6 Architectural: Interior Elements Summary

Entry into the majority of the units is provided by solid-wood entry doors. The unit interior doors are comprised of hollow-wood room and closet doors. The number of doors varies from unit to unit (3-14 doors/unit). There are hollow-wood and hollow-metal interior doors with or without inset glazing located throughout the common areas of the building. The original building is equipped with two (2) concrete staircases which provide access to all floors of the building. The stairs are topped with paint and rubber nosings and are equipped with either painted metal handrails or painted metal guardrails with wood handgrips. The addition is equipped with two (2) metal staircases which service all the floors of the building. The stairs are topped with concrete treads and metal nosings and are equipped with painted metal guardrails. The units in the addition are equipped with wood staircases to access both floors of the units. The stairs are topped with carpet and are equipped with a wood handrail on one side.

The common area interior finishes are as follows:

Walls: Painted drywall and ceramic tile.

Floors: Ceramic tile, vinyl sheet, terrazzo, parquet, and painted concrete.

Ceilings: ACT and painted drywall.

The unit interior finishes are as follows:

Walls: Painted drywall.

Floors: Carpet, laminate, VCT, and parquet.

Ceilings: Painted drywall.

1.7 Mechanical Summary

The domestic water supply system for the building is comprised of supply piping, two (2) domestic hot water storage tanks, four (4) water softener tanks, and two (2) circulation pumps. The sanitary waste piping for the building is connected to the local municipal sanitary waste sewers.

The heating system for the building is comprised of four (4) gas-fired boilers, two (2) circulation pumps, hydronic baseboard heaters, hydronic cabinet heaters, fan-forced unit heaters, electric unit heaters, residential gas-fired furnaces, rooftop gas-fired furnaces, and unit gas-fired furnaces.

The cooling system for the building is comprised of two condensing units and a split system.

The ventilation system for the building is comprised of ceilings mounted and range hood exhaust fans in the bathrooms and kitchens, fresh air dampers, two (2) make-up air units, and air vents.

The building's laundry rooms are equipped with a total of eight (8) washers and eight (8) dryers.

The building is equipped with a diesel-powered emergency generator which is manufactured by Simpower and is located in the generator room. Fuel for the generator is stored in the ULC fuel storage tank which is located in the generator room.

Each unit kitchen is equipped with melamine cabinetry, laminate countertops, a metal sink with a metal faucet, ceramic tile backsplash, a range hood exhaust fan, a stove, a refrigerator, vinyl composite tile (VCT) or laminate flooring, and painted drywall walls and ceilings.

1.8 Electrical Summary

The primary electrical distribution system for the building is comprised of a 2500A switchboard which is manufactured by Siemens (3-Phase, 4-Wire) and located in the electrical room. The secondary electrical distribution system for the building is comprised of approximately fourteen (14) distribution panels and three (3) safety switches. Each unit is equipped with a 125A electrical distribution panel which is manufactured by ITE. Hardwired light fixtures in the units use incandescent and CFL, bulbs in ceiling-mounted lighting fixtures. Hardwired light fixtures in the common areas use incandescent and CFL, bulbs and tubes in ceiling-mounted lighting fixtures.

1.9 Fire & Life Safety Summary

The dry-pipe sprinkler system services the mechanical rooms, service rooms, laundry rooms, parking garage, and garbage rooms. There is a fire pump which is manufactured by ULC (M/N: 20-IE-7) and is located in the addition's mechanical room. There is a standpipe system running vertically through the building which is connected to the fire hose cabinets. There are approximately twenty (20) fire extinguishers located throughout the building. There is a fire alarm panel which is manufactured by Troy and is located in the electrical room. Annunciator panels are present at the main entrances to the building. The fire alarm devices for the building are comprised of manual pull stations, heat detectors, and warning bells. Exit signage and emergency lighting consist of ceiling and wall-mounted exit signs and battery power emergency lighting fixtures.

1.10 Accessibility Summary

A full accessibility audit was not completed as part of this assessment but general observations indicate that the building could be considered only partly accessible.

The elevator does not have an audible indicator of floor level.

Only audible fire alarms were observed - no visual (strobe light devices) were observed.

Automatic door operators are installed at the main building entrance.

1.11 Site Summary

There is an asphalt roadway which leads from Joseph Street through the site. Site parking is provided by an asphalt parking lot which is located on the North end of the site. The perimeter of the paved asphalt parking and roadways are equipped with poured concrete curbs. Pedestrian walkways for the site are comprised of poured concrete and interlocking brick. There is concrete paving located in the courtyard which is comprised of poured concrete slabs and interlocking brick. General landscaping consists of manicured lawns, shrubs, and trees. There is wood fencing between the unit patios on the South end of the site. There are painted metal railings located throughout the site. Site lighting is provided by approximately twenty (20) pole-mounted fixtures and 100 wall-mounted and soffit-mounted fixtures.

2 INTRODUCTION

2.1 Objectives

The objectives of Building Condition Assessments (BCAs) and Elevator Audits[1] will be:

- To determine the present physical condition of the listed facilities with respect to structural/architectural components, building envelope, mechanical and electrical systems, fire/life safety systems, and predictive 30-year renewal costs;
- To determine the scope, timing and current cost of all building component repairs or replacement likely to be required;
- To determine the finances required to be set aside for both normal maintenance and capital repair/replacement of major components for budgetary purposes; and
- To report all findings and recommendations from these assessments and audits of all repairs, replacements, rehabilitations, and 30-year plans in the formats as stated in this RFP.

2.2 Scope of Work

As per the agreement between the client and WalterFedy, the Building Condition Assessment (BCA) includes a visual assessment using non-destructive techniques and tools of the following major building assemblies and their component parts:

- Structural assemblies (those that are visible)
    - Including parking garages (when applicable)
- Architectural assemblies (exterior, interior components)
    - Roof coverings
    - Building wall cladding
    - Windows and doors
    - Unique architectural items
    - Room finishes
- Mechanical assemblies
    - Heating, Cooling and Ventilation
    - Plumbing
- Electrical assemblies
- Fire and Life Safety assemblies
- Exterior site features
    - Roadways and parking
    - Sidewalks, patios or other hard surfaces
    - Fences and gates
    - Storm water drainage
    - Soft landscaping
- Elevators (when applicable)

The assessments consider the physical condition of each assembly and its components, the age of the components compared to an expected useful life of similar components, and any capacity issues identified. When further details are required to fully understand the scope of a deficiency that is identified, WalterFedy recommends further study and investigative work to be done.

[1] Where Applicable

Building components are identified using the *ASTM E1557 - 09(2015) Standard Classification for Building Elements and Related Sitework-UNIFORMATII*. This industry-recognized standard allows an easy-to-understand description of the building components, as well as a logical method to analyze collected data.

2.3 Recommended Actions

When necessary WalterFedy will develop Recommended Action items for components. The Actions are classified as one of the following categories:

Table 2: Possible Action Type Categories

Action Type	Definition
Repair	The existing component is functioning, but in need of repair so that it will function to its intended capacity and design lifecycle
Replacement	The existing component cannot be effectively repaired due to • the cost of repair being greater than the cost of a new component, • outdated technology, • the component is at its expected normal useful lifecycle, or • a repair will not be effective at resolving any deficiencies
Install	A component that is required is missing and should be installed
Study	Further detailed assessment including possible destructive testing is required in order to fully understand the requirements for the component

Action items are developed based on the knowledge of WalterFedy's assessors and industry standards (including applicable Code requirements).

2.4 Cost Estimates

Action cost estimates provided in this report should be considered Class "D" estimates (i.e., ±25% of expected actual costs) and are provided as a preliminary estimate of the expected costs to repair the deficiencies identified by WalterFedy assessors. The cost values are determined by identifying the requirements for an element or component of the building and then estimating element replacement costs and/or a reasonable lump sum allowance for the recommended work.

The action cost estimates are, unless otherwise stated, reflective of the cost to remove the existing element and replace it with a new version of the element that would provide equivalent service (i.e., a "like-for-like" replacement). These costs are determined from a combination of source information:

- RS Means is an industry leader specializing in providing baseline cost estimates for building systems. Their costing databases compare building activities across North America in order to establish baseline cost estimates for replacement or installation of components and elements adjusted for the geographic location of the subject building. RS Means costs include an allowance for a contractor's overhead and profit.
- WalterFedy also makes use of information from other current and past projects completed by our firm that include work similar in scope to the actions recommended in the BCA reports.

- Finally, with an extensive project history in Southwestern Ontario and beyond, WalterFedy has relationships with many local contractors, and has gained a good understanding of current building construction, market trends and costs.

The information from the sources listed above is compiled, reviewed and maintained in an internal database of action costs for actions or building elements that are relevant to the building(s) in this study. This database is regularly reviewed and updated as necessary in order to ensure that our cost estimates match current market values.

Cost estimates are prepared in 2022 Canadian Dollars (i.e., the year of assessment) and include a 20% contingency fee to cover unforeseen costs plus a 10% contingency fee to cover applicable consulting fees, but do not include any applicable taxes.

The cost estimates assume work is performed at one time and, as such, do not include general project management costs, or costs for a contractor to mobilize for a project that might result from a combination of multiple actions into one larger project.

More precise cost estimates would require more detailed investigations and design work than provided for in the scope of work of this project. WalterFedy cannot guarantee or warrant that the final costs will not exceed these estimated amounts, or that all ancillary costs related to the recommended actions are covered.

2.5 Action Year

For each identified action WalterFedy also identifies a year when that action should occur. This timing is based on our knowledge of the typical lifecycles of building components before replacement is expected, but will also be developed taking into consideration the unique situation of the component.

When a component lifecycle is less than the length of the study period (i.e., less than 30 years) the action item will appear as many times in the future as the lifecycle requires within the study period.

2.6 Condition and Priority Rating System

As part of the RFP package, the client provided a template worksheet for identifying the various components within the building, including defined condition ratings:

Table 3: Condition Definitions

Condition	Definition
Very Good	Asset is physically sound and is performing its function as originally intended. Required maintenance costs are well within standards and norms. Typically, asset is new or recently rehabilitated.
Good	Asset is physically sound and is performing its function as originally intended. Required maintenance costs are within acceptable standards and norms but are increasing. Typically, the asset has been used for some time but is within mid-stage of its expected life.
Fair	Asset is showing signs of deterioration and is performing at a lower level than originally intended. Some components of the asset are becoming physically deficient. Required maintenance costs exceed acceptable standards and norms are increasing. Typically, asset has been used for a long time and is within the later stage of its expected life.
Poor	Asset is showing significant signs of deterioration and is performing to a much lower level than originally intended. A major portion of the asset is physically deficient. Required maintenance costs significantly exceed acceptable standards and norms. Typically, asset is approaching the end of its expected life.

Very Poor	Asset is physically unsound and/or not performing as originally intended. Asset has higher probability of failure or failure is imminent. Maintenance costs are unacceptable and rehabilitation is not cost effective. Replacement/major refurbishment is required.

3 FACILITY CONDITION INDEX (FCI)

3.1 General Information and Methodology

The FCI is an industry standard key performance indicator (KPI) which can be used to objectively quantify and evaluate the current condition (i.e., physical health) of an individual building, or to compare an individual building to other buildings in a portfolio. It is based on the financial needs of the building only, and can help building owners and managers make benchmark comparisons on the relative condition of buildings but should be used with care. The FCI will not allow identification of priority actions or levels of risk associated with the building, nor a detailed list of all the required Actions.

By using projected renewal and replacement costs a future FCI can be predicted that will demonstrate the changing condition of the building over time.

FCI is typically expressed using the following equation:

$$\text{FCI} = \frac{\text{Total Renewal and Repair Costs}}{\text{Building Replacement Cost}}$$

Where:

- Renewal and repair costs are determined by the identified Repair or Replacement Action items.
- The building replacement cost represents the construction cost to building a building the same size, with the same function, in accordance with current Standards and Codes, exclusive of land or real estate market costs.

The following benchmarks are typical industry standards used to indicate the overall building condition based on the FCI calculation:

- FCI: 0-5% Good Condition
- FCI: 5-10% Fair Condition
- FCI: 10-30% Poor Condition
- FCI: >30% Critical Condition

Unless advised otherwise, WalterFedy uses a unit-cost-per-area construction cost based on current construction market costs and comparable buildings.

3.2 Subject Building Details

As it stands, the building is currently in Good condition overall with an FCI score of 0.00%.

In order to examine how the condition of the building may change, we assume a “worst case” scenario where no investment is made to the building. The FCI will continue to worsen (i.e., the percentage value will increase) and over the next ten (10) years, the calculated 10-year average FCI value is 12.64%. That means the facility will be in Poor condition overall.

If the FCI is calculated in a longer term such as 20-30 years, some of the lifecycle replacement actions may be repeated. Therefore, the calculation results will not accurately reflect the actual condition. Figure 1 displays the FCI graph over the thirty (30) year study period.

Figures 2 and 3 provide an annual breakdown of forecast expenditures: Figure 2 represents the forecast replacement costs (i.e., due to lifecycle needs or other reasons) and Figure 3 represents the forecast repair costs for elements that do not require full replacement, but do require attention to return them to satisfactory condition.

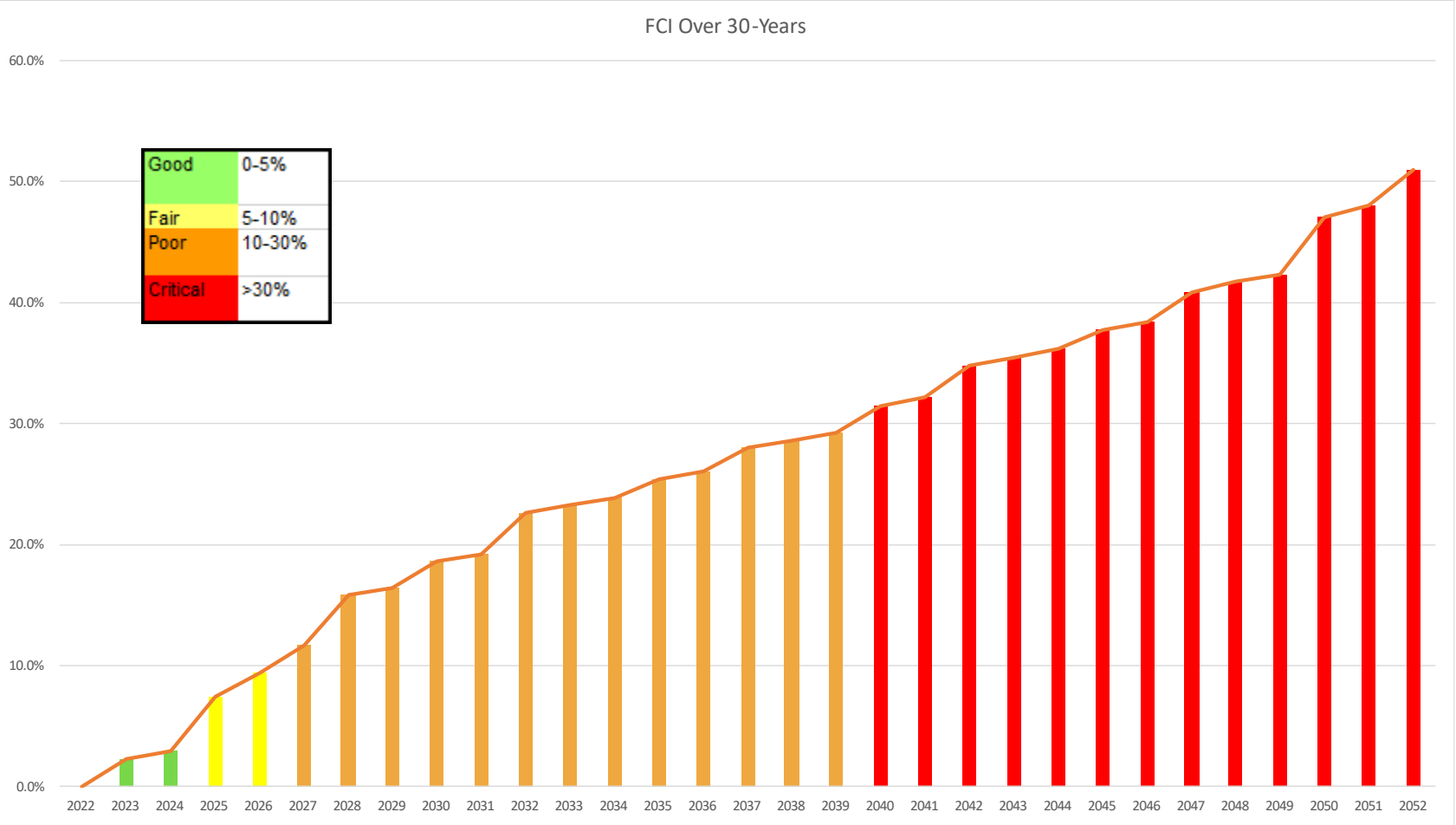


Figure 1: Facility Condition Index (FCI) Chart

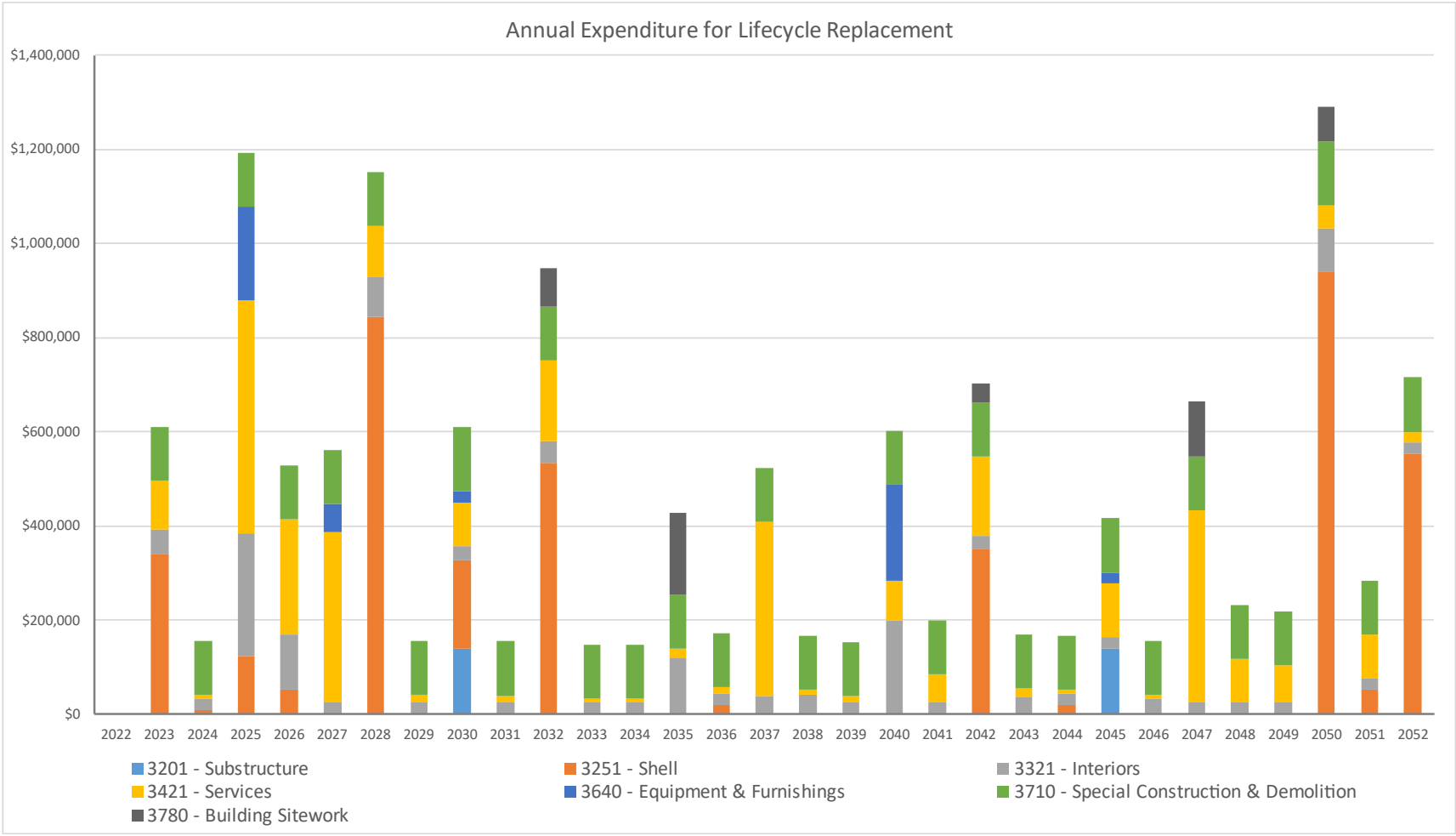


Figure 2: Annual Expenditures Chart for Lifecycle Replacement *(*2022 dollars without inflation)*

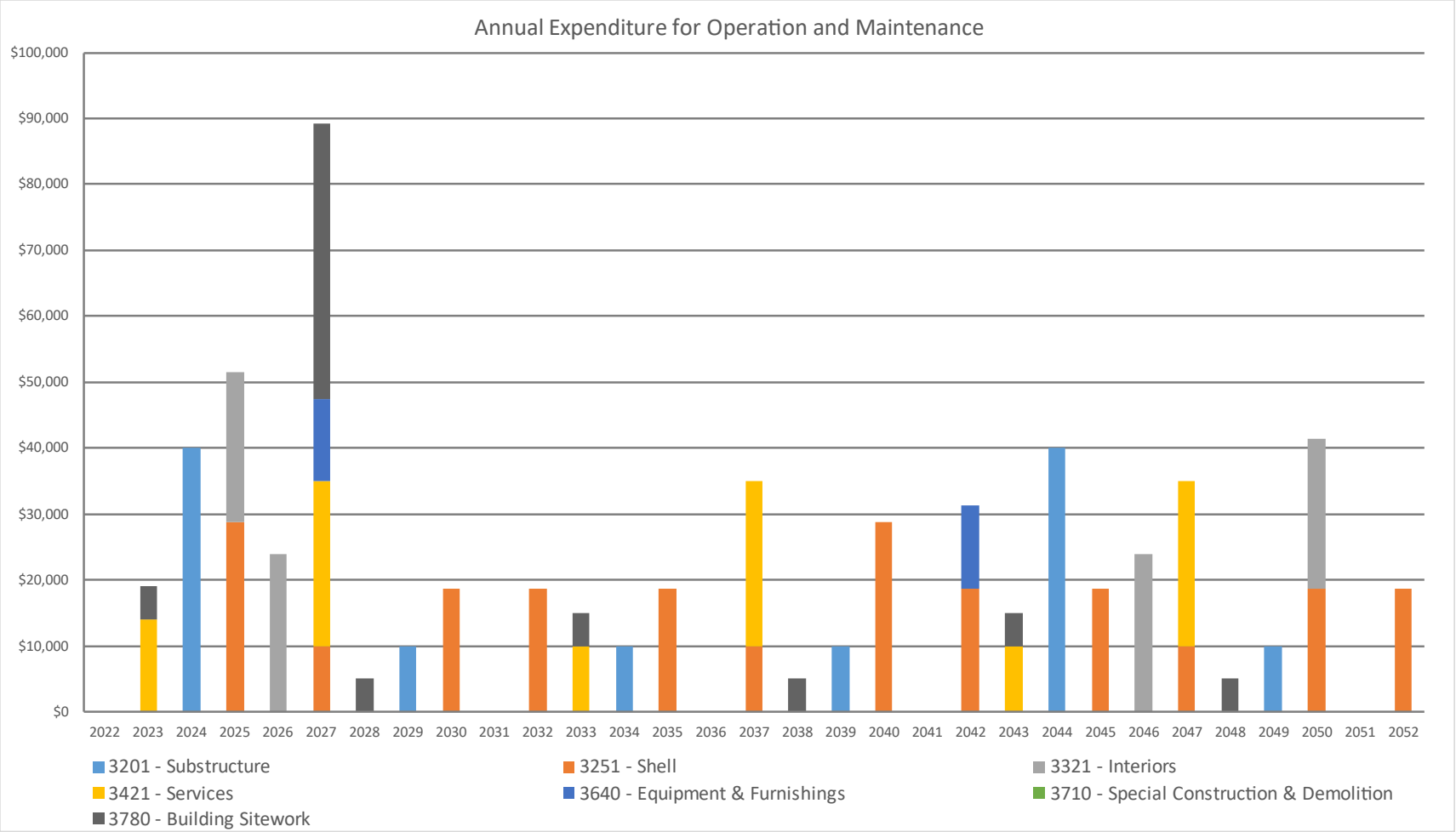


Figure 3: Annual Expenditures Chart for Operation and Maintenance *(*2022 dollars without inflation)*

4 LIST OF REFERENCE DOCUMENTS AND STANDARDS

- ASTM E2018 - 15 Standard Guide for Property Condition Assessments: Baseline Property Condition Assessment Process
- ASTM E2166 - 16 Standard Practice for Organizing and Managing Building Data
- ASTM E1557 - 09(2015) Standard Classification for Building Elements and Related Sitework-UNIFORMATII
- Ontario Building Code, 2012
- Ontario Fire Code, 2007

4.1 Contact Information

The contact information for the Owner (The Region of Waterloo) and the Consultant (WalterFedy) can be found in Table 5:

Table 5: Contact Information

Owner:	**Consultant:**
The Region of Waterloo	WalterFedy
Rhonda Wadel Housing Asset Administrator	Marlen Aleman, LEED GA, FMP Team Leader
rwadel@regionofwaterloo.ca	519-576-2150 ext. 211 marlen.aleman@walterfedy.com
99 Regina St. S., 4th Floor Waterloo N2J 4V6	675 Queen Street South, Suite 111 Kitchener, ON N2M 1A1

5 EXISTING CONDITIONS AND RENEWAL RECOMMENDATIONS

3201 - Substructure

1. 3206 - Wall Foundations

Element Name: Foundations - Original
Year of Installation: 1910
Condition Rating: Fair - 3
Component Condition: The original foundation is comprised of parged clay brick masonry foundation walls extending below grade, a poured concrete basement floor slab, and poured concrete footings extending below grade. Upon inspection, the foundations appeared to be in fair condition with some of the exterior foundation's walls being visibly damaged and missing parging. Full replacement of the foundation is not anticipated within the terms of the study.
Component Recommendation: An allowance has been included to repair the original foundations as needed.

Recommended Action: Repair

Action Summary:	**Action Description:**
Allowance for repairs	Repair the original foundation as needed.

Other Information:

Action Cost:	$10,000	**Action Year:**	2024
Expected Useful Life:	100	**Repeat Cycle:**	5
Average CoF:	4	**Average PoF**	3

Component Photographs

3201 - Substructure

2. 3206 - Wall Foundations

Element Name: Foundations - Addition
Year of Installation: 1992
Condition Rating: Good - 2
Component Condition: The foundation of the addition is comprised of precast concrete foundation walls extending below grade, a poured concrete foundation floor slab and poured concrete footings extending below grade. No issues with regard to the addition's foundation were reported during the site inspection, therefore, it is considered to be in good condition. Full replacement of the foundation is not anticipated within the terms of the study.
Component Recommendation: No major capital expenditures are anticipated within the terms of the study period.

Recommended Action: No Action Required

Action Summary:	**Action Description:**
Not Applicable	Not Applicable

Other Information:

Action Cost:	Not Applicable	**Action Year:**	Not Applicable
Expected Useful Life:	100	**Repeat Cycle:**	Not Applicable
Average CoF:	4	**Average PoF**	2

Component Photographs

3201 - Substructure

3. 3206 - Wall Foundations

Element Name: Underground Parking Garage - Waterproofing
Year of Installation: 1992
Condition Rating: Fair - 3
Component Condition: The basement level of the addition is an underground parking garage which provides parking for the tenants. The floor of the parking garage is the poured concrete foundation slab. Upon inspection, the slab appeared to be in fair condition with some areas of visible wear and surface deterioration.
Component Recommendation: An allowance has been included to waterproof the floors of the underground parking garage at the end of its useful life.

Recommended Action: Install

Action Summary:	**Action Description:**
Allowance for installation	Waterproof the parking garage floor Qty: 10,000 SF Unit Cost: $3/SF

Other Information:

Action Cost:	$30,000	**Action Year:**	2024
Expected Useful Life:	20	**Repeat Cycle:**	20
Average CoF:	4	**Average PoF**	3

Component Photographs

3201 - Substructure

4. 3206 - Wall Foundations

Element Name: Underground Parking Garage - Painting
Year of Installation: 2015
Condition Rating: Good - 2
Component Condition: The walls of the parking garage are finished with paint on precast concrete. The actual age of the finish is unknown, therefore, the installation year has been estimated. Upon inspection, the finish appeared to be in good condition.
Component Recommendation: An allowance has been included to replace the paint finishes on the underground parking walls at the end of their useful life.

Recommended Action: Replacement

Action Summary:	**Action Description:**
Allowance for replacement	Repaint the parking garage walls Qty: 40,000 SF Unit Cost: $3.50/SF

Other Information:

Action Cost:	$140,000	**Action Year:**	2030
Expected Useful Life:	15	**Repeat Cycle:**	15
Average CoF:	4	**Average PoF**	2

Component Photographs

3251 - Shell

5. 3257 - Upper Floors Construction

Element Name: Superstructure - Original
Year of Installation: 1910
Condition Rating: Good - 2
Component Condition: The superstructure of the original building is comprised of cast-in-place concrete floor slabs and clay brick masonry structural walls. No issues with regard to the original superstructure were reported during the site inspection, therefore, it is considered to be in good condition. Full replacement of the superstructure is not anticipated within the terms of the study period.
Component Recommendation: An allowance has been included to repair the original superstructure as needed.

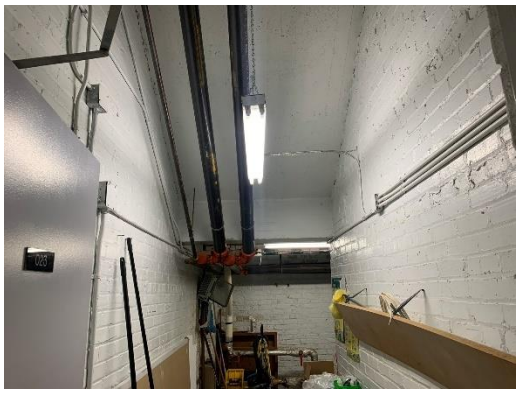
Recommended Action: Repair

Action Summary:	**Action Description:**
Allowance for repairs	Repair the original superstructure as needed

Other Information:

Action Cost:	$10,000	**Action Year:**	2027
Expected Useful Life:	100	**Repeat Cycle:**	10
Average CoF:	4	**Average PoF**	2

Component Photographs



3251 - Shell

6. 3257 - Upper Floors Construction

Element Name: Superstructure - Addition
Year of Installation: 1992
Condition Rating: Good - 2
Component Condition: The superstructure of the addition is comprised of precast concrete floor slabs and concrete block structural walls. No issues with regard to the superstructure were reported during the site inspection, therefore, it is considered to be in good condition.
Component Recommendation: No major capital expenditures are anticipated within the terms of the study period.

Recommended Action: No Action Required

Action Summary:	**Action Description:**
Not Applicable	Not Applicable

Other Information:

Action Cost:	Not Applicable	**Action Year:**	Not Applicable
Expected Useful Life:	100	**Repeat Cycle:**	Not Applicable
Average CoF:	4	**Average PoF**	2

Component Photographs

3251 - Shell

7. 3258 - Balcony Floors Construction

Element Name: Unit Balconies
Year of Installation: 1992
Condition Rating: Good - 2
Component Condition: Units on the second, fourth, fifth, sixth, and seventh floors of the addition are each equipped with two precast concrete balconies. The balconies are topped with concrete pavers and equipped with painted metal guardrails. Upon inspection, the balconies appeared to be in good condition.
Component Recommendation: An allowance has been included for the lifecycle replacement of the concrete balconies at the end of their useful life.

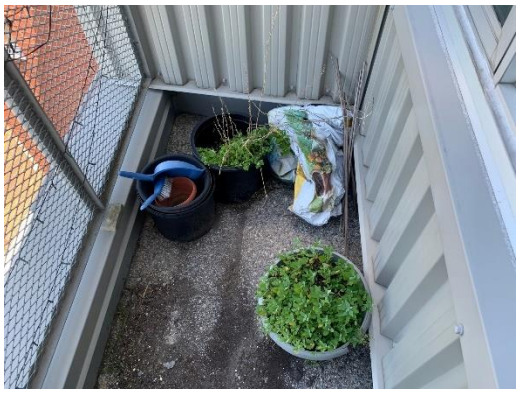
Recommended Action: Replacement

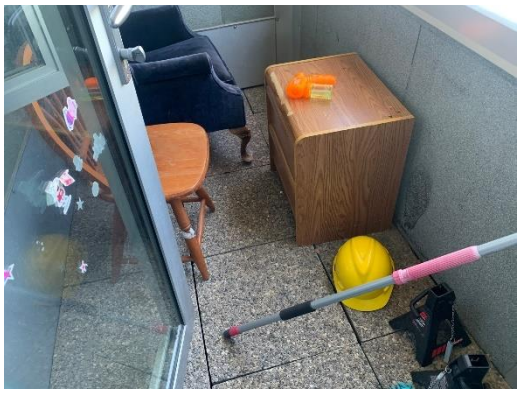
Action Summary:	**Action Description:**
Allowance for lifecycle replacement	Replace concrete balconies Qty: 36 Units Unit Cost: $10,000/Unit

Other Information:

Action Cost:	$360,000	**Action Year:**	2032
Expected Useful Life:	40	**Repeat Cycle:**	20
Average CoF:	3	**Average PoF**	2

Component Photographs





3251 - Shell

8. 3276 - Exterior Wall Construction

Element Name: Brick Masonry - Original
Year of Installation: 1910
Condition Rating: Fair - 3
Component Condition: The exterior walls of the original building are clad with clay and stone brick masonry. Upon inspection, the masonry appeared to be in fair condition with areas of efflorescence and deterioration. Full replacement of the masonry is not anticipated within the terms of the study.
Component Recommendation: An allowance has been included to repair the brick masonry as needed.

Recommended Action: Repair

Action Summary:	**Action Description:**
Allowance for repairs	Repair the brick masonry as needed (5% of total area) Qty: 2,500 SF Unit Cost: $7.50/SF

Other Information:

Action Cost:	$18,750	**Action Year:**	2025
Expected Useful Life:	100	**Repeat Cycle:**	5
Average CoF:	2	**Average PoF**	3

Component Photographs

3251 - Shell

9. 3276 - Exterior Wall Construction

Element Name: Brick Masonry - Addition
Year of Installation: 1992
Condition Rating: Good - 2
Component Condition: The majority of the addition's exterior walls are clad with clay brick masonry. Upon inspection, the masonry appeared to be in good condition. Full replacement of the brick masonry is not anticipated within the terms of the study.
Component Recommendation: An allowance has been included to repair the brick masonry as needed.

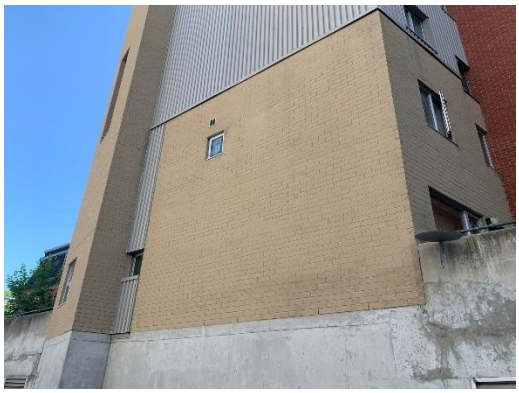
Recommended Action: Repair

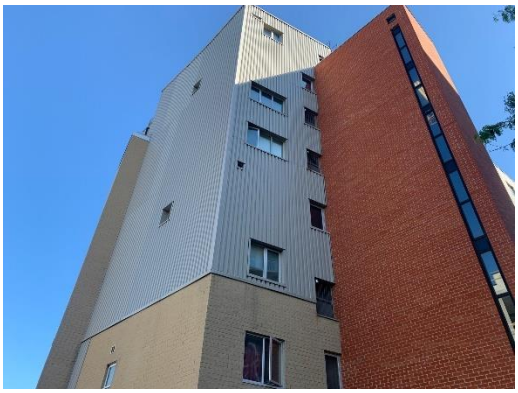
Action Summary:	**Action Description:**
Allowance for repairs	Repair the brick masonry as needed (5% of total area) Qty: 2,500 SF Unit Cost: $7.50/SF

Other Information:

Action Cost:	$18,750	**Action Year:**	2032
Expected Useful Life:	100	**Repeat Cycle:**	10
Average CoF:	2	**Average PoF**	2

Component Photographs





3251 - Shell

10. 3276 - Exterior Wall Construction

Element Name: Concrete Columns
Year of Installation: 1910
Condition Rating: Good - 2
Component Condition: There are six (6) concrete columns which are located at the front of the original building. Upon inspection, the columns appeared to be in good condition.
Component Recommendation: No major capital expenditures are anticipated within the terms of the study period.

Recommended Action: No Action is Required.

Action Summary:	**Action Description:**
Not Applicable	Not Applicable

Other Information:

Action Cost:	Not Applicable	**Action Year:**	Not Applicable
Expected Useful Life:	100	**Repeat Cycle:**	Not Applicable
Average CoF:	2	**Average PoF**	2

Component Photographs

3251 - Shell

11. 3276 - Exterior Wall Construction

Element Name: Wood Crown Molding
Year of Installation: 1910
Condition Rating: Good - 2
Component Condition: Portions of the exterior wall are equipped with painted wood crown moulding. Upon inspection, the moulding appeared to be in fair condition with sections of visible wear and deterioration. Full replacement of the moulding is not anticipated within the terms of the study.
Component Recommendation: An allowance has been included to repair/repaint portions of the moulding as needed.

Recommended Action: Repair

Action Summary:	**Action Description:**
Allowance for repairs	Repair/repaint the crown moulding as needed

Other Information:

Action Cost:	$10,000	**Action Year:**	2025
Expected Useful Life:	100	**Repeat Cycle:**	15
Average CoF:	2	**Average PoF**	2

Component Photographs

3251 - Shell

12. 3276 - Exterior Wall Construction

Element Name: Aluminum Siding
Year of Installation: 1992
Condition Rating: Good - 2
Component Condition: A portion of the addition's exterior walls is clad with aluminum siding. Upon inspection, the siding appeared to be in good condition.
Component Recommendation: An allowance has been included for the lifecycle replacement of the aluminum siding at the end of its useful life.

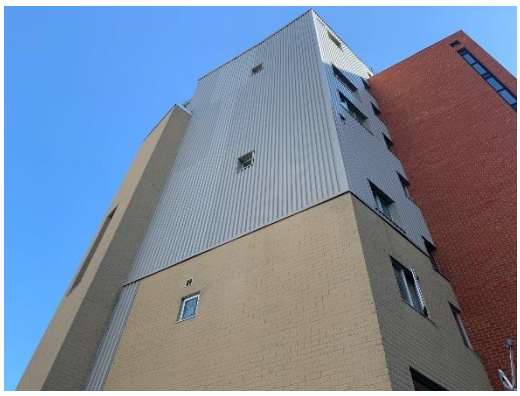
Recommended Action: Replacement

Action Summary:	Action Description:
Allowance for lifecycle replacement	Replace the aluminum siding Qty: 20,500 SF Unit Cost: $11/SF

Other Information:

Action Cost:	$225,500	**Action Year:**	2042
Expected Useful Life:	50	**Repeat Cycle:**	50
Average CoF:	2	**Average PoF**	2

Component Photographs



3251 - Shell

13. 3276 - Exterior Wall Construction

Element Name: Exterior Walls - EIFS
Year of Installation: 1992
Condition Rating: Good - 2
Component Condition: A portion of the addition's exterior walls is clad with an EIFS (Exterior Insulation Finish System). Upon inspection, the cladding appeared to be in fair with some areas with visible cracking.
Component Recommendation: An allowance has been included to repair the EIFS.

Recommended Action: Replacement

Action Summary:	**Action Description:**
Allowance for lifecycle replacement	Repair/replace the damaged portions of the EIFS (roughly 10 % of the total area) Qty: 500 SF Unit Cost: $11/SF

Other Information:

Action Cost:	$7,500	**Action Year:**	2024
Expected Useful Life:	50	**Repeat Cycle:**	0
Average CoF:	2	**Average PoF**	2

Component Photographs

3251 - Shell

14. 3276 - Exterior Wall Construction

Element Name: Exterior Walls - EIFS
Year of Installation: 1992
Condition Rating: Good - 2
Component Condition: Please refer to the previous element for commentary.
Component Recommendation: An allowance has been included for the lifecycle replacement of the EIFS at the end of its useful life.

Recommended Action: Replacement

Action Summary:	**Action Description:**
Allowance for lifecycle replacement	Replace the EIFS Qty: 5,000 SF Unit Cost: $15/SF

Other Information:

Action Cost:	$75,000	**Action Year:**	2042
Expected Useful Life:	50	**Repeat Cycle:**	50
Average CoF:	2	**Average PoF**	2

Component Photographs

3251 - Shell

15. 3276 - Exterior Wall Construction

Element Name: Exterior Caulking
Year of Installation: 2020
Condition Rating: Good - 2
Component Condition: There is exterior caulking located along the perimeter of the exterior doors and windows. The actual age of the caulking is unknown, therefore, the installation year has been estimated. Upon inspection, the caulking appeared to be in good condition.
Component Recommendation: An allowance has been included for the lifecycle replacement of the exterior caulking at the end of its useful life.

Recommended Action: Replacement

Action Summary:	**Action Description:**
Allowance for replacement	Replace exterior caulking Qty: 6,200 LF Unit Cost: $3/LF

Other Information:

Action Cost:	$18,600	**Action Year:**	2028
Expected Useful Life:	8	**Repeat Cycle:**	8
Average CoF:	1	**Average PoF**	2

Component Photographs

3251 - Shell

16. 3286 - Windows

Element Name: Exterior Windows - Wood-Framed IGUs
Year of Installation: 1910
Condition Rating: Poor - 4
Component Condition: The windows in the original building are comprised of wood-framed units in a punched configuration with vertical sliders. Upon inspection, the windows appeared to be in poor condition with visible aging and deterioration.
Component Recommendation: It is recommended that the windows be refurbished rather than replaced as they hold historical value for the building. Therefore, an allowance has been included to refurbish the wood-framed windows at the end of their useful life.

Recommended Action: Replacement

Action Summary:	**Action Description:**
Allowance for refurbishment	Refurbish the wood-framed windows Qty: 140 Windows Unit Cost: $3,000/Window

Other Information:

Action Cost:	$340,000	**Action Year:**	2023
Expected Useful Life:	30	**Repeat Cycle:**	30
Average CoF:	2	**Average PoF**	4

Component Photographs

3251 - Shell

17. 3286 - Windows

Element Name: Exterior Windows - Aluminum-Framed IGUs
Year of Installation: 1992
Condition Rating: Good - 2
Component Condition: The windows in the addition are comprised of aluminum-framed units in a punched configuration with casement and fixed units. Upon inspection, the windows appeared to be in good condition, therefore, their expected service life has been extended.
Component Recommendation: An allowance has been included for the replacement of the windows at the end of their useful life.

Recommended Action: Replacement

Action Summary:	**Action Description:**
Allowance for replacement	Replace the aluminum-framed windows Qty: 240 Windows Unit Cost: $2,000/Window

Other Information:

Action Cost:	$480,000	**Action Year:**	2028
Expected Useful Life:	30	**Repeat Cycle:**	30
Average CoF:	2	**Average PoF**	2

Component Photographs

3251 - Shell

18. 3286 - Windows

Element Name: Exterior Glazing
Year of Installation: 1992
Condition Rating: Good - 2
Component Condition: There are two portions of aluminum-framed exterior glazing located on the exterior wall of two staircases. Upon inspection, the glazing appeared to be in good condition, therefore, the expected service life of the glazing has been extended.
Component Recommendation: An allowance has been included for the replacement of the exterior glazing at the end of its useful life.

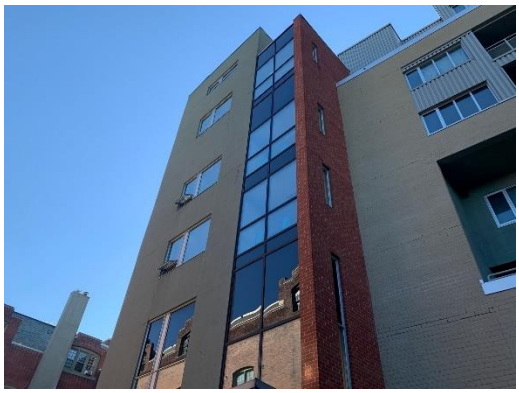
Recommended Action: Replacement

Action Summary:	**Action Description:**
Allowance for replacement	Replace the exterior glazing Qty: 1,700 SF Unit Cost: $100/SF

Other Information:

Action Cost:	$170,000	**Action Year:**	2029
Expected Useful Life:	30	**Repeat Cycle:**	30
Average CoF:	2	**Average PoF**	2

Component Photographs



3251 - Shell

19. 3291 - Glazed Doors & Entrances

Element Name: Main Entrance Doors - Original
Year of Installation: 1910
Condition Rating: Fair - 3
Component Condition: The main entrances into the original building are provided by twelve (12) solid-wood glazed exterior doors. Similar doors are located on the interior of the vestibules. The doors are equipped with top glazing. Upon inspection, the doors appeared to be in fair condition with signs of wear and deterioration.
Component Recommendation: It is recommended that the entrance doors be refurbished rather than replaced as they hold historical value for the building. Therefore, an allowance has been included to refurbish the solid-wood entrance doors at the end of their useful life.

Recommended Action: Replacement

Action Summary:	**Action Description:**
Allowance for refurbishment	Refurbish the solid wood entrance doors Qty: 24 Doors Unit Cost: $3,000/Door

Other Information:

Action Cost:	$72,000	**Action Year:**	2025
Expected Useful Life:	25	**Repeat Cycle:**	25
Average CoF:	2	**Average PoF**	3

Component Photographs

3251 - Shell

20. 3295 - Other Doors & Entrances

Element Name: Hollow-Metal Service Doors - Original
Year of Installation: 2000
Condition Rating: Fair - 3
Component Condition: There are a pair of hollow-metal service doors which provide access to the original building. The doors are equipped with top glazing. The actual age of the doors is unknown, therefore, their installation year has been estimated. Upon inspection, the doors appeared to be in fair condition with signs of wear and aging.
Component Recommendation: An allowance has been included for the lifecycle replacement of the hollow-metal service doors at the end of their useful life.

Recommended Action: Replacement

Action Summary:	**Action Description:**
Allowance for lifecycle replacement	Replace the hollow-metal service doors Qty: 2 Doors Unit Cost: $2,000/Door

Other Information:

Action Cost:	$4,000	**Action Year:**	2025
Expected Useful Life:	25	**Repeat Cycle:**	25
Average CoF:	2	**Average PoF**	3

Component Photographs

3251 - Shell

21. 3295 - Other Doors & Entrances

Element Name: Aluminum Framed Glazed Entrance Doors
Year of Installation: 1992
Condition Rating: Fair - 3
Component Condition: There is a pair of aluminum-framed glazed entrance doors which provide entry to the addition. There is a similar set of doors on the interior of the vestibule. Both sets of doors are equipped with automatic door openers and side/top glazing. Upon inspection, the doors appeared to be in fair condition with signs of wear and aging.
Component Recommendation: An allowance has been included for the replacement of the aluminum-framed glazed entrance doors at the end of their useful life.

Recommended Action: Replacement

Action Summary:	**Action Description:**
Allowance for replacement	Replace the aluminum-framed glazed entrance doors Qty: 4 Doors Unit Cost: $10,000/Door

Other Information:

Action Cost:	$40,000	**Action Year:**	2026
Expected Useful Life:	25	**Repeat Cycle:**	25
Average CoF:	2	**Average PoF**	3

Component Photographs

3251 - Shell

22. 3295 - Other Doors & Entrances

Element Name: Hollow-Metal Exterior Doors - Addition
Year of Installation: 1992
Condition Rating: Fair - 3
Component Condition: Additional entry into the newer section of the building is provided by hollow-metal doors with or without inset glazing. Upon inspection, the doors appeared to be in fair condition with signs of wear and aging.
Component Recommendation: An allowance has been included for the replacement of the hollow-metal exterior doors at the end of their useful life.

Recommended Action: Replacement

Action Summary:	**Action Description:**
Allowance for replacement	Replace the hollow-metal exterior doors Qty: 6 Doors Unit Cost: $2,000/Door

Other Information:

Action Cost:	$12,000	**Action Year:**	2026
Expected Useful Life:	25	**Repeat Cycle:**	25
Average CoF:	2	**Average PoF**	3

Component Photographs

3251 - Shell

23. 3295 - Other Doors & Entrances

Element Name: Exterior Unit Entry Doors
Year of Installation: 1992
Condition Rating: Fair - 3
Component Condition: The ground-level units of the addition are accessed through hollow-metal glazed doors. Upon inspection, the doors appeared to be in fair condition with signs of wear and aging.
Component Recommendation: An allowance has been included for the replacement of the exterior unit entry doors at the end of their useful life.

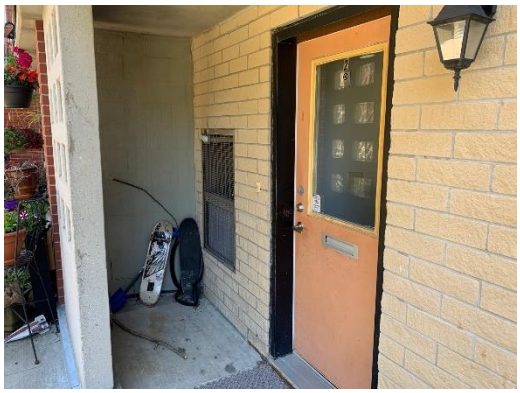
Recommended Action: Replacement

Action Summary:	**Action Description:**
Allowance for replacement	Replace exterior unit entry doors Qty: 12 Doors Unit Cost: $2,000/Door

Other Information:

Action Cost:	$24,000	**Action Year:**	2025
Expected Useful Life:	25	**Repeat Cycle:**	25
Average CoF:	2	**Average PoF**	3

Component Photographs



3251 - Shell

24. 3295 - Other Doors & Entrances

Element Name: Balcony & Patio Doors
Year of Installation: 1992
Condition Rating: Fair - 3
Component Condition: Entry onto the unit balconies are provided by aluminum-framed glazed balcony doors. Additionally, the ground-level unit patios are accessed through aluminum-framed glazed sliding doors. Upon inspection, the doors appeared to be in good condition, therefore, their expected service life has been extended.
Component Recommendation: An allowance has been included for the replacement of the unit balcony and patio doors at the end of their useful life.

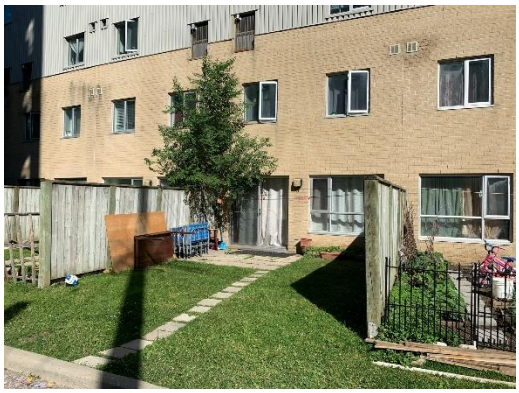
Recommended Action: Replacement

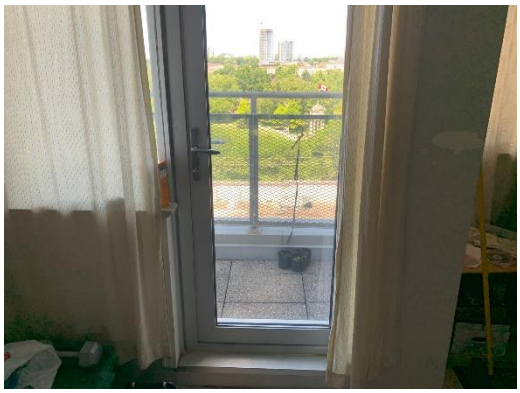
Action Summary:	**Action Description:**
Allowance for replacement	Replace the unit balcony and patio doors Qty: 72 Doors Unit Cost: $2,000/Door

Other Information:

Action Cost:	$144,000	**Action Year:**	2028
Expected Useful Life:	25	**Repeat Cycle:**	25
Average CoF:	2	**Average PoF**	3

Component Photographs





3251 - Shell

25. 3295 - Other Doors & Entrances

Element Name: Overhead Doors
Year of Installation: 1992
Condition Rating: Fair - 3
Component Condition: There are two aluminum overhead doors which provide access to the parking garage. Additionally, the addition's garbage room is also equipped with an aluminum overhead door. Upon inspection, the doors appeared to be in fair condition with signs of wear and aging.
Component Recommendation: An allowance has been included for the replacement of the overhead doors at the end of their useful life.

Recommended Action: Replacement

Action Summary:	Action Description:
Allowance for replacement	Replace the overhead doors Qty: 3 Doors Unit Cost: $7,500/Door

Other Information:

Action Cost:	$22,500	**Action Year:**	2025
Expected Useful Life:	25	**Repeat Cycle:**	25
Average CoF:	2	**Average PoF**	3

Component Photographs

3251 - Shell

26. 3306 - Roof Finishes

Element Name: Built-Up Roofing - Original
Year of Installation: 2010
Condition Rating: Good - 2
Component Condition: A portion of the original building's roof is clad with a Built-Up Roofing (BUR) system. The actual age of the roofing is unknown, therefore, the installation year has been estimated. Upon inspection, the roofing appeared to be in good condition.
Component Recommendation: An allowance has been included for the lifecycle replacement of the BUR system at the end of its useful life.

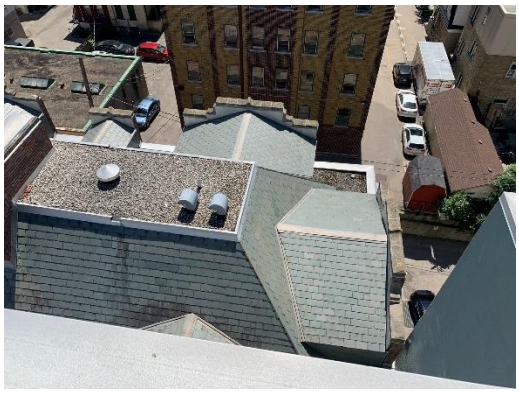
Recommended Action: Replacement

Action Summary:	**Action Description:**
Allowance for lifecycle replacement	Replace the BUR system Qty: 7,500 SF Unit Cost: $25/SF

Other Information:

Action Cost:	$187,500	**Action Year:**	2030
Expected Useful Life:	20	**Repeat Cycle:**	20
Average CoF:	2	**Average PoF**	2

Component Photographs



3251 - Shell

27. 3306 - Roof Finishes

Element Name: Slate Roofing - Original
Year of Installation: 1980
Condition Rating: Good - 2
Component Condition: A portion of the original building's roof is clad with slate roofing. The actual age of the roofing is unknown, therefore, the installation year has been estimated. Upon inspection, the roofing appeared to be in good condition.
Component Recommendation: An allowance has been included for the lifecycle replacement of the slate roofing at the end of its useful life.

Recommended Action: Replacement

Action Summary:	**Action Description:**
Allowance for lifecycle replacement	Replace the slate roofing Qty: 21,000 SF Unit Cost: $30/SF

Other Information:

Action Cost:	$630,000	**Action Year:**	2050
Expected Useful Life:	70	**Repeat Cycle:**	20
Average CoF:	2	**Average PoF**	2

Component Photographs

3251 - Shell

28. 3306 - Roof Finishes

Element Name: Built-Up Roofing - Addition
Year of Installation: 2012
Condition Rating: Good - 2
Component Condition: The addition's roof is clad with a BUR system. The actual age of the roofing is unknown, therefore, the installation year has been estimated. Upon inspection, the roofing appeared to be in good condition.
Component Recommendation: An allowance has been included for the lifecycle replacement of the roofing at the end of its useful life.

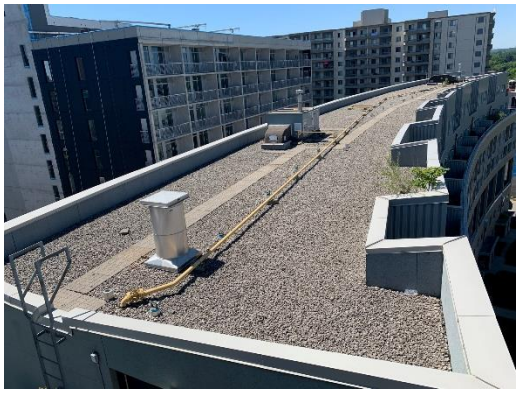
Recommended Action: Replacement

Action Summary:	**Action Description:**
Allowance for lifecycle replacement	Replace the BUR system Qty: 7,000 SF Unit Cost: $25/SF

Other Information:

Action Cost:	$175,000	**Action Year:**	2032
Expected Useful Life:	20	**Repeat Cycle:**	20
Average CoF:	2	**Average PoF**	2

Component Photographs



3251 - Shell

29. 3306 - Roof Finishes

Element Name: Roof Anchors
Year of Installation: 1992
Condition Rating: Good - 2
Component Condition: The roof is equipped with several fall-arrest roof anchors. Upon inspection, the roof anchors appeared to be in good condition.
Component Recommendation: An allowance has been included for the lifecycle replacement of the roof anchors at the end of their useful life.

Recommended Action: Replacement

Action Summary:	Action Description:
Allowance for lifecycle replacement	Replace the roof anchors

Other Information:

Action Cost:	$50,000	**Action Year:**	2042
Expected Useful Life:	50	**Repeat Cycle:**	50
Average CoF:	2	**Average PoF**	2

Component Photographs

3251 - Shell

30. 3316 - Glazed Roof Openings

Element Name: Skylights
Year of Installation: 1910
Condition Rating: Good - 2
Component Condition: There are three (3) wood-framed skylights located on the roof of the original building. Upon inspection, the skylights appeared to be in good condition.
Component Recommendation: It is recommended that the skylights be refurbished rather than replaced as they hold value for the building. Therefore, an allowance has been included to refurbish the skylights at the end of their useful life.

Recommended Action: Replacement

Action Summary:	Action Description:
Allowance for refurbishment	Refurbish the skylights Qty: 3 Lights Unit Cost: $10,000/Unit

Other Information:

Action Cost:	$30,000	**Action Year:**	2028
Expected Useful Life:	30	**Repeat Cycle:**	30
Average CoF:	2	**Average PoF**	2

Component Photographs

3321 - Interiors

31. 3326 - Fixed Partitions

Element Name: Interior Brick Masonry
Year of Installation: 1992
Condition Rating: Good - 2
Component Condition: There is interior brick masonry present in the lobby of the original building. Upon inspection, the masonry appeared to be in good condition.
Component Recommendation: No major capital expenditures are anticipated within the terms of the study period.

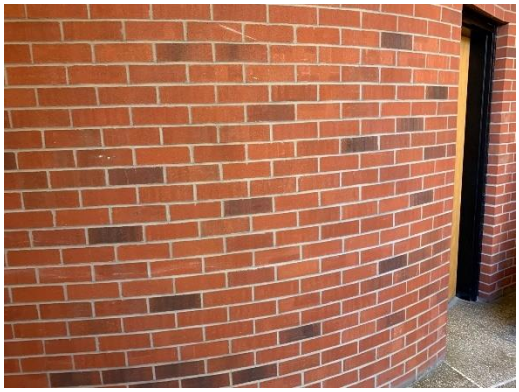
Recommended Action: No action required

Action Summary:	**Action Description:**
Not Applicable	Not Applicable

Other Information:

Action Cost:	Not Applicable	**Action Year:**	Not Applicable
Expected Useful Life:	85	**Repeat Cycle:**	Not Applicable
Average CoF:	2	**Average PoF**	2

Component Photographs



3321 - Interiors

32. 3326 - Fixed Partitions

Element Name: Interior Glazing
Year of Installation: 1992
Condition Rating: Good - 2
Component Condition: There is interior glazing in multiple locations within the common areas of the building. Upon inspection, the glazing appeared to be in good condition.
Component Recommendation: An allowance has been included for the lifecycle replacement of the interior glazing at the end of its useful life.

Recommended Action: Replacement

Action Summary:	**Action Description:**
Allowance for lifecycle replacement	Replace interior glazing Qty: 200 SF Unit Cost: $100/SF

Other Information:

Action Cost:	$20,000	**Action Year:**	2032
Expected Useful Life:	40	**Repeat Cycle:**	40
Average CoF:	2	**Average PoF**	2

Component Photographs

3321 - Interiors

33. 3336 - Interior Doors

Element Name: Unit Entry Doors
Year of Installation: 1992
Condition Rating: Good - 2
Component Condition: Entry into the majority of the units is provided by solid-wood entry doors. Upon inspection, the doors appeared to be in good condition. It was reported that unit entry doors are replaced as needed, generally during unit turnover.
Component Recommendation: A turnover rate of 5% (5 units) is anticipated annually, at which time replacement of the unit entry doors is recommended. However, replacement of the doors is not always required. Therefore, an allowance has been included to replace the entry door for three (3) units annually.

Recommended Action: Replacement

Action Summary:	**Action Description:**
Allowance for replacement	Replace the entry door in three (3) units annually Qty: 3 Units Unit Cost: $3,000/Door

Other Information:

Action Cost:	$9,000	**Action Year:**	2023
Expected Useful Life:	30	**Repeat Cycle:**	1
Average CoF:	2	**Average PoF**	2

Component Photographs

3321 - Interiors

34. 3336 - Interior Doors

Element Name: Hollow-Wood Unit Interior Doors
Year of Installation: 1992
Condition Rating: Good - 2
Component Condition: The unit interior doors are comprised of hollow-wood room and closet doors. The number of doors varies from unit to unit (3-14 doors/unit). Upon inspection, the doors appeared to be in good condition
Component Recommendation: A turnover rate of 5% (5 units) is anticipated annually, at which time replacement of the unit interior doors is recommended. However, replacement of the doors is not always needed. Therefore, an allowance has been included to replace the interior doors in three (3) units every year.

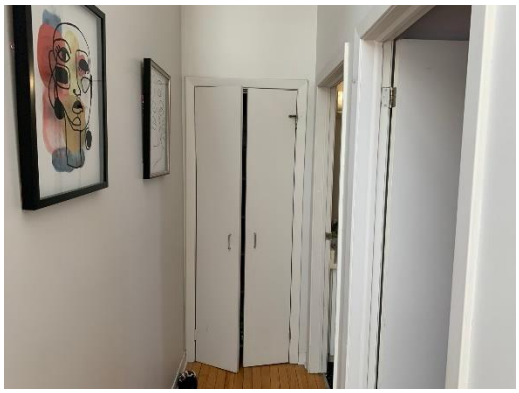
Recommended Action: Replacement

Action Summary:	**Action Description:**
Allowance for replacement	Replace the interior doors in three (3) units annually Qty: 21 Doors (7/Unit) Unit Cost: $600/Door

Other Information:

Action Cost:	$12,600	**Action Year:**	2023
Expected Useful Life:	30	**Repeat Cycle:**	1
Average CoF:	2	**Average PoF**	2

Component Photographs



3321 - Interiors

35. 3336 - Interior Doors

Element Name: Interior Doors - Common Area
Year of Installation: 1992
Condition Rating: Good - 2
Component Condition: There are hollow-wood and hollow-metal interior doors with or without inset glazing located throughout the common areas of the building. Upon inspection, the doors appeared to be in fair condition with signs of wear and aging.
Component Recommendation: An allowance has been included for the replacement of the interior doors at the end of their useful life.

Recommended Action: Replacement

Action Summary:	**Action Description:**
Allowance for replacement	Replace common area interior doors Qty: 70 Doors Unit Cost: $1,200/Door

Other Information:

Action Cost:	$84,000	**Action Year:**	2026
Expected Useful Life:	30	**Repeat Cycle:**	30
Average CoF:	2	**Average PoF**	2

Component Photographs

3321 - Interiors

36. 3352 - General Fittings & Misc. Metals

Element Name: Aluminum Mailboxes
Year of Installation: 1992
Condition Rating: Good - 2
Component Condition: There are aluminum mailboxes located in the mail room of the addition. Upon inspection, the mailboxes appeared to be in good condition.
Component Recommendation: An allowance has been included for the lifecycle replacement of the mailboxes at the end of their useful life.

Recommended Action: Replacement

Action Summary:	**Action Description:**
Allowance for lifecycle replacement	Replace the aluminum mailboxes Qty: 100 Units Unit Cost: $140/Unit

Other Information:

Action Cost:	$14,000	**Action Year:**	2037
Expected Useful Life:	45	**Repeat Cycle:**	45
Average CoF:	1	**Average PoF**	2

Component Photographs

3321 - Interiors

37. 3366 - Regular Stairs

Element Name: Interior Stairs - Original
Year of Installation: 1910
Condition Rating: Poor - 4
Component Condition: The original building is equipped with two (2) concrete staircases which provide access to all floors of the building. The stairs are topped with paint and rubber nosings and are equipped with either painted metal handrails or painted metal guardrails with wood handgrips. Upon inspection, the staircase finishes appeared to be in poor condition with visible wear and deterioration. Full replacement of the stairs is not anticipated within the terms of the study.
Component Recommendation: An allowance has been included to replace the staircase finishes at the end of their useful life.

Recommended Action: Replacement

Action Summary:	Action Description:
Allowance for replacement	Replace staircase finishes and refinish railings/handrails Qty: 2 Staircases Unit Cost: $5,000/Staircase

Other Information:

Action Cost:	$10,000	**Action Year:**	2023
Expected Useful Life:	100	**Repeat Cycle:**	20
Average CoF:	2	**Average PoF**	4

Component Photographs

3321 - Interiors

38. 3366 - Regular Stairs

Element Name: Interior Stairs - Addition
Year of Installation: 1992
Condition Rating: Good - 2
Component Condition: The addition is equipped with two (2) metal staircases which service all the floors of the building. The stairs are topped with concrete treads and metal nosings and are equipped with painted metal guardrails. Upon inspection, the staircase finishes appeared to be in fair condition with signs of wear and aging. Full replacement of the staircases is not anticipated within the terms of the study.
Component Recommendation: An allowance has been included to repair the staircase treads within the terms of the study.

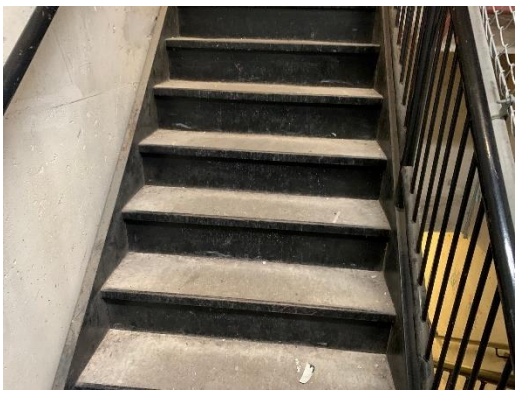
Recommended Action: Repair

Action Summary:	**Action Description:**
Allowance for repairs	Repair the concrete treads and refinish the metal railings Qty: 2 Staircases Unit Cost: $12,000/Staircase

Other Information:

Action Cost:	$24,000	**Action Year:**	2026
Expected Useful Life:	100	**Repeat Cycle:**	20
Average CoF:	2	**Average PoF**	2

Component Photographs



3321 - Interiors

39. 3366 - Regular Stairs

Element Name: Interior Stairs - Units
Year of Installation: 1992
Condition Rating: Good - 2
Component Condition: The units located in the building's addition are equipped with wood staircases to access both floors of the units. The stairs are topped with carpet and are equipped with a wood handrail on one side. Upon inspection, the finishes appeared to be in good condition. Full replacement of the stairs is not anticipated within the terms of the study period.
Component Recommendation: An allowance has been included to replace the staircase finishes in two (2) units located in the building's addition each year.

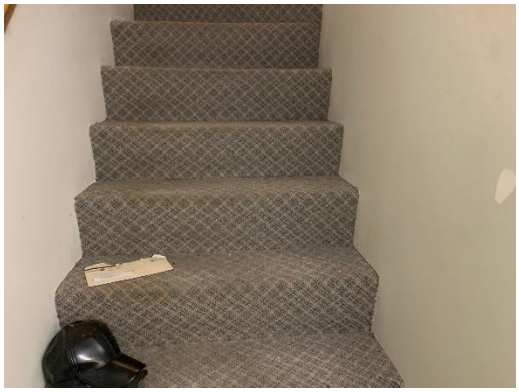
Recommended Action: Replacement

Action Summary:	Action Description:
Allowance for replacement	Replace the staircase finishes and refinish the handrails in two (2) units annually Qty: 2 Staircases Unit Cost: $1,400/Staircase

Other Information:

Action Cost:	$2,800	**Action Year:**	2023
Expected Useful Life:	20	**Repeat Cycle:**	1
Average CoF:	2	**Average PoF**	2

Component Photographs



3321 - Interiors

40. 3387 - Wall Finishes to Interior Walls

Element Name: Painted Wall Finish
Year of Installation: 2010
Condition Rating: Good - 2
Component Condition: The majority of the common area interior walls are finished with paint on drywall, brick masonry, or concrete block. The actual age of the finish is unknown, therefore, the installation year has been estimated. Upon inspection, the finish appeared to be in fair condition overall with some areas of wear and deterioration.
Component Recommendation: An allowance has been included to refinish the common area walls at the end of their useful life.

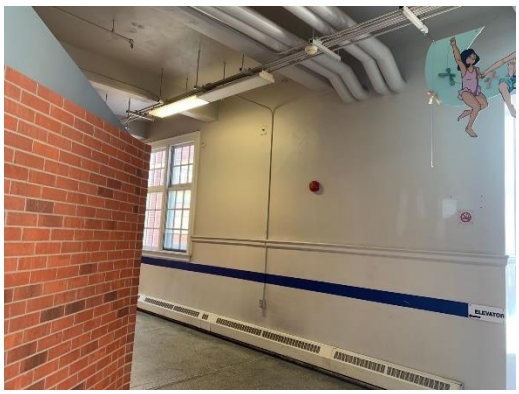
Recommended Action: Replacement

Action Summary:	Action Description:
Allowance for repairs	Repaint the common area walls Qty: 50,000 SF Unit Cost: $3.50/SF

Other Information:

Action Cost:	$175,000	**Action Year:**	2025
Expected Useful Life:	15	**Repeat Cycle:**	15
Average CoF:	2	**Average PoF**	2

Component Photographs



3321 - Interiors

41. 3387 - Wall Finishes to Interior Walls

Element Name: Ceramic Tile Walls
Year of Installation: 1992
Condition Rating: Good - 2
Component Condition: A portion of the interior walls in the lobby area is finished with ceramic tile. Upon inspection, the tile appeared to be in good condition.
Component Recommendation: An allowance has been included for the lifecycle replacement of the ceramic tile walls at the end of their useful life.

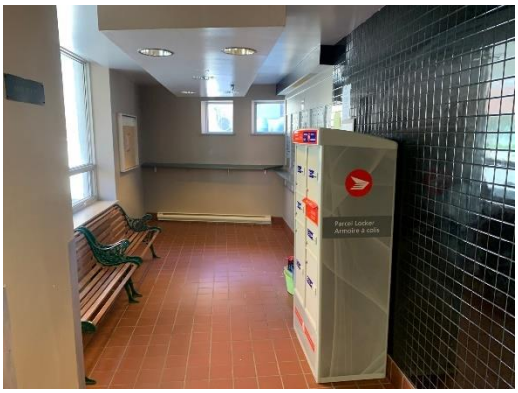
Recommended Action: Replacement

Action Summary:	Action Description:
Allowance for replacement	Replace the ceramic tile walls Qty: 200 SF Unit Cost: $20/SF

Other Information:

Action Cost:	$4,000	**Action Year:**	2042
Expected Useful Life:	50	**Repeat Cycle:**	50
Average CoF:	1	**Average PoF**	2

Component Photographs



3321 - Interiors

42. 3394 - Flooring

Element Name: Ceramic Tile Floors
Year of Installation: 1992
Condition Rating: Good - 2
Component Condition: A portion of the common areas (lobbies, laundry rooms, etc.) are equipped with ceramic tile flooring. The ceramic tile was observed to be in overall good condition and therefore, the useful life has been extended.
Component Recommendation: An allowance has been included for the replacement of the ceramic tile flooring at the end of its useful life.

Recommended Action: Replacement

Action Summary:	**Action Description:**
Allowance for replacement	Replace ceramic tile flooring Qty: 3,000 SF Unit Cost: $20/SF

Other Information:

Action Cost:	$60,000	**Action Year:**	2028
Expected Useful Life:	30	**Repeat Cycle:**	30
Average CoF:	2	**Average PoF**	2

Component Photographs

3321 - Interiors

43. 3394 - Flooring

Element Name: Vinyl Sheet Flooring
Year of Installation: 1992
Condition Rating: Good - 2
Component Condition: A portion of the common areas (addition corridors) are equipped with vinyl sheet flooring. Upon inspection, the flooring appeared to be in good condition, therefore, the expected service life of the flooring has been extended.
Component Recommendation: An allowance has been included for the replacement of the vinyl sheet flooring at the end of its useful life.

Recommended Action: Replacement

Action Summary:	**Action Description:**
Allowance for replacement	Replace vinyl sheet flooring Qty: 1,000 SF Unit Cost: $8/SF

Other Information:

Action Cost:	$8,000	**Action Year:**	2026
Expected Useful Life:	20	**Repeat Cycle:**	20
Average CoF:	1	**Average PoF**	2

Component Photographs

3321 - Interiors

44. 3394 - Flooring

Element Name: Terrazzo Flooring
Year of Installation: 1985
Condition Rating: Good - 2
Component Condition: A portion of floors in the original building are equipped with terrazzo flooring. The actual age of the flooring is unknown, therefore, the installation year has been estimated. Upon inspection, the flooring appeared to be in good condition.
Component Recommendation: An allowance has been included for the lifecycle replacement of the terrazzo flooring at the end of its useful life.

Recommended Action: Replacement

Action Summary:	**Action Description:**
Allowance for lifecycle replacement	Replace the terrazzo flooring Qty: 1,000 SF Unit Cost: $95/SF

Other Information:

Action Cost:	$95,000	**Action Year:**	2035
Expected Useful Life:	50	**Repeat Cycle:**	50
Average CoF:	2	**Average PoF**	2

Component Photographs

3321 - Interiors

45. 3394 - Flooring

Element Name: Wood Flooring
Year of Installation: 1992
Condition Rating: Fair - 3
Component Condition: A portion of the floors in the original building (corridors) are finished with wood flooring. Upon inspection, the flooring appeared to be in fair condition with visible wear and aging.
Component Recommendation: An allowance has been included for the lifecycle replacement of the wood flooring at the end of its useful life.

Recommended Action: Replacement

Action Summary:	**Action Description:**
Allowance for replacement	Replace the wood flooring Qty: 2,500 SF Unit Cost: $25/SF

Other Information:

Action Cost:	$62,500	**Action Year:**	2025
Expected Useful Life:	25	**Repeat Cycle:**	25
Average CoF:	2	**Average PoF**	3

Component Photographs

3321 - Interiors

46. 3395 - Carpeting

Element Name: Painted Concrete Flooring
Year of Installation: 1992
Condition Rating: Poor - 4
Component Condition: The majority of the service areas are equipped with painted concrete flooring. Upon inspection, the finish appeared to be in poor condition with visible deterioration and damage.
Component Recommendation: An allowance has been included to repaint the service area floors at the end of its useful life.

Recommended Action: Replacement

Action Summary:	Action Description:
Allowance for repairs	Repaint the flooring in the service areas Qty: 5,000 SF Unit Cost: $3.50/SF

Other Information:

Action Cost:	$17,500	**Action Year:**	2023
Expected Useful Life:	15	**Repeat Cycle:**	15
Average CoF:	2	**Average PoF**	4

Component Photographs

3321 - Interiors

47. 3402 - Suspended Ceilings

Element Name: Acoustic Ceiling Tile (ACT)
Year of Installation: 2010
Condition Rating: Good - 2
Component Condition: A portion of the addition's corridors are equipped with Acoustic Ceiling Tile (ACT) ceilings. The actual age of the ACT is unknown, therefore, the installation year has been estimated. Upon inspection, the ACT appeared to be in good condition.
Component Recommendation: An allowance has been included for the lifecycle replacement of the ACT at the end of its useful life.

Recommended Action: Replacement

Action Summary:	**Action Description:**
Allowance for replacement	Replace ACT Qty: 1,000 SF Unit Cost: $5/SF

Other Information:

Action Cost:	$5,000	**Action Year:**	2030
Expected Useful Life:	20	**Repeat Cycle:**	20
Average CoF:	1	**Average PoF**	2

Component Photographs

3321 - Interiors

48. 3402 - Suspended Ceilings

Element Name: Painted Drywall & Concrete Ceilings
Year of Installation: 2000
Condition Rating: Fair - 3
Component Condition: The majority of the common area ceilings are finished with paint on drywall and concrete ceilings. The actual age of the finish is unknown, therefore, the installation year has been estimated. Upon inspection, the finish appeared to be in fair condition with signs of wear and deterioration.
Component Recommendation: An allowance has been included to repaint the common area ceilings at the end of their useful life.

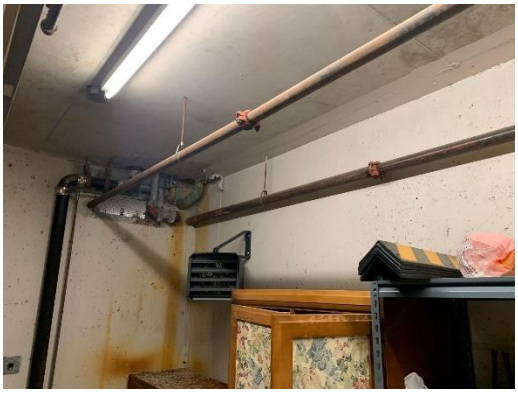
Recommended Action: Repair

Action Summary:	**Action Description:**
Allowance for repairs	Repaint/repair the common area drywall and concrete ceilings Qty: 6,500 SF Unit Cost: $3.50/SF

Other Information:

Action Cost:	$22,750	**Action Year:**	2025
Expected Useful Life:	25	**Repeat Cycle:**	25
Average CoF:	2	**Average PoF**	3

Component Photographs



3421 - Services

49. 3426 - Passenger Elevators

Element Name: Passenger Elevators 1 & 2 - Major Modernization
Year of Installation: 2017
Condition Rating: Good - 2
Component Condition: Vertical transportation for the building is provided by two (2) traction passenger elevators. The elevators were originally installed in 1992 by Northern Elevator and were modernized in 2017 by Delta. The elevators are currently maintained by Delta. Upon inspection, the elevators appeared to be in good condition. For further details, please refer to the Solucore Elevator Report dated May 9, 2022.
Component Recommendation: An allowance has been included for the major modernization of the passenger elevators at the end of their useful life.

Recommended Action: Replacement

Action Summary:	**Action Description:**
Allowance for replacement	Major modernization

Other Information:

Action Cost:	$400,000	**Action Year:**	2047
Expected Useful Life:	30	**Repeat Cycle:**	30
Average CoF:	2	**Average PoF**	2

Component Photographs

3421 - Services

50. 3426 - Passenger Elevators

Element Name: Passenger Elevators 1 and 2 - Code Changes and Vandalism
Year of Installation: 2017
Condition Rating: Good - 2
Component Condition: The Technical Standards and Safety Authority (TSSA) periodically upgrade/change the requirements for elevators. The elevators may need upgrades to meet the requirements of the TSSA. The elevators may also require repairs due to vandalism. These repairs and upgrades to ensure the elevators comply with the Rulings are not covered under the maintenance contract and are the responsibility of the Owner. For more details please refer to the Elevator Report by Solucore dated May 9, 2022.
Component Recommendation: An allowance has been included for code changes and vandalism repairs to the passenger elevators.

Recommended Action: Repair

Action Summary:	**Action Description:**
Allowance for repairs	Upgrades due to code changes and vandalism

Other Information:

Action Cost:	$10,000	**Action Year:**	2027
Expected Useful Life:	30	**Repeat Cycle:**	10
Average CoF:	2	**Average PoF**	2

Component Photographs

3421 - Services

51. 3426 - Passenger Elevators

Element Name: Passenger Elevators 1 and 2 - Door Operators
Year of Installation: 2017
Condition Rating: Good - 2
Component Condition: The existing door operators have a closed-loop system and are currently in good condition. However, more efficient door operators are entering the market. For more details please refer to the Elevator Report by Solucore dated May 9, 2022.
Component Recommendation: An allowance has been included to replace the door operators at the end of their useful life.

Recommended Action: Replacement

Action Summary:	Action Description:
Allowance for replacement	Replace door operators

Other Information:

Action Cost:	$30,000	**Action Year:**	2032
Expected Useful Life:	30	**Repeat Cycle:**	30
Average CoF:	2	**Average PoF**	2

Component Photographs

3421 - Services

52. 3426 - Passenger Elevators

Element Name: Passenger Elevators 1 and 2 - Rusting
Year of Installation: 2017
Condition Rating: Good - 2
Component Condition: Some of the door equipment is rusting which will eventually cause damage. To prevent further deterioration from occurring, the equipment should be sanded, painted and replaced if required. For more details please refer to the Elevator Report by Solucore dated May 9, 2022.
Component Recommendation: An allowance has been included to address the rusting issues with the door equipment.

Recommended Action: Repair

Action Summary:	Action Description:
Allowance for repairs	Repair rusting door equipment

Other Information:

Action Cost:	$4,000	**Action Year:**	2023
Expected Useful Life:	30	**Repeat Cycle:**	0
Average CoF:	2	**Average PoF**	2

Component Photographs

3421 - Services

53. 3426 - Passenger Elevators

Element Name: Passenger Elevators 1 and 2 - Cab and Fixture Upgrade
Year of Installation: 2017
Condition Rating: Good - 2
Component Condition: The existing passenger cab enclosures are in good condition but are starting to show signs of wear and tear. The fixtures are also in good condition but are easily damaged and can cause problems with vandals. Therefore, a cab and fixture upgrade may be required to maintain a consistent standard for the passengers. For more details please refer to the Elevator Report by Solucore dated May 9, 2022.
Component Recommendation: An allowance has been included to upgrade the cabs and fixtures of the passenger elevators at the end of their useful life.

Recommended Action: Replacement

Action Summary:	**Action Description:**
Allowance for replacement	Cab and fixture upgrade

Other Information:

Action Cost:	$50,000	**Action Year:**	2032
Expected Useful Life:	30	**Repeat Cycle:**	30
Average CoF:	2	**Average PoF**	2

Component Photographs

3421 - Services

54. 3466 - Cold Water Service

Element Name: Domestic Water Supply - Original
Year of Installation: 1910
Condition Rating: Fair - 3
Component Condition: The original building is equipped with domestic water supply piping. It is our understanding that leaking and damaged sections of the pipe are repaired/replaced as needed. Upon inspection, the piping appeared to be in fair condition with areas of visible rusting and deterioration. Full replacement of the piping is not anticipated within the terms of the study period.
Component Recommendation: An allowance has been included to repair/replace the original domestic water supply piping as needed.

Recommended Action: Repair

Action Summary:	Action Description:
Allowance for repairs	Repair/replace 20% of the original building's domestic water piping as needed

Other Information:

Action Cost:	$10,000	**Action Year:**	2023
Expected Useful Life:	50	**Repeat Cycle:**	10
Average CoF:	2	**Average PoF**	3

Component Photographs

3421 - Services

55. 3466 - Cold Water Service

Element Name: Domestic Water Supply - Addition
Year of Installation: 1992
Condition Rating: Good - 2
Component Condition: The building addition is equipped with copper domestic water supply piping. It is our understanding that leaking and damaged sections of the pipe are repaired/replaced as needed. Upon inspection, the domestic water piping appeared to be in good condition. Full replacement of the piping is not anticipated within the terms of the study period.
Component Recommendation: An allowance has been included to repair/replace the addition's domestic water supply piping as needed.

Recommended Action: Repair

Action Summary:	Action Description:
Allowance for repairs	Repair/replace 10% of addition's domestic water piping as needed

Other Information:

Action Cost:	$5,000	**Action Year:**	2027
Expected Useful Life:	50	**Repeat Cycle:**	10
Average CoF:	2	**Average PoF**	2

Component Photographs

3421 - Services

56. 3468 - Domestic Water Supply Equipment

Element Name: Water Storage Tank (1)
Year of Installation: 2021
Condition Rating: Good - 2
Component Condition: There is a hot water storage tank which is manufactured by A.O. Smith (M/N: T-200V 000) and is located in the original building's mechanical room. The tank was found to be rated for 188 USGAL. Upon inspection, the tank appeared to be in good condition.
Component Recommendation: An allowance has been included for the lifecycle replacement of the hot water storage tank at the end of its useful life.

Recommended Action: Replacement

Action Summary:	Action Description:
Allowance for lifecycle replacement	Replace water storage tank (1)

Other Information:

Action Cost:	$7,500	**Action Year:**	2051
Expected Useful Life:	30	**Repeat Cycle:**	30
Average CoF:	2	**Average PoF**	2

Component Photographs

3421 - Services

57. 3468 - Domestic Water Supply Equipment

Element Name: Water Storage Tank (2)
Year of Installation: 1992
Condition Rating: Good - 2
Component Condition: There is a hot water storage tank which is manufactured by A.O. Smith and is located in the penthouse mechanical room. The equipment tag was not readable at the time of the inspection, therefore the model and capacity of the storage tank could not be determined. Based on the age of the tank, it is considered to be in fair condition as it has passed its expected service life.
Component Recommendation: An allowance has been included for the lifecycle replacement of the hot water storage tank at the end of its useful life.

Recommended Action: Replacement

Action Summary:	Action Description:
Allowance for lifecycle replacement	Replace water storage tank (2)

Other Information:

Action Cost:	$7,500	**Action Year:**	2025
Expected Useful Life:	30	**Repeat Cycle:**	30
Average CoF:	2	**Average PoF**	2

Component Photographs

3421 - Services

58. 3468 - Domestic Water Supply Equipment

Element Name: Water Softeners
Year of Installation: 2015
Condition Rating: Good - 2
Component Condition: There are four water softener tanks located in the original mechanical room and the penthouse mechanical room. The actual age of the tanks is unknown, therefore, the installation year has been estimated. Upon inspection, the tanks appeared to be in good condition.
Component Recommendation: An allowance has been included for the lifecycle replacement of the water softener tanks at the end of their useful life.

Recommended Action: Replacement

Action Summary:	Action Description:
Allowance for lifecycle replacement	Replace water softener tanks Large Tank: Qty: 1 Tank Unit Cost: $10,000/Tank Small Tanks: Qty: 3 Tanks Unit Cost: $5,000/Tank

Other Information:

Action Cost:	$25,000	**Action Year:**	2030
Expected Useful Life:	15	**Repeat Cycle:**	15
Average CoF:	2	**Average PoF**	2

Component Photographs

3421 - Services

59. 3468 - Domestic Water Supply Equipment

Element Name: Domestic Water Circulation Pumps
Year of Installation: 2010
Condition Rating: Good - 2
Component Condition: The domestic water supply piping is equipped with two (2) domestic water circulation pumps which are manufactured by Armstrong and located in the original building's mechanical room. The actual age of the pumps is unknown, therefore, the installation year has been estimated. Upon inspection, the pumps appeared to be in good condition.
Component Recommendation: An allowance has been included for the lifecycle replacement of the domestic water circulation pumps at the end of their useful life.

Recommended Action: Replacement

Action Summary:	Action Description:
Allowance for lifecycle replacement	Replace domestic water circulation pumps Qty: 2 Pumps Unit Cost: $2,500/Pump

Other Information:

Action Cost:	$5,000	**Action Year:**	2030
Expected Useful Life:	20	**Repeat Cycle:**	20
Average CoF:	2	**Average PoF**	2

Component Photographs

3421 - Services

60. 3471 - Waste Piping

Element Name: Sanitary Waste Piping
Year of Installation: 1910
Condition Rating: Good - 2
Component Condition: The sanitary waste piping for the building is connected to the local municipal sanitary waste sewers. The sanitary piping is concealed under interior finishes and was not accessible for visual inspection at the time of the building assessment. No indications of problems were identified or reported by staff. Sanitary drain systems typically have a lifecycle of 50+ years with minimal maintenance.
Component Recommendation: An allowance has been included to repair/replace the sanitary waste piping as needed.

Recommended Action: Repair

Action Summary:	Action Description:
Allowance for repairs	Repair/replace sanitary piping as-needed

Other Information:

Action Cost:	$10,000	**Action Year:**	2027
Expected Useful Life:	50	**Repeat Cycle:**	10
Average CoF:	2	**Average PoF**	2

Component Photographs

Unable to obtain photos on site.

3421 - Services

61. 3483 - Rainwater Drainage Equipment

Element Name: Storm Water Drainage
Year of Installation: 1992
Condition Rating: Good - 2
Component Condition: Storm water drainage from the roof is provided via inset drains that lead to PVC pipes on the interior side of the building. The storm drain pipes route through the building and are concealed behind interior finishes and could not be assessed. The slope and capacity of the stormwater drainage system appears to be adequate and the building representative has not observed any accumulation of water during heavy storm events.
Component Recommendation: An allowance has been included for the lifecycle replacement of the storm water drainage system at the end of its useful life.

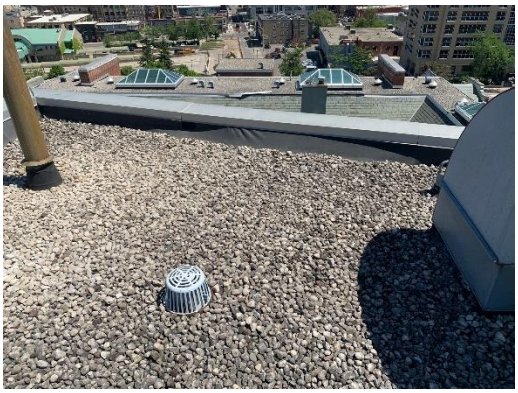
Recommended Action: Replacement

Action Summary:	**Action Description:**
Allowance for lifecycle replacement	Replace the stormwater drainage system

Other Information:

Action Cost:	$80,000	**Action Year:**	2042
Expected Useful Life:	50	**Repeat Cycle:**	50
Average CoF:	2	**Average PoF**	2

Component Photographs



3421 - Services

62. 3497 - Gas Supply System

Element Name: Natural Gas Piping
Year of Installation: 2015
Condition Rating: Good - 2
Component Condition: Natural gas supply lines are connected to the associated mechanical equipment (Boilers, MAUs, etc.). Upon inspection, the natural gas supply piping appeared to be in good condition.
Component Recommendation: An allowance has been included for the lifecycle replacement of the natural gas supply lines at the end of their useful life.

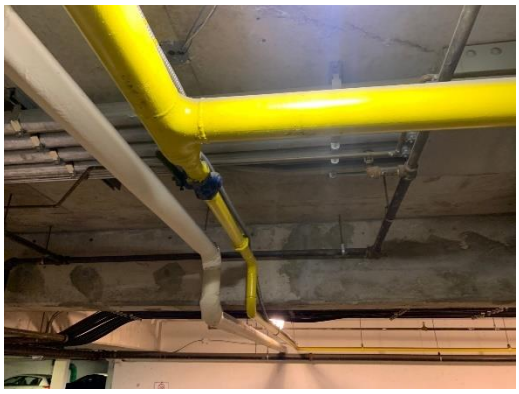
Recommended Action: Replacement

Action Summary:	**Action Description:**
Allowance for lifecycle replacement	Replace gas supply piping

Other Information:

Action Cost:	$40,000	**Action Year:**	2042
Expected Useful Life:	50	**Repeat Cycle:**	50
Average CoF:	2	**Average PoF**	2

Component Photographs



3421 - Services

63. 3506 - Boilers

Element Name: Domestic Hot Water Boilers
Year of Installation: 2011
Condition Rating: Good - 2
Component Condition: There are two (2) domestic hot water boilers which are manufactured by Rheem (M/N: WH3-HD401) and are located in the penthouse mechanical room. The boilers were found to be rated for 399,000 BTUH and 411 GPH. It is our understanding that the boilers were replaced in 2011. Upon inspection, the boilers appeared to be in good condition.
Component Recommendation: An allowance has been included for the lifecycle replacement of the boilers at the end of their useful life.

Recommended Action: Replacement

Action Summary:	**Action Description:**
Allowance for lifecycle replacement	Replace domestic hot water boilers Qty: 2 Boilers Unit Cost: $25,000

Other Information:

Action Cost:	$50,000	**Action Year:**	2041
Expected Useful Life:	30	**Repeat Cycle:**	30
Average CoF:	2	**Average PoF**	2

Component Photographs

3421 - Services

64. 3506 - Boilers

Element Name: Heating Boilers
Year of Installation: 2021
Condition Rating: Good - 2
Component Condition: There are two (2) P-K Thermific heating boilers which are manufactured by Patterson-Kelley and located in the original building's mechanical room. The heating boilers feed the fin tube radiators. It is our understanding that the boilers were replaced in 2021. Upon inspection, the boilers appeared to be in good condition.
Component Recommendation: An allowance has been included for the lifecycle replacement of the boilers at the end of their useful life.

Recommended Action: Replacement

Action Summary:	**Action Description:**
Allowance for lifecycle replacement	Replace boilers Qty: 2 Boilers Unit Cost: $25,000

Other Information:

Action Cost:	$50,000	**Action Year:**	2051
Expected Useful Life:	30	**Repeat Cycle:**	30
Average CoF:	2	**Average PoF**	2

Component Photographs

3421 - Services

65. 3506 - Boilers

Element Name: Circulation Pumps - Heating
Year of Installation: 1992
Condition Rating: Poor - 4
Component Condition: There are two (2) circulation pumps which service the hydronic heating system. Upon inspection, the pumps appeared to be in poor condition with visible wear and deterioration.
Component Recommendation: An allowance has been included for the replacement of the circulation pumps at the end of their useful life.

Recommended Action: Replacement

Action Summary:	**Action Description:**
Allowance for lifecycle replacement	Replace circulation pumps Qty: 2 Pumps Unit Cost: $5,000

Other Information:

Action Cost:	$10,000	**Action Year:**	2023
Expected Useful Life:	20	**Repeat Cycle:**	20
Average CoF:	2	**Average PoF**	4

Component Photographs

3421 - Services

66. 3510 - Cooling Generating Systems

Element Name: Condensing Unit (1)
Year of Installation: 2019
Condition Rating: Good - 2
Component Condition: There is a condensing unit which is manufactured by Carrier (M/N: 24ABB360A520) located on the exterior of the building. Upon inspection, the condensing unit appeared to be in good condition.
Component Recommendation: An allowance has been included for the lifecycle replacement of the condensing unit at the end of its useful life.

Recommended Action: Replacement

Action Summary:	Action Description:
Allowance for lifecycle replacement	Replace condensing unit

Other Information:

Action Cost:	$5,000	**Action Year:**	2039
Expected Useful Life:	20	**Repeat Cycle:**	20
Average CoF:	2	**Average PoF**	2

Component Photographs

3421 - Services

67. 3510 - Cooling Generating Systems

Element Name: Condensing Unit (2)
Year of Installation: 1993
Condition Rating: Good - 2
Component Condition: There is a condensing unit which is manufactured by Carrier (M/N: 38TKB060500) located on the exterior of the building. Upon inspection, the condensing unit appeared to be in fair condition with signs of wear and aging.
Component Recommendation: An allowance has been included for the lifecycle replacement of the condensing unit at the end of its useful life.

Recommended Action: Replacement

Action Summary:	**Action Description:**
Allowance for lifecycle replacement	Replace condensing unit

Other Information:

Action Cost:	$5,000	**Action Year:**	2025
Expected Useful Life:	20	**Repeat Cycle:**	20
Average CoF:	2	**Average PoF**	2

Component Photographs

3421 - Services

68. 3510 - Cooling Generating Systems

Element Name: Split System
Year of Installation: 2011
Condition Rating: Good - 2
Component Condition: There is a split system which is manufactured by Carrier (M/N: 38HDF036---3) and is located in the elevator room. Upon inspection, the split system appeared to be in good condition.
Component Recommendation: An allowance has been included for the lifecycle replacement of the split system at the end of its useful life.

Recommended Action: Replacement

Action Summary:	Action Description:
Allowance for lifecycle replacement	Replace split system

Other Information:

Action Cost:	$6,000	**Action Year:**	2031
Expected Useful Life:	20	**Repeat Cycle:**	20
Average CoF:	2	**Average PoF**	2

Component Photographs

3421 - Services

69. 3512 - Direct Expansion Systems

Element Name: Expansion Tanks
Year of Installation: 1992
Condition Rating: Good - 2
Component Condition: The hydronic heating system is equipped with two (2) expansion tanks. Upon inspection, the tanks appeared to be in good condition, therefore, their expected service life has been extended.
Component Recommendation: An allowance has been included for the replacement of the expansion tanks at the end of their useful life.

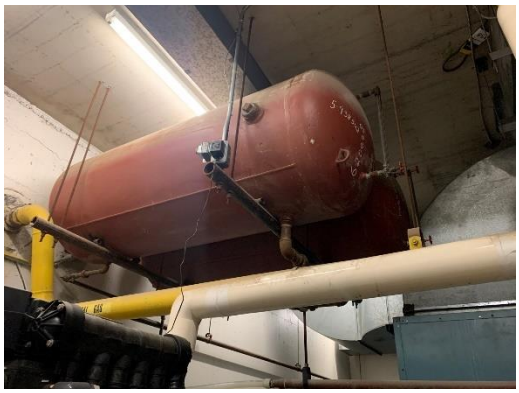
Recommended Action: Replacement

Action Summary:	Action Description:
Allowance for lifecycle replacement	Replace the expansion tanks Qty: 2 Tanks Unit Cost: $4,000/Tank

Other Information:

Action Cost:	$8,000	**Action Year:**	2029
Expected Useful Life:	30	**Repeat Cycle:**	30
Average CoF:	2	**Average PoF**	2

Component Photographs



3421 - Services

70. 3531 - Heating Generating Systems

Element Name: Hydronic Baseboard Heaters - Original Building
Year of Installation: 1995
Condition Rating: Fair - 3
Component Condition: Heating in the common areas and units of the original building is provided by hydronic baseboard heaters. The actual age of the heater is unknown, therefore, the installation year has been estimated. Upon inspection, the heaters appeared to be in fair condition with signs of wear and aging.
Component Recommendation: An allowance has been included for the lifecycle replacement of the hydronic baseboard heaters at the end of their useful life.

Recommended Action: Replacement

Action Summary:	**Action Description:**
Allowance for lifecycle replacement	Replace the hydronic baseboards in the original building Qty: 300 Heaters Unit Cost: $1,000/Heater

Other Information:

Action Cost:	$300,000	**Action Year:**	2025
Expected Useful Life:	30	**Repeat Cycle:**	30
Average CoF:	2	**Average PoF**	3

Component Photographs

3421 - Services

71. 3531 - Heating Generating Systems

Element Name: Hydronic Baseboard Heaters - Addition
Year of Installation: 1992
Condition Rating: Fair - 3
Component Condition: Heating in the common areas of the building addition is provided by hydronic baseboard heaters. Upon inspection, the heaters appeared to be in fair condition with signs of wear and aging.
Component Recommendation: An allowance has been included for the replacement of the hydronic baseboard heaters at the end of their useful life.

Recommended Action: Replacement

Action Summary:	**Action Description:**
Allowance for replacement	Replace the hydronic baseboards in the addition Qty: 20 Heaters Unit Cost: $1,000/Heater

Other Information:

Action Cost:	$20,000	**Action Year:**	2025
Expected Useful Life:	30	**Repeat Cycle:**	30
Average CoF:	2	**Average PoF**	3

Component Photographs

3421 - Services

72. 3531 - Heating Generating Systems

Element Name: Hydronic Cabinet Heaters
Year of Installation: 2000
Condition Rating: Good - 2
Component Condition: There are approximately ten (10) hydronic cabinet heaters which are located at the entrances to the original building. The actual age of the heaters is unknown, therefore, the installation year has been estimated. Upon inspection, the heaters appeared to be in good condition.
Component Recommendation: An allowance has been included for the lifecycle replacement of the hydronic cabinet heaters at the end of their useful life.

Recommended Action: Replacement

Action Summary:	**Action Description:**
Allowance for lifecycle replacement	Replace the hydronic cabinet heaters Qty: 10 Heaters Unit Cost: $1,500/Heater

Other Information:

Action Cost:	$15,000	**Action Year:**	2030
Expected Useful Life:	30	**Repeat Cycle:**	30
Average CoF:	2	**Average PoF**	2

Component Photographs

3421 - Services

73. 3531 - Heating Generating Systems

Element Name: Fan-Forced Unit Heaters
Year of Installation: 1992
Condition Rating: Fair - 3
Component Condition: There are approximately twenty (20) fan-forced unit heaters located throughout the building. Upon inspection, the heaters appeared to be in fair condition with signs of wear and aging.
Component Recommendation: An allowance has been included for the replacement of the fan-forced unit heaters at the end of their useful life.

Recommended Action: Replacement

Action Summary:	**Action Description:**
Allowance for lifecycle replacement	Replace the fan-forced unit heaters Qty: 20 Heaters Unit Cost: $1,500/Heater

Other Information:

Action Cost:	$30,000	**Action Year:**	2025
Expected Useful Life:	30	**Repeat Cycle:**	30
Average CoF:	2	**Average PoF**	3

Component Photographs

3421 - Services

74. 3531 - Heating Generating Systems

Element Name: Electric Unit Heaters
Year of Installation: 2020
Condition Rating: Good - 2
Component Condition: There are approximately four (4) electric ceiling-hung unit heaters located in the service areas of the building. The actual age of the heaters is unknown, therefore, their installation year has been estimated. Upon inspection, the unit heaters appeared to be in good condition overall.
Component Recommendation: An allowance has been included for the lifecycle replacement of the ceiling-hung unit heaters at the end of their useful life.

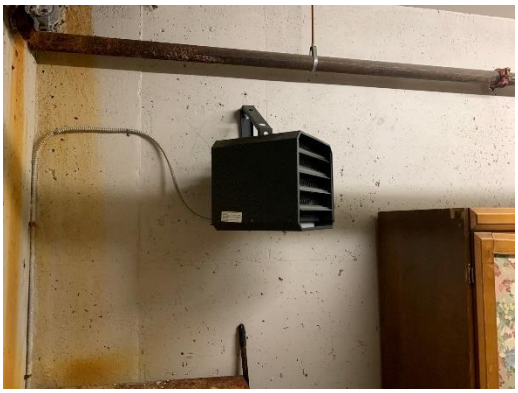
Recommended Action: Replacement

Action Summary:	**Action Description:**
Allowance for lifecycle replacement	Replace the electric ceiling-hung unit heaters Qty: 4 Heaters Unit Cost: $2,500/Heater

Other Information:

Action Cost:	$10,000	**Action Year:**	2050
Expected Useful Life:	30	**Repeat Cycle:**	30
Average CoF:	2	**Average PoF**	2

Component Photographs



3421 - Services

75. 3531 - Heating Generating Systems

Element Name: Furnaces - Parking Garage
Year of Installation: 2010
Condition Rating: Good - 2
Component Condition: There are two (2) gas-fired furnaces which are manufactured by Lennox and are located in the parking garage. The model and capacities of the furnaces were not accessible at the time of the site inspection. The actual age of the furnaces is unknown, therefore, the installation year has been estimated. Upon inspection, the furnaces appeared to be in good condition.
Component Recommendation: An allowance has been included for the lifecycle replacement of the furnaces at the end of their useful life.

Recommended Action: Replacement

Action Summary:	Action Description:
Allowance for lifecycle replacement	Replace the furnaces in the parking garage Qty: 2 Furnaces Unit Cost: $7,500/Furnace

Other Information:

Action Cost:	$15,000	**Action Year:**	2030
Expected Useful Life:	20	**Repeat Cycle:**	20
Average CoF:	2	**Average PoF**	2

Component Photographs

3421 - Services

76. 3531 - Heating Generating Systems

Element Name: Furnaces - Roof
Year of Installation: 1998
Condition Rating: Good - 2
Component Condition: There are two gas-fired commercial furnaces which are manufactured by ICE (M/N: HTDM 400) and located on the roof of the addition. The furnaces were found to be rated for 400,000 BTUH and 4,000 CFM. Upon inspection, the furnaces appeared to be in good condition.
Component Recommendation: An allowance has been included for the lifecycle replacement of the furnaces at the end of their useful life.

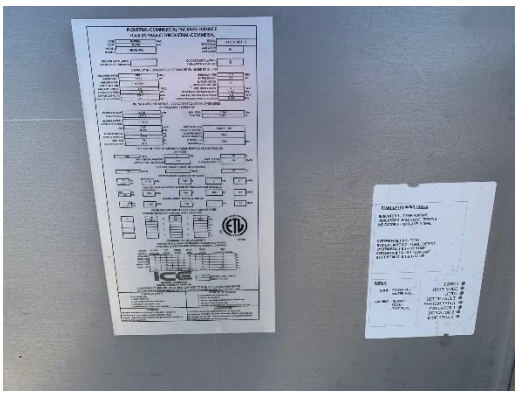
Recommended Action: Replacement

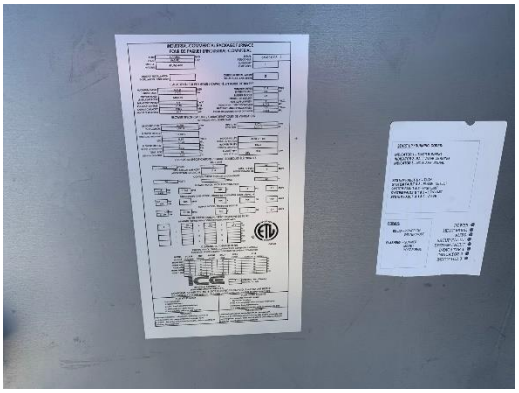
Action Summary:	Action Description:
Allowance for lifecycle replacement	Replace the rooftop furnaces Qty: 2 Units Unit Cost: $50,000/Unit

Other Information:

Action Cost:	$100,000	**Action Year:**	2028
Expected Useful Life:	30	**Repeat Cycle:**	30
Average CoF:	2	**Average PoF**	2

Component Photographs





3421 - Services

77. 3531 - Heating Generating Systems

Element Name: Furnaces - Units
Year of Installation: 2017
Condition Rating: Good - 2
Component Condition: The units in the addition are heated and cooled by gas-fired furnaces which are manufactured by Napoleon (M/N: PSC030A012A) and located within the units. The furnaces were found to be rated for 30,000 BTUH and were reported to be installed in 2017. Upon inspection, the furnaces appeared to be in good condition.
Component Recommendation: An allowance has been included for the lifecycle replacement of the furnaces at the end of their useful life.

Recommended Action: Replacement

Action Summary:	**Action Description:**
Allowance for lifecycle replacement	Replace the unit furnaces Qty: 48 Furnaces Unit Cost: $7,500/Furnace

Other Information:

Action Cost:	$360,000	**Action Year:**	2037
Expected Useful Life:	30	**Repeat Cycle:**	20
Average CoF:	3	**Average PoF**	2

Component Photographs

3421 - Services

78. 3534 - Exhaust & Ventilating Systems

Element Name: Exhaust Fans
Year of Installation: 1992
Condition Rating: Fair - 3
Component Condition: Each kitchen within the building is equipped with a range hood exhaust fan. Additionally, the common and unit bathrooms are each equipped with a ceiling-mounted exhaust fan. The actual age of the exhaust fans is unknown, therefore, the installation year of the fans has been estimated. Upon inspection, the fans appeared to be in fair condition with signs of wear and aging.
Component Recommendation: An allowance has been included for the lifecycle replacement of the exhaust fans at the end of their useful life.

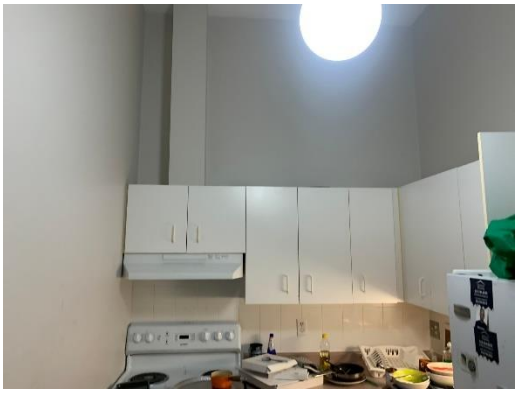
Recommended Action: Replacement

Action Summary:	**Action Description:**
Allowance for replacement	Replace bathroom and kitchen exhaust fans Qty: 212 Fans Unit Cost: $500/Fan

Other Information:

Action Cost:	$106,000	**Action Year:**	2026
Expected Useful Life:	30	**Repeat Cycle:**	30
Average CoF:	2	**Average PoF**	3

Component Photographs



3421 - Services

79. 3534 - Exhaust & Ventilating Systems

Element Name: Fresh Air Dampers
Year of Installation: 1992
Condition Rating: Fair - 3
Component Condition: There are three (3) fresh air dampers which service the parking garage. Upon inspection, the dampers appeared to be in fair condition with signs of wear and aging.
Component Recommendation: An allowance has been included to replace the fresh air dampers at the end of their useful life.

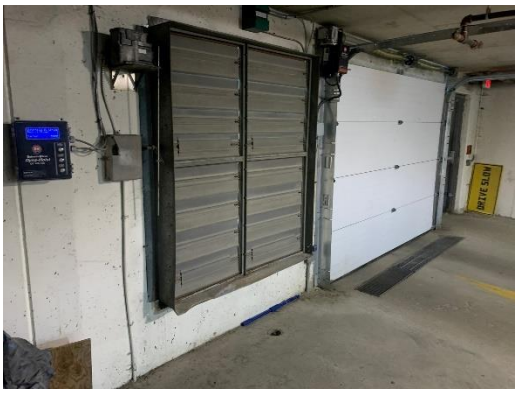
Recommended Action: Replacement

Action Summary:	Action Description:
Allowance for replacement	Replace fresh air dampers Qty: 3 Dampers Unit Cost: $5,000/Damper

Other Information:

Action Cost:	$15,000	**Action Year:**	2026
Expected Useful Life:	30	**Repeat Cycle:**	30
Average CoF:	2	**Average PoF**	3

Component Photographs



3421 - Services

80. 3534 - Exhaust & Ventilating Systems

Element Name: Air Vents
Year of Installation: 1990
Condition Rating: Good - 2
Component Condition: There are four (4) painted metal air vents which are located on the exterior of the original building. The actual age of the air vents is unknown, therefore, the installation year has been estimated. Upon inspection, the vents appeared to be in good condition.
Component Recommendation: An allowance has been included for the lifecycle replacement of the air vents at the end of their useful life.

Recommended Action: Replacement

Action Summary:	**Action Description:**
Allowance for replacement	Replace air vents Qty: 4 Vents Unit Cost: $500/Vent

Other Information:

Action Cost:	$2,000	**Action Year:**	2040
Expected Useful Life:	50	**Repeat Cycle:**	50
Average CoF:	1	**Average PoF**	2

Component Photographs

3421 - Services

81. 3534 - Exhaust & Ventilating Systems

Element Name: Make-Up Air Units
Year of Installation: 1992
Condition Rating: Fair - 3
Component Condition: There are two (2) make-up air units which are manufactured by En-Mar and are located in the original building's mechanical room. Upon inspection, the units appeared to be in fair condition with signs of wear and aging.
Component Recommendation: An allowance has been included for the replacement of the make-up air units at the end of their useful life.

Recommended Action: Replacement

Action Summary:	Action Description:
Allowance for replacement	Replace the make-up air units Qty: 2 Units Unit Cost: $50,000/Unit

Other Information:

Action Cost:	$100,000	**Action Year:**	2026
Expected Useful Life:	30	**Repeat Cycle:**	30
Average CoF:	2	**Average PoF**	3

Component Photographs

3421 - Services

82. 3537 - Energy Monitoring & Control

Element Name: Thermostats
Year of Installation: 1992
Condition Rating: Fair - 3
Component Condition: Each unit is equipped with thermostats which control the furnace/baseboard heaters. Upon inspection, the thermostats appeared to be in fair condition as they are outdated and have surpassed their expected service life.
Component Recommendation: It is recommended that the thermostats be upgraded to programmable units. An allowance has been included for the replacement of the thermostats at the end of their useful life.

Recommended Action: Replacement

Action Summary:	Action Description:
Allowance for replacement	Replace thermostats with programmable thermostats Qty: 100 Units Unit Cost: $500/each

Other Information:

Action Cost:	$50,000	**Action Year:**	2025
Expected Useful Life:	20	**Repeat Cycle:**	20
Average CoF:	2	**Average PoF**	3

Component Photographs

3421 - Services

83. 3566 - Sprinkler Water Supply

Element Name: Dry-Pipe Sprinkler System
Year of Installation: 1992
Condition Rating: Poor - 4
Component Condition: The dry-pipe sprinkler system services the mechanical rooms, service rooms, laundry rooms, parking garage, and garbage rooms. The system was not tested but all inspection tags are up-to-date. The sprinkler system appears to have been replaced and expanded in the original building during the construction of the addition in 1992. Upon inspection, the system appeared to be in poor condition with extensive rusting and deterioration visible throughout the building.
Component Recommendation: An allowance has been included for the replacement of the sprinkler system at the end of its useful life.

Recommended Action: Replacement

Action Summary:	Action Description:
Allowance for replacement	Replace the dry-pipe sprinkler system Qty: 20,000 SF Unit Cost: $4.20/SF

Other Information:

Action Cost:	$84,000	**Action Year:**	2023
Expected Useful Life:	25	**Repeat Cycle:**	25
Average CoF:	2	**Average PoF**	4

Component Photographs

3421 - Services

84. 3567 - Sprinkler Pumping Equipment

Element Name: Fire Pump
Year of Installation: 1992
Condition Rating: Fair - 3
Component Condition: There is a fire pump which is manufactured by ULC (M/N: 20-IE-7) and is located in the addition's mechanical room. The pump was found to be rated for 6.8 HP and 3500 RPM. Upon inspection, the pumps appeared to be in fair condition with signs of wear and aging.
Component Recommendation: An allowance has been included for the replacement of the fire pump at the end of its useful life.

Recommended Action: Replacement

Action Summary:	Action Description:
Allowance for replacement	Replace fire pump

Other Information:

Action Cost:	$15,000	**Action Year:**	2026
Expected Useful Life:	25	**Repeat Cycle:**	25
Average CoF:	2	**Average PoF**	3

Component Photographs

3421 - Services

85. 3573 - Standpipe Equipment

Element Name: Standpipe System
Year of Installation: 1992
Condition Rating: Good - 2
Component Condition: There is a standpipe system running vertically through the building which is connected to the fire hose cabinets. Upon inspection, the standpipe system appeared to be in good condition.
Component Recommendation: No major capital expenditures are anticipated within the terms of the study period.

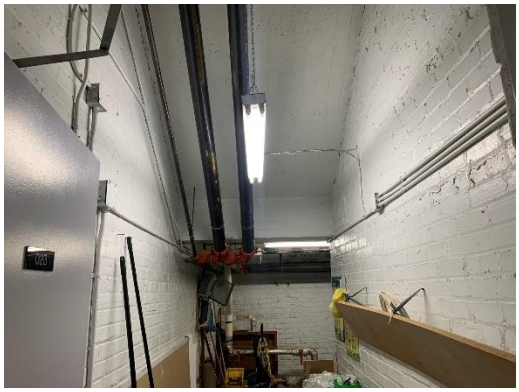
Recommended Action: No action required

Action Summary:	**Action Description:**
Not Applicable	Not Applicable

Other Information:

Action Cost:	Not Applicable	**Action Year:**	Not Applicable
Expected Useful Life:	85	**Repeat Cycle:**	Not Applicable
Average CoF:	2	**Average PoF**	2

Component Photographs



3421 - Services

86. 3576 - Fire Extinguishers

Element Name: Fire Extinguishers
Year of Installation: 2020
Condition Rating: Good - 2
Component Condition: There are approximately twenty (20) fire extinguishers located throughout the building. The actual age of the fire extinguishers is unknown, therefore, the installation year has been estimated. Upon inspection, the fire extinguishers appeared to be in good condition.
Component Recommendation: An allowance has been included for the lifecycle replacement of the fire extinguishers at the end of their useful life.

Recommended Action: Replacement

Action Summary:	Action Description:
Allowance for lifecycle replacement	Replace the fire extinguishers Qty: 20 Units Unit Cost: $500/unit

Other Information:

Action Cost:	$10,000	**Action Year:**	2025
Expected Useful Life:	5	**Repeat Cycle:**	5
Average CoF:	2	**Average PoF**	2

Component Photographs

3421 - Services

87. 3596 - High Tension Service & Dist.

Element Name: Primary Electrical Distribution System
Year of Installation: 1992
Condition Rating: Good - 2
Component Condition: The primary electrical distribution system for the building is comprised of a 2500A switchboard which is manufactured by Siemens (3-Phase, 4-Wire) and located in the electrical room. Upon inspection, the switchboard appeared to be in good condition.
Component Recommendation: An allowance has been included for the lifecycle replacement of the switchboard at the end of its useful life.

Recommended Action: Replacement

Action Summary:	**Action Description:**
Allowance for lifecycle replacement	Replace the main switchboard

Other Information:

Action Cost:	$100,000	**Action Year:**	2027
Expected Useful Life:	35	**Repeat Cycle:**	35
Average CoF:	2	**Average PoF**	2

Component Photographs

3421 - Services

88. 3597 - Low Tension Service & Dist.

Element Name: Secondary Electrical Distribution System
Year of Installation: 1992
Condition Rating: Good - 2
Component Condition: The secondary electrical distribution system for the building is comprised of approximately fourteen (14) distribution panels and three (3) safety switches. Upon inspection, the panels and switches appeared to be in good condition.
Component Recommendation: An allowance has been included for the lifecycle replacement of the secondary electrical panels and switches at the end of their useful life.

Recommended Action: Replacement

Action Summary:	Action Description:
Allowance for lifecycle replacement	Replace secondary electrical panels and switches 60-200A Panels: Qty: 6 Panels Unit Cost: $2,500/Panel 200A Panels: Qty: 6 Panels Unit Cost: 5,000/Panel 600A Panels: Qty: 2 Panels Unit Cost: 8,000/Panel 60-200A Switches: Qty: 3 Switches Unit Cost

Other Information:

Action Cost:	$64,000	**Action Year:**	2027
Expected Useful Life:	35	**Repeat Cycle:**	35
Average CoF:	2	**Average PoF**	2

Component Photographs

3421 - Services

89. 3597 - Low Tension Service & Dist.

Element Name: Unit Electrical Panels
Year of Installation: 1992
Condition Rating: Good - 2
Component Condition: Each unit is equipped with a 125A electrical distribution panel which is manufactured by ITE. Upon inspection, the panels appeared to be in good condition.
Component Recommendation: An allowance has been included for the lifecycle replacement of the unit electrical panels at the end of their useful life.

Recommended Action: Replacement

Action Summary:	Action Description:
Allowance for lifecycle replacement	Replace the unit electrical panels Qty: 100 Units Unit Cost: $1,500/Unit

Other Information:

Action Cost:	$150,000	**Action Year:**	2027
Expected Useful Life:	35	**Repeat Cycle:**	35
Average CoF:	2	**Average PoF**	2

Component Photographs

3421 - Services

90. 3602 - Lighting Equipment

Element Name: Lighting Fixtures - Units
Year of Installation: 1992
Condition Rating: Fair - 3
Component Condition: Hardwired light fixtures in the units use incandescent and CFL bulbs in ceiling-mounted lighting fixtures. Each unit has approximately seven (7) lighting fixtures. Upon inspection, the lighting fixtures appeared to be in fair condition with signs of wear and aging.
Component Recommendation: It is recommended the existing fixtures be replaced with LED fixtures for improved energy saving and illumination quality. A turnover rate of 5% (5 units) is anticipated annually, at which time replacement of the unit lighting fixtures is recommended. Therefore, an allowance has been included for the replacement of the lighting fixtures in five (5) units every year.

Recommended Action: Replacement

Action Summary:	Action Description:
Allowance for LED lighting upgrade	Upgrade lighting fixtures to LED in five (5) units annually Qty: 5 Unit Cost: $1,500/unit

Other Information:

Action Cost:	$7,500	**Action Year:**	2023
Expected Useful Life:	17	**Repeat Cycle:**	1
Average CoF:	2	**Average PoF**	3

Component Photographs

3421 - Services

91. 3602 - Lighting Equipment

Element Name: Lighting Fixtures - Common Area
Year of Installation: 2012
Condition Rating: Good - 2
Component Condition: Hardwired light fixtures in the common areas use incandescent and CFL bulbs and tubes in ceiling-mounted lighting fixtures. The actual age of the fixtures is unknown, therefore, the installation year has been estimated. Upon inspection, the fixtures appeared to be in good condition
Component Recommendation: It is recommended the existing fixtures be replaced with LED fixtures for improved energy saving and illumination quality. An allowance has been included for the lifecycle replacement of the common area lighting fixtures at the end of their useful life.

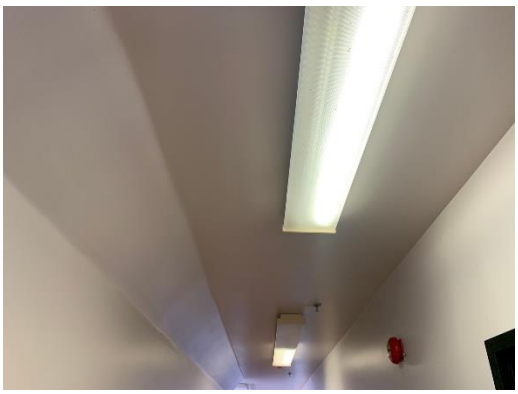
Recommended Action: Replacement

Action Summary:	Action Description:
Allowance for LED lighting upgrade	Upgrade common area lighting fixtures to LED Qty: 200 Unit Cost: $350/unit

Other Information:

Action Cost:	$70,000	**Action Year:**	2032
Expected Useful Life:	17	**Repeat Cycle:**	17
Average CoF:	2	**Average PoF**	2

Component Photographs



3421 - Services

92. 3607 - Intercommunication & Paging System

Element Name: Enterphone
Year of Installation: 2007
Condition Rating: Good - 2
Component Condition: The building is equipped with an Enterphone system at the main entrance. The actual age of the system is unknown, therefore, the installation year has been estimated. Upon inspection, the Enterphone appeared to be in good condition, therefore, the expected service life of the Enterphone has been extended.

Component Recommendation: An allowance has been included for the replacement of the Enterphone at the end of its useful life.

Recommended Action: Replacement

Action Summary:	Action Description:
Allowance for lifecycle replacement	Replace Enterphone

Other Information:

Action Cost:	$5,000	**Action Year:**	2036
Expected Useful Life:	15	**Repeat Cycle:**	15
Average CoF:	1	**Average PoF**	2

Component Photographs

3421 - Services

93. 3612 - Fire Alarm Systems

Element Name: Smoke Detectors
Year of Installation: 1992
Condition Rating: Good - 2
Component Condition: Each unit is equipped with a hard-wired smoke detector. Upon inspection, the smoke detectors appeared to be in good to fair condition based on the replacement dates of the observed units.
Component Recommendation: An allowance has been included for the replacement of the smoke detectors as needed.

Recommended Action: Replacement

Action Summary:	Action Description:
Allowance for lifecycle replacement	Replace smoke detectors as needed (10% of total units) Quantity: 10 Units Unit Cost: $150/Unit

Other Information:

Action Cost:	$1,500	**Action Year:**	2023
Expected Useful Life:	10	**Repeat Cycle:**	1
Average CoF:	2	**Average PoF**	2

Component Photographs

3421 - Services

94. 3612 - Fire Alarm Systems

Element Name: Fire Alarm Panels
Year of Installation: 2012
Condition Rating: Good - 2
Component Condition: There is a fire alarm panel which is manufactured by Troy and is located in the electrical room. Annunciator panels are present at the main entrances to the building. The actual age of the panels is unknown, therefore, the installation year has been estimated. Upon inspection, the panels appeared to be in good condition.
Component Recommendation: An allowance has been included for the lifecycle replacement of the fire alarm panels at the end of their useful life.

Recommended Action: Replacement

Action Summary:	Action Description:
Allowance for lifecycle replacement	Replace fire alarm and annunciator panels Main Panel: $7,500 Annunciators: $2,500 each

Other Information:

Action Cost:	$12,500	**Action Year:**	2032
Expected Useful Life:	15	**Repeat Cycle:**	20
Average CoF:	2	**Average PoF**	2

Component Photographs

3421 - Services

95. 3612 - Fire Alarm Systems

Element Name: Fire Alarm Devices
Year of Installation: 2007
Condition Rating: Good - 2
Component Condition: The fire alarm devices for the building are comprised of manual pull stations, heat detectors, and warning bells. The actual age of the devices is unknown, therefore, the installation year has been estimated. Upon inspection, the devices appeared to be in fair condition with signs of wear and aging.
Component Recommendation: An allowance has been included for the replacement of the fire alarm devices at the end of their useful life.

Recommended Action: Replacement

Action Summary:	Action Description:
Allowance for lifecycle replacement	Replace fire alarm devices Heat Detectors: Qty: 125 Units Unit Cost: $300/Unit Warning Bells: Qty: 20 Units Unit Cost: $350/Unit Manual Pull Stations: Qty: 50 Units Unit Cost: $350/Unit

Other Information:

Action Cost:	$62,000	**Action Year:**	2025
Expected Useful Life:	15	**Repeat Cycle:**	15
Average CoF:	2	**Average PoF**	2

Component Photographs

3421 - Services

96. 3613 - Security and Detection Systems

Element Name: Security System
Year of Installation: 2015
Condition Rating: Good - 2
Component Condition: The security system for the building is comprised of nine (9) security cameras. The actual age of the cameras is unknown, therefore, the installation year has been estimated. Upon inspection, the cameras appeared to be in good condition
Component Recommendation: An allowance has been included for the lifecycle replacement of the security cameras at the end of their useful life.

Recommended Action: Replacement

Action Summary:	**Action Description:**
Allowance for lifecycle replacement	Replace security system cameras Qty: 9 Cameras Unit Cost: $1,500/Camera

Other Information:

Action Cost:	$13,500	**Action Year:**	2030
Expected Useful Life:	15	**Repeat Cycle:**	15
Average CoF:	2	**Average PoF**	2

Component Photographs

3421 - Services

97. 3617 - Emergency Light & Power Systems

Element Name: Exit Signs & Emergency Lighting
Year of Installation: 2012
Condition Rating: Good - 2
Component Condition: Exit signage and emergency lighting consist of ceiling and wall-mounted exit signs and battery power emergency lighting fixtures. The number of exit signs and emergency lighting fixtures appears to be sufficient for the building. All of the exit signs throughout the building were red CFL fixtures. The actual age of the fixtures is unknown, therefore, the installation year has been estimated. Upon inspection, the fixtures appeared to be in good condition.
Component Recommendation: It is recommended that the CFL exit signage be replaced with the new, code-compliant 'green running man' signs. An allowance has been included for the lifecycle replacement of the exit signage and emergency lighting fixtures at the end of their useful lif

Recommended Action: Replacement

Action Summary:	Action Description:
Allowance for lifecycle replacement	Replace exit signs and emergency lighting fixtures Exit Signage: Qty: 40 Fixtures Unit Cost: $600/Fixture Emergency Lighting: Qty: 10 Fixtures Unit Cost: $1,500/Fixture

Other Information:

Action Cost:	$39,000	**Action Year:**	2027
Expected Useful Life:	15	**Repeat Cycle:**	15
Average CoF:	2	**Average PoF**	2

Component Photographs

3640 - Equipment & Furnishings

98. 3651 - Laundry & Dry Cleaning Equipment

Element Name: Laundry Equipment
Year of Installation: 2015
Condition Rating: Good - 2
Component Condition: The building's laundry rooms are equipped with a total of eight (8) washers and eight (8) dryers. The actual age of the washers and dryers is unknown, therefore, the installation year has been estimated. Upon inspection, the washers and dryers appeared to be in good condition.
Component Recommendation: An allowance has been included for the lifecycle replacement of the washers and dryers at the end of their useful life.

Recommended Action: Replacement

Action Summary:	Action Description:
Allowance for replacement	Replace the washers and dryers Qty: 16 Units Unit Cost: $1,500/Unit

Other Information:

Action Cost:	$24,000	**Action Year:**	2030
Expected Useful Life:	15	**Repeat Cycle:**	15
Average CoF:	2	**Average PoF**	2

Component Photographs

3640 - Equipment & Furnishings

99. 3675 - Unit Kitchens/Appliances

Element Name: Refrigerators
Year of Installation: 2010
Condition Rating: Fair - 3
Component Condition: Each unit kitchen is equipped with a refrigerator. Upon inspection, the refrigerators appeared to be in fair condition with signs of wear and aging.
Component Recommendation: An allowance has been included for the lifecycle replacement of the refrigerators at the end of their useful life.

Recommended Action: Replacement

Action Summary:	Action Description:
Allowance for lifecycle replacement	Replace the refrigerators Qty: 100 Units Unit Cost: $1,000/Unit

Other Information:

Action Cost:	$100,000	**Action Year:**	2025
Expected Useful Life:	15	**Repeat Cycle:**	15
Average CoF:	2	**Average PoF**	3

Component Photographs

3640 - Equipment & Furnishings

100. 3675 - Unit Kitchens/Appliances

Element Name: Stoves
Year of Installation: 2010
Condition Rating: Fair - 3
Component Condition: Each unit kitchen is equipped with a stove. Upon inspection, the stoves appeared to be in fair condition with signs of wear and aging.
Component Recommendation: An allowance has been included for the lifecycle replacement of the stoves at the end of their useful life.

Recommended Action: Replacement

Action Summary:	Action Description:
Allowance for lifecycle replacement	Replace the stoves Qty: 100 Units Unit Cost: $1,000/Unit

Other Information:

Action Cost:	$100,000	**Action Year:**	2025
Expected Useful Life:	15	**Repeat Cycle:**	15
Average CoF:	2	**Average PoF**	3

Component Photographs

3640 - Equipment & Furnishings

101. 3677 - Other Equipment

Element Name: Garbage Compactor
Year of Installation: 1992
Condition Rating: Good - 2
Component Condition: The building is equipped with a garbage compactor that is attached to a chute that services all floors of the building. Upon inspection, the compactor appeared to be in good condition.
Component Recommendation: It is recommended that the hydraulic pump and cylinder be replaced as part of regular maintenance and repair activities for the trash compactor.

Recommended Action: Repair

Action Summary:	Action Description:
Allowance for as-needed replacements/repairs	Replace hydraulic pump Unit: 1 Unit Cost: $2,500 Replace hydraulic cylinder Unit: 1 Unit Cost: $10,000

Other Information:

Action Cost:	$12,500	**Action Year:**	2027
Expected Useful Life:	30	**Repeat Cycle:**	15
Average CoF:	2	**Average PoF**	2

Component Photographs

3640 - Equipment & Furnishings

102. 3677 - Other Equipment

Element Name: Garbage Compactor
Year of Installation: 1992
Condition Rating: Good - 2
Component Condition:. See previous element for commentary
Component Recommendation: An allowance has been included to replace the garbage compactor within the study period.

Recommended Action: Replacement

Action Summary:	**Action Description:**
Allowance for lifecycle replacement	Replace garbage compactor Unit: 1 Unit Cost: $30,000

Other Information:

Action Cost:	$30,000	**Action Year:**	2042
Expected Useful Life:	30	**Repeat Cycle:**	30
Average CoF:	2	**Average PoF**	2

Component Photographs

See previous element for photo.

3640 - Equipment & Furnishings

103. 3677 - Other Equipment

Element Name: Diesel-Powered Generator
Year of Installation: 1992
Condition Rating: Good - 2
Component Condition: The building is equipped with a diesel-powered emergency generator which is manufactured by Simpower and is located in the generator room. The generator was found to be rated for 110 kW. Upon inspection, the generator appeared to be in good condition.
Component Recommendation: An allowance has been included for the lifecycle replacement of the generator at the end of its useful life.

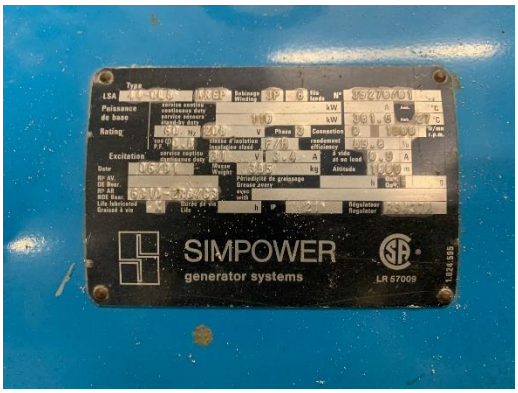
Recommended Action: Replacement

Action Summary:	Action Description:
Allowance for lifecycle replacement	Replace the generator

Other Information:

Action Cost:	$60,000	**Action Year:**	2027
Expected Useful Life:	35	**Repeat Cycle:**	35
Average CoF:	2	**Average PoF**	2

Component Photographs



3640 - Equipment & Furnishings

104. 3677 - Other Equipment

Element Name: Fuel Storage Tank
Year of Installation: 2015
Condition Rating: Good - 2
Component Condition: Fuel for the generator is stored in the ULC fuel storage tank which is located in the generator room. It is our understanding that the tank was installed in 2015. The tank was viewed to be rated for 94.5L. Upon inspection, the tank appeared to be in good condition.
Component Recommendation: An allowance has been included for the lifecycle replacement of the fuel storage tank at the end of its useful life.

Recommended Action: Replacement

Action Summary:	Action Description:
Allowance for lifecycle replacement	Replace the fuel storage tank

Other Information:

Action Cost:	$5,000	**Action Year:**	2040
Expected Useful Life:	25	**Repeat Cycle:**	25
Average CoF:	1	**Average PoF**	2

Component Photographs

3710 - Special Construction & Demolition

105. 3723 - Other Integrated Construction

Element Name: Kitchen Renovations - Units
Year of Installation: 1992
Condition Rating: Fair - 3
Component Condition: Each unit kitchen is equipped with melamine cabinetry, laminate countertops, a metal sink with a metal faucet, ceramic tile backsplash, a range hood exhaust fan, a stove, a refrigerator, VCT or laminate flooring, and painted drywall walls and ceilings. Upon inspection, the unit kitchens appeared to be in fair condition. Kitchen renovations are inclusive of melamine cabinetry, laminate countertops, a metal sink with a metal faucet, ceramic tile backsplash, flooring finishes and paint touch-ups. GFCI receptacles were not viewed to be present in the unit kitchens during the site inspection.
Component Recommendation: It is recommended that GFCI receptacles be installed on outlets within 1.5m of a water source for shock prevention. A turnover rate of 5% (5 units) is anticipated annually, at which time renovation of the kitchens is recommended. Therefore, an allowance has been included for the renovation of the kitchens in five (5) units every year.

Recommended Action: Replacement

Action Summary:	Action Description:
Allowance for renovations	Renovate the kitchens in five (5) units annually Qty: 5 Units Unit Cost: $6,500/Unit

Other Information:

Action Cost:	$32,500	**Action Year:**	2023
Expected Useful Life:	20	**Repeat Cycle:**	1
Average CoF:	2	**Average PoF**	3

Component Photographs

3710 - Special Construction & Demolition

106. 3723 - Other Integrated Construction

Element Name: Bathroom Renovations - Units
Year of Installation: 1992
Condition Rating: Good - 2
Component Condition: Each unit bathroom is equipped with a melamine vanity, a laminate or ceramic countertop, a ceramic sink with a metal faucet, a toilet (unknown LPF), a tub with ceramic tile tub surround, a ceiling-mounted exhaust fan, VCT flooring, and painted drywall walls and ceilings. The units in the addition are also equipped with a powder room that has similar finishes and fixtures. Upon inspection, the unit bathrooms appeared to be in good condition. Bathroom renovations are inclusive of a vanity, a countertop, a ceramic sink with a metal faucet, a toilet, a tub and surround, flooring finishes and paint touch-ups. GFCI receptacles were viewed to be present in the unit bathrooms.
Component Recommendation: A turnover rate of 5% (5 units) is anticipated annually, at which time renovation of the bathrooms is recommended. Therefore, an allowance has been included to renovate the bathrooms in five (5) units every year.

Recommended Action: Replacement

Action Summary:	**Action Description:**
Allowance for renovations	Renovate the bathrooms in five (5) units annually Qty: 5 Units Unit Cost: $6,500

Other Information:

Action Cost:	$32,500	**Action Year:**	2023
Expected Useful Life:	20	**Repeat Cycle:**	1
Average CoF:	2	**Average PoF**	2

Component Photographs

3710 - Special Construction & Demolition

107. 3723 - Other Integrated Construction

Element Name: Bathroom Renovations - Common Area
Year of Installation: 2010
Condition Rating: Fair - 3
Component Condition: The addition of the building is equipped with four (4) common area washrooms. The washrooms are equipped with a wood vanity, a laminate countertop, a ceramic sink with a metal faucet, a toilet (unknown LPF), a ceiling-mounted exhaust fan, VCT (Vinyl Composite Tile) flooring, and painted drywall walls and ceilings. The actual age of the washrooms is unknown, therefore, the installation year has been estimated. Upon inspection, the washrooms appeared to be in fair condition. Washroom renovations are inclusive of a vanity, a countertop, a ceramic sink with a metal faucet, a toilet, flooring finishes and paint touch-ups.
Component Recommendation: An allowance has been included for the renovation of the common washrooms at the end of their useful life.

Recommended Action: Replacement

Action Summary:	Action Description:
Allowance for renovations	Renovate the common area washrooms Qty: 4 Units Unit Cost: $5,000/Unit

Other Information:

Action Cost:	$20,000	**Action Year:**	2030
Expected Useful Life:	20	**Repeat Cycle:**	20
Average CoF:	2	**Average PoF**	3

Component Photographs

3710 - Special Construction & Demolition

108. 3723 - Other Integrated Construction

Element Name: Unit Renovations
Year of Installation: 1992
Condition Rating: Good - 2
Component Condition: The interior finishes of the units are comprised of painted drywall ceilings with or without a stipple finish, painted drywall walls, and either wood, laminate, carpet, or VCT flooring. Upon inspection, the unit interior finishes appeared to be in good condition.
Component Recommendation: A turnover rate of 5% (5 units) is anticipated annually, at which time renovation of the unit interior finishes is recommended. Therefore, an allowance has been included for the renovation of the interior finishes of five (5) units every year.

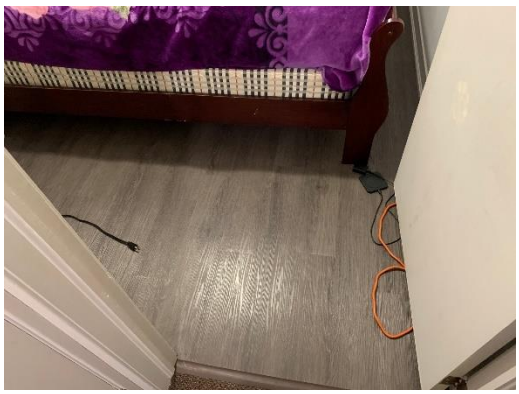
Recommended Action: Replacement

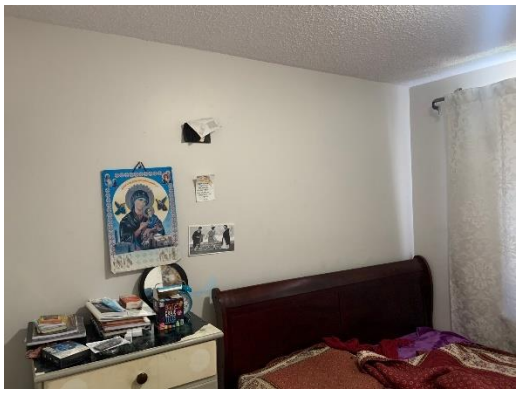
Action Summary:	Action Description:
Allowance for renovations	Renovate the interior finishes of five (5) units annually Qty: 5 Units Unit Cost: $10,000/Unit

Other Information:

Action Cost:	$50,000	**Action Year:**	2023
Expected Useful Life:	20	**Repeat Cycle:**	1
Average CoF:	2	**Average PoF**	2

Component Photographs





3780 - Building Sitework

109. 3827 - Parking Paving & Surfacing

Element Name: Asphalt Roadway & Parking
Year of Installation: 1992
Condition Rating: Good - 2
Component Condition: There is an asphalt roadway which leads from Joseph Street through the site. Site parking is provided by an asphalt parking lot which is located on the North end of the site. Upon inspection, the asphalt paving appeared to be in good condition.
Component Recommendation: An allowance has been included to resurface the asphalt paving within the study period.

Recommended Action: Repair

Action Summary:	Action Description:
Allowance for repairs	Resurface the asphalt paving Qty: 16,700 SF Unit Cost: $2.50/SF

Other Information:

Action Cost:	$41,750	**Action Year:**	2027
Expected Useful Life:	40	**Repeat Cycle:**	40
Average CoF:	1	**Average PoF**	2

Component Photographs

3780 - Building Sitework

110. 3827 - Parking Paving & Surfacing

Element Name: Asphalt Roadway & Parking
Year of Installation: 1992
Condition Rating: Good - 2
Component Condition: Please refer to the previous element for commentary.
Component Recommendation: An allowance has been for the replacement of the asphalt paving at the end of its useful life.

Recommended Action: Replacement

Action Summary:	Action Description:
Allowance for replacement	Replace the asphalt paving Qty: 16,700 SF Unit Cost: $7/SF

Other Information:

Action Cost:	$116,900	**Action Year:**	2047
Expected Useful Life:	40	**Repeat Cycle:**	40
Average CoF:	1	**Average PoF**	2

Component Photographs

3780 - Building Sitework

111. 3828 - Curbs, Rails & Barriers

Element Name: Concrete Curbs
Year of Installation: 1992
Condition Rating: Good - 2
Component Condition: The perimeter of the paved asphalt parking and roadways are equipped with poured concrete curbs. The concrete curbs were observed to be in good condition overall with minor cracks and chipping noted.
Component Recommendation: An allowance has been included for the lifecycle replacement of the concrete curbs at the end of their useful life.

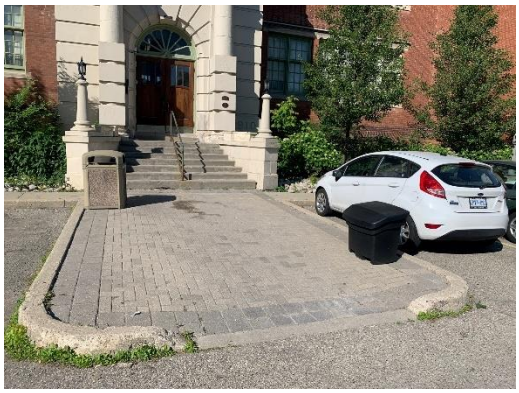
Recommended Action: Replacement

Action Summary:	**Action Description:**
Allowance for repairs	Replace the concrete curbs Qty: 970 LF Unit Cost: $25/LF

Other Information:

Action Cost:	$24,250	**Action Year:**	2032
Expected Useful Life:	40	**Repeat Cycle:**	40
Average CoF:	1	**Average PoF**	2

Component Photographs



3780 - Building Sitework

112. 3836 - Pedestrian Paving & Surfacing

Element Name: Concrete Walkways
Year of Installation: 1992
Condition Rating: Good - 2
Component Condition: Pedestrian walkways for the site are comprised of poured concrete and interlocking brick. Upon inspection, the walkways appeared to be in good condition.
Component Recommendation: An allowance has been included for the lifecycle replacement of the concrete walkways at the end of their useful life.

Recommended Action: Replacement

Action Summary:	Action Description:
Allowance for lifecycle replacement	Replace concrete walkways Qty: 500 LF Unit Cost: $25/LF

Other Information:

Action Cost:	$12,500	**Action Year:**	2032
Expected Useful Life:	40	**Repeat Cycle:**	40
Average CoF:	1	**Average PoF**	2

Component Photographs

3780 - Building Sitework

113. 3836 - Pedestrian Paving & Surfacing

Element Name: Concrete Paving
Year of Installation: 1992
Condition Rating: Good - 2
Component Condition: There is concrete paving located in the courtyard which is comprised of poured concrete slabs and interlocking brick. Upon inspection, the concrete appeared to be in good condition.
Component Recommendation: An allowance has been included for the lifecycle replacement of the concrete paving at the end of its useful life.

Recommended Action: Replacement

Action Summary:	Action Description:
Allowance for lifecycle replacement	Replace concrete paving Qty: 4,000 SF Unit Cost: $7.50/SF

Other Information:

Action Cost:	$30,000	**Action Year:**	2032
Expected Useful Life:	40	**Repeat Cycle:**	40
Average CoF:	1	**Average PoF**	2

Component Photographs

3780 - Building Sitework

114. 3841 - Fences & Gates

Element Name: Wood Fencing
Year of Installation: 1992
Condition Rating: Good - 2
Component Condition: There is wood fencing between the unit patios on the South end of the site. Upon inspection, the wood fencing appeared to be in good condition. Based on the observered good condition of the wood fence, the useful life has been extended.
Component Recommendation: An allowance has been included for the lifecycle replacement of the wood fencing at the end of its useful life.

Recommended Action: Replacement

Action Summary:	Action Description:
Allowance for lifecycle replacement	Replace patio wooden fences Qty: 140 LF Unit Cost: $100/LF

Other Information:

Action Cost:	$14,000	**Action Year:**	2032
Expected Useful Life:	30	**Repeat Cycle:**	30
Average CoF:	1	**Average PoF**	2

Component Photographs

3780 - Building Sitework

115. 3841 - Fences & Gates

Element Name: Metal Railings
Year of Installation: 1992
Condition Rating: Good - 2
Component Condition: There are painted metal railings located throughout the site. Upon inspection, the railings appeared to be in good condition.
Component Recommendation: An allowance has been included for the lifecycle replacement of the painted metal railings at the end of their useful life.

Recommended Action: Replacement

Action Summary:	Action Description:
Allowance for lifecycle replacement	Replace the painted metal railings Qty: 400 LF Unit Cost: $100/LF

Other Information:

Action Cost:	$40,000	**Action Year:**	2042
Expected Useful Life:	50	**Repeat Cycle:**	50
Average CoF:	1	**Average PoF**	2

Component Photographs

3780 - Building Sitework

116. 3858 - Other Landscape Features

Element Name: General Landscaping
Year of Installation: 1992
Condition Rating: Good - 2
Component Condition: General landscaping consists of manicured lawns, shrubs, and trees. The landscaping was found to be in good condition.
Component Recommendation: An allowance has been included for regular maintenance and repair.

Recommended Action: Repair

Action Summary:	Action Description:
Allowance for maintenance	Allowance for tree trimming and minor landscape repairs

Other Information:

Action Cost:	$5,000	**Action Year:**	2023
Expected Useful Life:	30	**Repeat Cycle:**	5
Average CoF:	2	**Average PoF**	2

Component Photographs

3780 - Building Sitework

117. 3921 - Fixtures & Transformers

Element Name: Site Lighting - Fixtures
Year of Installation: 2020
Condition Rating: Good - 2
Component Condition: Site lighting is provided by approximately twenty (20) pole-mounted fixtures and 100 wall-mounted and soffit-mounted fixtures. It is our understanding that the fixtures were upgraded to LEDs in 2020. Upon inspection, the site lighting fixtures appeared to be in good condition.
Component Recommendation: An allowance has been included for the lifecycle replacement of the site lighting fixtures at the end of their useful life.

Recommended Action: Replacement

Action Summary:	Action Description:
Allowance for lifecycle replacement	Replace LED site lighting fixtures Pole-Mounted: Qty: 20 Fixtures Unit Cost: $1,200/Fixture Wall/Soffit-Mounted: Qty: 100 Fixtures Unit Cost: $500/Fixture

Other Information:

Action Cost:	$74,000	**Action Year:**	2035
Expected Useful Life:	15	**Repeat Cycle:**	15
Average CoF:	1	**Average PoF**	2

Component Photographs

3780 - Building Sitework

118. 3921 - Fixtures & Transformers

Element Name: Site Lighting - Poles
Year of Installation: 1992
Condition Rating: Good - 2
Component Condition: Please refer to the previous element for commentary.
Component Recommendation: An allowance has been included to replace the pole standards during the lighting replacement in 2035.

Recommended Action: Replacement

Action Summary:	**Action Description:**
Allowance for lifecycle replacement	Replace pole standards Qty: 20 Poles Unit Cost: $5,000/Pole

Other Information:

Action Cost:	$100,000	**Action Year:**	2035
Expected Useful Life:	40	**Repeat Cycle:**	40
Average CoF:	1	**Average PoF**	2

Component Photographs

APPENDIX A

Pre-Site Visit Information Checklist

BCA 2022 Questionnaire for Site Visit

Please fill in the following questionnaire before the scheduled site visit. We hope to receive this completed form 2 business days before the site visit, if possible, to share with the consultant.

Note: as you type in the comments field in the form, the box will keep expanding.

If the site has more than one building type (apartment and townhouses) please use a separate form per building type.

Highlighted questions are examples of areas that may have supporting documentation the Housing Provider can share to assist in writing their report. If possible, please send a copy of supporting documents back electronically, along with the completed questionnaire, or email on the day of site visit.

Documentation can be sent to:

To: HPreporting@regionofwaterloo.ca
Cc: RWadel@regionofwaterloo.ca
Subject: BCA 2022 Site Visit - <Housing Provider Name> <Site Address, City>

We appreciate your help in addressing emails as such to streamline the process of documentation coming forth over the next few months.

Housing Provider Name		Site Address			
Site visit date:		Building type: Apartment/Townhouse			
Sect/No.	Question	Yes	No	N/A	Comments/Explanation
A	**Building Structure and Envelope**				
1	Any crack on the foundation, exterior wall, floor structure?	X			There have been several minor cracks found – and they have been repaired or are in the process of being repaired.
2	Is there water leakage through the foundation or exterior wall?		X		
3	Is there water leakage or other roof-related issues?		X		
4	Was the roof replaced in the last 10 years? If so, cost?		X		
5	Has roof insulation been added?		X		
6	Have the windows been replaced since building construction? If so, what was the cost?		X		
7	If windows have not been replaced, are there any plans of replacement?		X		
8	Is there water leakage or condensation or mould issues with the windows?		X		There have been some repairs made to windows if leakage has been reported/noted
9	Has any exterior door (entrance/unit/patio door) been replaced? Identify the type of doors and costs of replacement.		X		Doors are replaced as needed, sometimes at Unit Turnover
10	If doors have not been replaced, are there any plans of replacement?		X		
11	Is there underground parking?	X			
12	If there is underground parking, are there any issues?		X		
B	**Mechanical and Plumbing**				
1	What is the common area heating system (furnace, baseboard heater, rooftop unit or boiler)?				Boiler
2	Any there any issues with the common area heating system?		X		
3	Was the common area heating system replaced in the last 10 years?		X		Boiler installed in 2011.

No.	Question	Yes	No	N/A	Comments/Explanation
4	What is the in-suite heating system (furnace, baseboard heater, rooftop unit or boiler)?				Boiler
5	Any there any issues with the in-suite heating systems?		X		
6	Was the in-suite heating system replaced in the last 10 years?		X		
7	What is the common area cooling system (window AC unit or rooftop unit)?				One MUA unit to provide tempered air to common spaces
8	Was the common area cooling system replaced in the last 10 years?		X		
9	What is the in-suite cooling system (window AC unit or rooftop unit)?				Rooftop, as well as heating/cooling furnace, MUA units.
10	If window AC unit, are they unit owned or building owned?				Building
11	Was the in-suite cooling system replaced in the last 10 years?	X			Heating/Cooling furnace installed in 2017.
12	Are the bathrooms equipped with exhaust fans?	X			
13	Were the exhaust fans replaced in the last 10 years?		X		
14	If existing, when was the elevator(s) installed?				Elevator was modernized in 2017
15	Were the domestic water heaters replaced in the last 10 years?		X		No – but major repair was done in December 2021
16	Are there issues with pinhole leaks in the domestic water pipe lines?	X			We have had leaks – that are repaired when found.
17	Has a back-flow preventer been installed?	X			
C	**Electrical**				
1	Were the electrical services updated in the last 10 years (panels, transformers, switches, UPS, etc)? Identify what was updated.		X		
2	Were the lighting fixtures replaced with LED? Identify where.	X			Outdoor lighting in 2020
No.	Question	Yes	No	N/A	Comments/Explanation
3	If the lighting has not been replaced with LED, is an LED retrofit considered in the future?	X			
4	Is there a power generator? Type, age, capacity if available.	X			
5	What is the type or fuel?			X	
6	Where is the fuel located?			X	

7	Are there emergency lighting and exit signs?	X			
D	**Building Interior**				
1	Were the interior finishes in public areas updated in the last 10 years, (ceiling and wall paint, carpet, etc.)		X		
2	Were the unit interior finishes updated?	X			Unit interior finishes are done as needed and at turnover if needed
3	Are the unit interiors updated at turnover?	X			Unit interior finishes are done as needed and at turnover if needed
4	Were the unit washrooms renovated (tubs, toilets, lavatories)? If yes, provide time of renovation.		X		Washrooms are renovated at turnover if needed
5	Are the unit washrooms renovated at turnover?	X			Washrooms are renovated at turnover if needed
6	Were the unit kitchens renovated (sinks, stoves, counter tops, cabinets)? If yes, provide time of renovation.		X		Kitchens are done at turnover if needed
7	Are the unit kitchens renovated at turnover?	X			Kitchens are done at turnover if needed
8	If there is a common kitchen, has it been renovated? If yes, provide time of renovation.		X		
9	If there are common washrooms, have they been renovated? If yes, provide time of renovation.		X		
10	Is there asbestos, lead, or mould in the building? If yes, please specify	X			When mould is identified, it gets professionally removed
11	Are there previous DSS reports available for review?		X		

No.	Question	Yes	No	N/A	Comments/Explanation
E	**Site**				
1	Was the parking lot re-paved in the last 10 years?		X		We are looking into repaving.
2	Are there barrier free parking spots available?	X			
3	Were the site lighting fixtures (lighting poles, wall packs, flood lights) replaced in the last 10 years?	X			
4	Has the site lighting been replaced to LED?	X			Updated in 2020.
5	If not, are there any plans to replace the site lighting to LED?			X	
6	Are there septic or well systems on the site? If yes, please identify which.		X		
7	Are there electric solar systems on the site? If yes, please provide size of system, and age of system		X		
8	Is there a hot water heating solar system on the site?		X		
9	Have the catch basins ever been cleaned? If yes, when?	X			October 2021
F	**Accessibility, Health, Safety, and Others**				
1	Is there modified unit for barrier free access?	X			5 accessible units
2	Are there automatic door openers?	X			
3	Is the site equipped with accessible ramps?	X			
4	Is there an accessible bathroom?	X			
5	Are there fire alarms?	X			
6	Are there smoke detectors?	X			
7	Are there heat detectors?		X		
8	Are there CO detectors?		X		
9	Is there a CCTV system?	X			
10	Is there a security alarm system provided for the building?	X			

Additional Items	Comments or Concerns
	The building is a heritage building, which makes some repairs more difficult.

APPENDIX B

Elevator Report

SOLUCORE
Elevator Consultants
5160 Explorer Drive, Unit 29
Mississauga, Ontario L4W 4T7
Tel: 905.206.0555
www.solucore.com
Offices: Calgary • Edmonton • Florida • Halifax • Kitchener • Los Angeles • Mississauga • Montréal • New York • Ottawa • Toronto • Vancouver • Victoria • Winnipeg

May 9, 2022

Walterfedy
675 Queen St. S., Suite 111
Kitchener, ON, N2M 1A1
Canada

Attention: Ms. Linda Bennett, Project Coordinator

Reference: **Kitchener Housing - Joseph Street**
25 Joseph Street, Kitchener, **Ontario**
Elevator Technical Audit
Our Job Number: 2250018T003

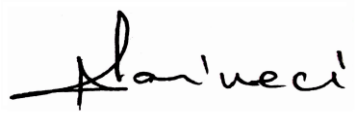
Dear Ms. Bennett:

On May 9, 2022, we reviewed the elevator equipment at 25 Joseph Street, located in Kitchener, Ontario.

Enclosed is our report detailing our findings.

Should you have any questions or concerns, please do not hesitate to call.

Sincerely Yours,
Solucore Inc.



Valentin Marineci, B. Eng
Field Engineer

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KITCHENER HOUSING - JOSEPH STREET
25 JOSEPH STREET
KITCHENER, ONTARIO

Elevator Technical Audit

Performed by:	Nauman Saeed, P.Eng, M.Eng, EDM-F
Reviewed by:	Valentin Marineci, B. Eng
For:	Walterfedy
Date of Inspection:	May 9, 2022
Job Number:	2250018T003

TABLE OF CONTENTS

SUMMARY

On May 9, 2022, Solucore Inc. performed an inspection of the vertical transportation equipment located at 25 Joseph Street, in Kitchener, Ontario, for Walterfedy. The purpose of the inspection was to check the general condition and operation of the equipment and to note concerns and deficiencies. A detailed reserve fund study and performance audit was performed. The vertical transportation consists of 2 traction Passenger elevators.

A visual review of the equipment was performed and the available documentation in the equipment room was reviewed.

This inspection did not include a review of the safety aspects of the installation as this falls under the jurisdiction of the governing authorities. There are no major areas in which the equipment is not in compliance with current codes except as noted.

An electronic copy of the maintenance contract was not provided for review. The elevators appear to be covered under the terms of a full maintenance contract with Delta Elevator. The typical elevator "full maintenance" contract covers the replacement of major components in addition to the labour and materials necessary for ongoing repairs, adjustment and preventative maintenance work. Entrances and cab finishes are normally excluded. As long as "full maintenance" is purchased the only additional costs to the Owner should be for malicious damage, repairs to the elevator cabs and entrances and replacement of obsolescent parts. We are assuming, of course, that repairs required due to accidents or "Acts of God" (flood, fire, etc.) are covered by insurance.

The schematics are located in the machine room and were laminated. The Maintenance Control Program (MCP) was also reviewed and all items appear to be complete. The fire testing according to Technical Standards and Safety Authority (TSSA) Code Amendment Document (CAD) 261-13 r1 and Director's Order 239/10 has been completed and is available in the machine room.

The vertical transportation equipment installed at this location is generally considered to be of average quality in terms of longevity, reliability and performance. The elevators have been located in an adequate manner to provide a reasonable level of service for a building of this type and size. Car top railings have been installed and are compliant with TSSA Code Amendment Document (CAD) 261-13 r1 and Director's Order 245/10. Machine guarding has been installed as per Ministry of Labour (MOL) requirements.

The elevators were modernized in 2017 and will most likely require modernization again in the long term of this review. This is mostly due to shortage in parts and expertise. Modernizing the equipment will also bring the elevators up to new code requirements. Therefore, we have made some recommendations in the Possible Upgrades and Concerns section of the report.

ITEMS OF CONCERN PASSENGER

Controls
Passenger: 1, 2 - The Delta elevator controls provided at this site are considered to be of reasonable quality. The controllers are provided in several installations around the country. The controller is having Delta Diagnostic Interface (DDI) to access the DMPC elevator controller, which may render them easy for others to service and maintain. The advantages of having a non-proprietary elevator control system are: greater flexibility in selecting the elevator contractor; ability to get competitive quotes; and wider sources for parts. The manufacturer should also provide a certificate to the Owner pledging support for parts and labour.

Elevator Ride
Passenger: 1, 2 - The ride profiles consist of horizontal vibrations (front to rear or X-axis and side to side or Y-axis) and vertical vibrations (up and down or Z-axis) as well as jerk and acceleration. Some of these vibrations are above the recommended value and should be adjusted to improve the overall ride quality.

Manuals
Passenger: 1, 2 - A complete set of manuals should be provided to the Owner with the latest information on this elevator equipment. The information should include the following where applicable: door operator manual, door locks, clutch and door operator arms adjustment manual, car top devices, motor, machine, governor, rope gripper, drive, controller, safeties, and door infrared detector manuals.

Performance
Passenger: 1, 2 - We observed during our maintenance audit that the elevator control system is not adequately adjusted to provide optimum performance. Given the type of elevator(s) installed, the performance can be significantly improved. Some of the performance concerns identified during the inspection include: car up and down times, door open and close times and car dwell times.

EQUIPMENT DESCRIPTION - PASSENGER

Designation:	1	2
Installation Number:	68490	68491
OEM Manufacturer:	Northern Elevator	Northern Elevator
Modernization Installer:	Delta	Delta
Current Contractor:	Delta	Delta
Year Installed:	Circa 1993	Circa 1993
Year Modernized:	Circa 2017	Circa 2017
Sales Number:	EP176340	EP176341
Control Manufacturer:	Delta	Delta
Control Type:	PC6AR	PC6AR
Elevator Classification:	Passenger	Passenger
Capacity (lbs):	2500	2000
Contract Speed (fpm):	200	200
Governor Trip Speed:	266	266
Motor Manufacturer:	Reuland	Reuland
Motor Type:	A000	A000
Motor Output:	15 HP	12.5 HP
Machine Type:	Geared	Geared
Machine Manufacturer:	Hollister Whitney	Hollister Whitney
Machine Model:	54OH	44OH
Drive Manufacturer:	Yaskawa	Yaskawa
Drive Type:	VVVF	VVVF
Drive Model:	A1000	A1000
Drive Configuration:	Overhead	Overhead
Rope Ratio:	1:1	1:1
# of Ropes/Belts:	4	4
Rope Diameter:	0.5	0.5
Auxiliary Brake:	Rope gripper - HW	Rope gripper - HW
Entrance Type:	SSSO	SSSO
Door Operator Type:	GAL MOVFE 2500	GAL MOVFE 2500
Door Locks:	GAL	GAL
Entrance Protection:	Infrared	Infrared
Entrance Width (inches):	42	36

Designation:	1	2
Entrance Height (inches):	84	84
Arrival Signal:	Car lantern	Car lantern
Cab Width (inches):	76	66
Cab Depth (inches):	50	49
Cab Height (inches):	103	90
Car Operating Panels:	Main	Main
Floors Served:	P,G,2-5	P,G,2-5
Fire Service:	FEO	FEO
Communication:	Hands-free	Hands-free
Security:	Keyed	Keyed

NOTES ON PERFORMANCE DATA

1. The Operating Time is measured from the time the doors begin to close until they are three quarters open at the next floor.

2. The Door Open Time is measured from the time the doors begin to open until they are fully open.

3. The Door Close Time is measured from the time the doors begin to close until they are completely closed.

4. The Door Dwell times are measured from the time the doors are fully open until they start to close after answering a hall or car call.

5. Hall Advance Time is measured in seconds from the time the hall directional lantern chimes until the door begins to open.

6. Noise levels are measured with an ANSI type 2 sound level meter on the "A" scale, set for an "F" response. For elevators the running (fan) noise level is measured inside the cab with the doors closed; the door operation noise level is measured during a full door open and close cycle. For escalators the ambient noise level is measured at the respective landing with the meter at eye level; escalator noise level is measured with the meter pointed to the respective deck plate.

7. Unless otherwise stated, all times are in seconds, all distances are in inches (in) or millimeters (mm), all speeds are in feet per minute (fpm) or meter per second (mps), all capacities are in pounds (lbs) or kilograms (kg), all sound levels are in decibels, all temperatures are in degrees Fahrenheit (F) or Celsius (C) and all forces are in pound-force (lbf) or Newton (N).

8. Unless otherwise stated, for elevators the terms "left" and "right" are used viewing the elevator from the hall lobby. For escalators the terms "left" and "right" are used viewing the escalator from the bottom landing looking up.

9. Acceleration is the change in velocity and is measured in feet per second squared (ft/sec^2) or meter per second squared (m/sec^2) and is measured from peak-to-peak.

10. Jerk is the rate of change in acceleration and is measured in feet per second cubed (ft/sec^3) or meter per second cubed (m/sec^3).

PERFORMANCE DATA - PASSENGER

Designation:	1	
Parameters	**Measured Values**	**Suggested Values[Ψ]**
Installation Number:	68490	-
Speed Up (fpm):	204.0	196.0 - 204.0
Speed Down (fpm):	204.0	196.0 - 204.0
Operating Time Up (s):	**15.19**	10.20
Operating Time Down (s):	**15.24**	10.20
Door Open Time (s):	**4.29**	2.70
Door Close Time (s):	**4.66**	4.30
Car Call Dwell Time (s):	**7.29**	3.00 - 4.00
Hall Call Dwell Time (s):	5.52	5.00 - 6.00
Nudging Time (s):	18.29	≤ 20.00
Running (Fan) Noise Level (db):	54.0	≤ 55.0
Door Open Noise Level (db):	57.0	≤ 62.0
Door Close Noise Level (db):	56.0	≤ 62.0
Max: X (mg):	3.3	≤ 10.0
Max: Y (mg):	8.2	≤ 10.0
Max: Z (mg):	**12.7**	≤ 10.0
A95: X (mg):	1.6	≤ 6.0
A95: Y (mg):	3.7	≤ 6.0
A95: Z (mg):	5.3	≤ 6.0
Levelling Accuracy (inches):	0.250	≤ 0.250
Door Closing Force (lbf):	20	≤ 30
Jerk (ft/s3):	4.4	≤ 9.0
A95 Acceleration (ft/s2):	3.1	≤ 4.5

Designation:	2	
Parameters	**Measured Values**	**Suggested Values[Ψ]**
Installation Number:	68491	-
Speed Up (fpm):	196.4	196.0 - 204.0
Speed Down (fpm):	196.0	196.0 - 204.0
Operating Time Up (s):	**16.36**	10.00
Operating Time Down (s):	**14.98**	10.00
Door Open Time (s):	**4.07**	2.50
Door Close Time (s):	**4.61**	4.10
Car Call Dwell Time (s):	**7.58**	3.00 - 4.00
Hall Call Dwell Time (s):	5.24	5.00 - 6.00
Nudging Time (s):	17.59	≤ 20.00
Running (Fan) Noise Level (db):	54.0	≤ 55.0
Door Open Noise Level (db):	57.0	≤ 62.0
Door Close Noise Level (db):	57.0	≤ 62.0
Max: X (mg):	4.1	≤ 10.0
Max: Y (mg):	5.7	≤ 10.0
Max: Z (mg):	**15.5**	≤ 10.0
A95: X (mg):	1.6	≤ 6.0
A95: Y (mg):	3.7	≤ 6.0
A95: Z (mg):	**8.6**	≤ 6.0
Levelling Accuracy (inches):	0.250	≤ 0.250
Door Closing Force (lbf):	20	≤ 30
Jerk (ft/s3):	3.0	≤ 9.0
A95 Acceleration (ft/s2):	2.4	≤ 4.5

Ψ- Operating times and door times should be discussed with building management.
s/d - Elevator shutdown.

DEFICIENCIES - PASSENGER

Maintenance Related Deficiencies

The elevator company should address the following deficiencies under the maintenance contract:

#	Elevator	Description	Photo
1	1	The cab handrail is loose or damaged. The cab handrail should be repaired or secured properly. Right hand side is loose.	
2	1	We observed rollback in one or both directions. The contractor should adjust the preloading and rollback of the elevator as well as review the drive and acceleration parameters.	
3	1	The car door is scratched, scuffed, or damaged. The contractor should refinish or repair the door as required.	
4	1	**The overlap between the hall door and entrance frame is less than the allowable limit. Adjust the door to increase the overlap and prevent any passenger injuries. On floor 4.**	
5	1	One or more hall door gibs are loose or worn. The worn gibs should be replaced or adjusted to prevent excessive door movement or scraping. On floor 4	
6	1	The grounding/bonding for the machine guards is missing or not secured properly. The grounding should be provided and properly installed. Missing.	
7	1	The door open time is too slow and should be improved. Refer to the "Performance Data" for suggested value.	
8	1	The door close time is too slow and should be improved. Refer to the "Performance Data" for suggested value.	
9	1	The operating time up is too slow and should be improved. Refer to the "Performance Data" for suggested value.	
10	1	The operating time down is too slow and should be improved. Refer to the "Performance Data" for suggested value.	
11	1	The car call dwell time is too long. The time should be improved so that this time is within expectations. Refer to the "Performance Data" table for suggested value.	
12	1	The maximum vertical vibration in the Z-axis or up and down direction is greater than the suggested limit. Refer to the Performance Data for suggested value and to the ride analysis portion of our report for more details.	

#	Elevator	Description	Photo
13	2	One or more hall door rubber stops are missing. The contractor should replace the missing rubber stops. On floor 5.	
14	2	The car door is scratched, scuffed, or damaged. The contractor should refinish or repair the door as required.	
15	2	**The overlap between the hall door and entrance frame is less than the allowable limit. Adjust the door to increase the overlap and prevent any passenger injuries. On floor 2.**	1
16	2	The hall door does not open fully reducing the open width. The contractor should adjust the door equipment and replace worn components to allow for a full width opening.	
17	2	One or more screws in the hall call faceplate are missing or loose. The loose or missing screws should be secured or provided. Not flushed against the wall on floor 5.	
18	2	The grounding/bonding for the machine guards is missing or not secured properly. The grounding should be provided and properly installed. Missing.	
19	2	The door open time is too slow and should be improved. Refer to the "Performance Data" for suggested value.	
20	2	The door close time is too slow and should be improved. Refer to the "Performance Data" for suggested value.	
21	2	The operating time up is too slow and should be improved. Refer to the "Performance Data" for suggested value.	
22	2	The operating time down is too slow and should be improved. Refer to the "Performance Data" for suggested value.	
23	2	The car call dwell time is too long. The time should be improved so that this time is within expectations. Refer to the "Performance Data" table for suggested value.	
24	2	The maximum vertical vibration in the Z-axis or up and down direction is greater than the suggested limit. Refer to the Performance Data for suggested value and to the ride analysis portion of our report for more details.	
25	2	The maximum vertical vibration in the Z-axis or up and down direction for 95% of the ride is greater than the suggested limit. Refer to the Performance Data for suggested value and to the ride analysis portion of our report for more details.	

Other Maintenance Related Deficiencies

The elevator company should address the following deficiencies under the maintenance contract:

#	Elevator	Description
26	1	The pit is slightly dusty and dirty. The pit should be cleaned.
27	2	The pit is slightly dusty and dirty. The pit should be cleaned.

Owner Related Deficiencies

Trades other than the elevator company, at the conclusion of construction, should have addressed the following deficiencies:

#	Elevator	Description	Photo
28	1	No load rating is provided on the overhead beams in the machine room. The load rating of the beam should be verified and a label installed.	
29	1	The hall door is scuffed or damaged in places. Owner should repair the door skin. Hall door frame is scratched on few floors and needs to be re-painted.	
30	1	The hall door equipment is rusting. To correct this problem we recommend sanding, priming and painting the hall door equipment with a high grade rust inhibitor. On floor P.	
31	2	The hall door is scuffed or damaged in places. Owner should repair the door skin. Hall door frame is scratched on few floors and needs to be re-painted.	
32	2	The handrail has been removed on one or more sides. The missing handrails should be replaced.	
33	2	The hall door equipment is rusting. To correct this problem we recommend sanding, priming and painting the hall door equipment with a high grade rust inhibitor. On floor P.	2

PHOTO REFERENCE PASSENGER

Photo - 1

Photo - 2

POSSIBLE UPGRADES AND CONCERNS

A summary of possible elevator related upgrades and/or concerns are as follows. We would suggest that money be set aside for the following upgrades that will likely be required (voluntarily or otherwise) over the next 30 years.

Please note that all capital costs are in today's dollar and these costs are estimates for budgetary purpose only. These costs can change without notice due to fluctuation in the Canadian Dollar, changes in the collective agreement, inflation, war, and strikes.

REQUIRED IMMEDIATE (Passenger)

Rusting - Door Equipment (1, 2)

Some of the door equipment such as hall doors, entrance frames, car door equipment and sills are rusting and the presence of rust on the equipment will eventually cause damage. To prevent further deterioration from occurring, the equipment should be sanded and painted so that further damage does not occur. The scope of work includes cleaning and treating the steel, sanding the equipment and priming and painting. Some components may need to be replaced as required.

Total cost of upgrade : $4,000

REQUIRED - SHORT TERM (Passenger)

Code Changes and Vandalism (Short Term) (1, 2)

Some money should be set aside for code changes and to repair vandalism of the equipment or for other items not covered under the maintenance contract. If the money is not used, it can be redistributed to help finance some of the capital upgrade items.

Total cost of upgrade : $10,000

REQUIRED - MID TERM (Passenger)

Code Changes and Vandalism (Mid Term) (1, 2)

Some money should be set aside for code changes and to repair vandalism of the equipment or for other items not covered under the maintenance contract. If the money is not used, it can be redistributed to help finance some of the capital upgrade items.

Total cost of upgrade : $10,000

Door Operators (1, 2)

The existing door operator(s) have a closed loop system. However, newer closed loop door operators are entering the market that are more efficient and durable while still adjusting the door closing force to compensate for wind pressure and other obstacles. Since door related calls represent 80% of the callbacks, it is not uncommon to upgrade the door operators prior to a modernization. Therefore, an upgrade is recommended.

Total cost of upgrade : $30,000

OPTIONAL - MID TERM (Passenger)

Cab and Fixture Upgrade (1, 2)

The existing passenger cab enclosure(s) are in good condition, but starting to show signs of wear and tear. The fixtures are in good condition, but are also easily damaged and stop buttons if equipped can also cause problems with vandals. Hence, upgrading the cab and fixtures may be required in order to maintain a consistent standard and clean looking elevator cab(s). Furthermore, upgrading the fixtures will increase the user's confidence with the elevator because new fixtures are associated with new elevators. The upgrade will include emergency light, new hall and car pushbuttons, new service panel and switches, integrated security capabilities where required, tactile markings, new digital position indicator where chosen, integrated hands-free phone and license certificate. The cab would also be refurbished.

Total cost of upgrade : $50,000

REQUIRED - LONG TERM (Passenger)

Major Modernization (1, 2)

Over time elevators will require modernization as certain elevator components may be unavailable due to obsolescence. Additionally, as newer equipment designs become more predominant, the service personnel capable of performing necessary adjustments will become increasingly difficult to find. Thus, in order to remain competitive and ensure reliable elevator service over the long term, modernization of the elevators will likely be required. Though parts are still available from elevator parts manufacturers they will become increasingly difficult to source and expertise in trouble-shooting may eventually become scarce. The elevating device system in this complex is equipped with a Variable Voltage Variable Frequency (VVVF) drive. This design has become very common and popular. Therefore, a major modernization is anticipated depending on the need to compete with other buildings, and how well this equipment functions. The scope of work would include replacing existing controller with newer microprocessor based controls, replacing existing motor controls with newer solid-state electronic VVVF, providing emergency lighting, and updating cab and fixtures if not already performed. Barrier free requirements should also be addressed during this time if not compliant with local legislation. Other costs for items like taxes, electrical work and patching should be added to the overall cost. We recommend budgeting a contingency of 20% to cover these additional costs.

Total cost of upgrade : $400,000

Cost Assessment Summary - Required (Passenger)

Component	Repair/Replacement Reserve Analysis				
	Immediate	Short Term (1-10 years)	Mid Term (11-20 years)	Long Term (21-30 years)	Total
Code Changes and Vandalism (Short Term)		$10,000			$10,000
Code Changes and Vandalism (Mid Term)			$10,000		$10,000
Door Operators			$30,000		$30,000
Major Modernization				$400,000	$400,000
Rusting - Door Equipment	$4,000				$4,000
Total	**$4,000**	**$10,000**	**$40,000**	**$400,000**	**$454,000**

Cost Assessment Summary - Optional (Passenger)

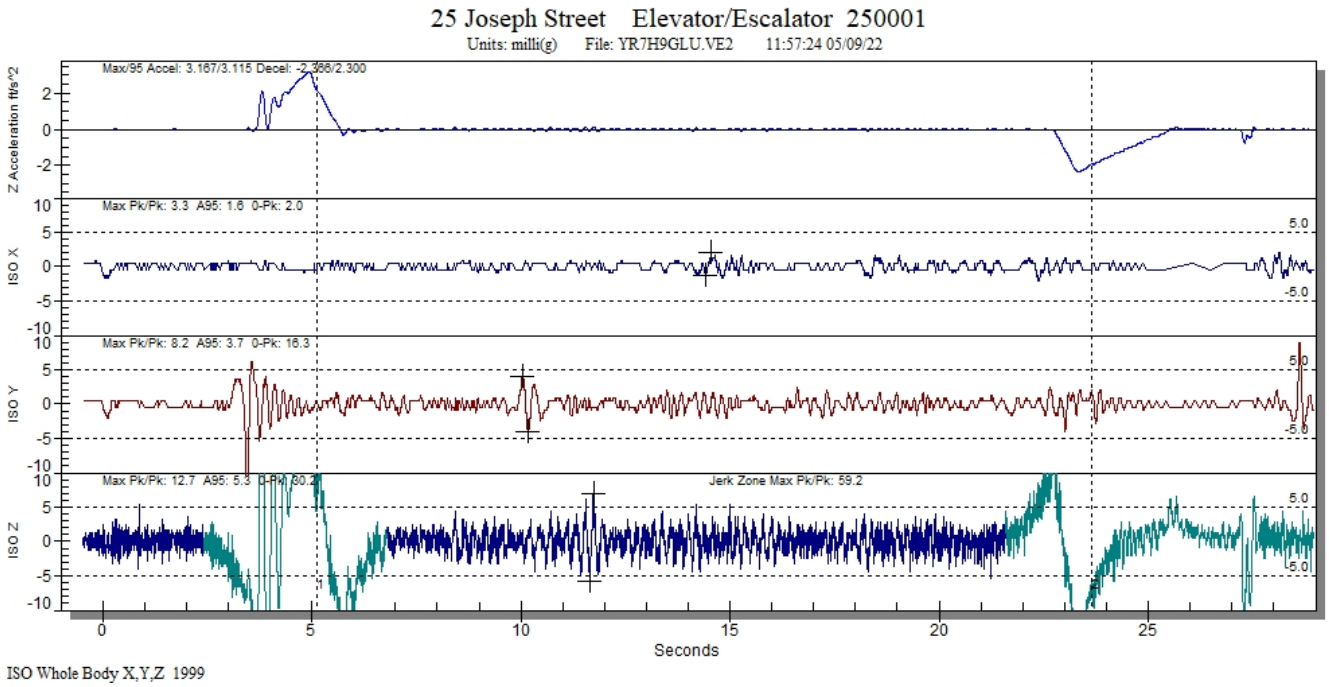
Component	Repair/Replacement Reserve Analysis				
	Immediate	Short Term (1-10 years)	Mid Term (11-20 years)	Long Term (21-30 years)	Total
Cab and Fixture Upgrade			$50,000		$50,000
Total			**$50,000**		**$50,000**

RIDE ANALYSIS

The following graphs show the ride quality of the building equipment.

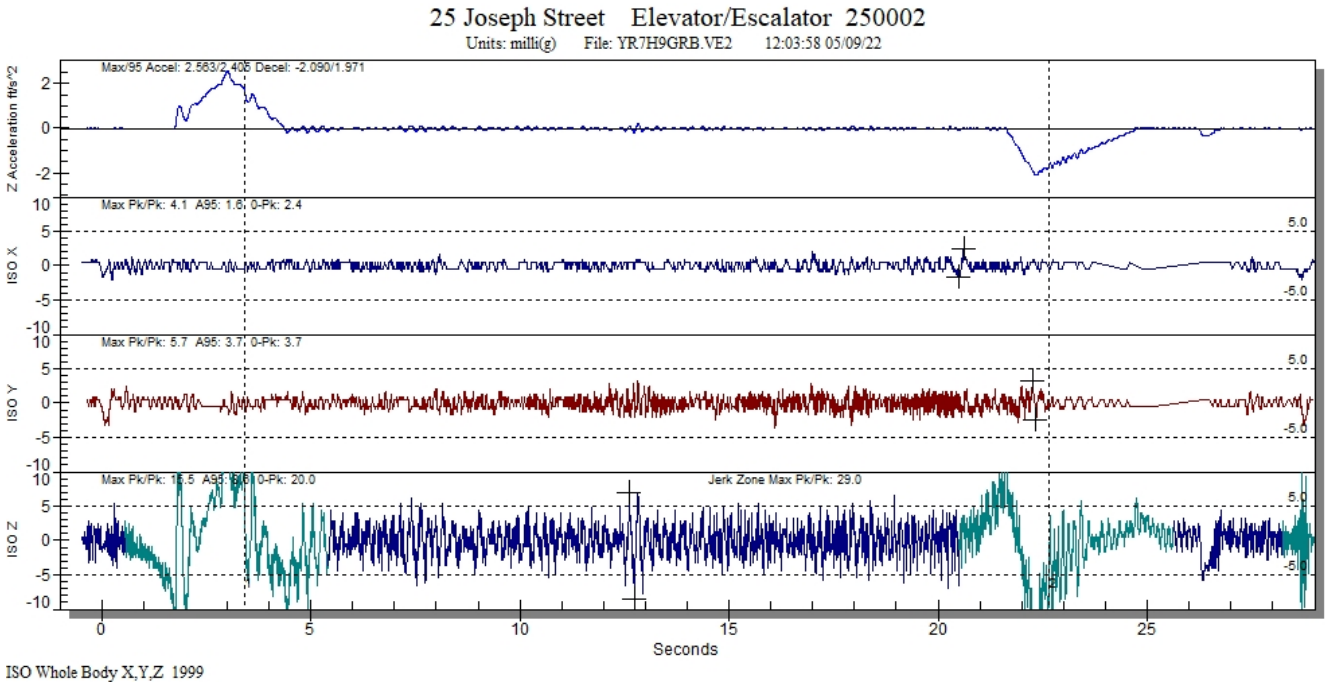
Passenger - 1

The ride quality appears to be good in all axes. No further action is required by the contractor other than monitoring.



Passenger - 2

The ride quality appears to be poor in the Z-axis. The readings are greater than the suggested value and should be improved. The contractor should review the ride quality in the Z-axis and make the necessary adjustment or repairs to rollers, rails, stabilizers, etc. as required.



ISO Whole Body X,Y,Z 1999