NEW WESTMINSTER

FACILITIES ASSET MANAGEMENT PLAN (2024)



City of New Westminster

Rev No	Date	Revision Details
01	Feb 26th, 2024	For Council endorsement

Executive Summary

Introduction

This document is the City of New Westminster's first Facilities Asset Management Plan ('FAMP'). The FAMP was developed following the strategies and direction of the City of New Westminster's 2019 Asset Management Strategy (SAMP).

The purpose of the first Facilities Asset Management Plan is to:

- form part of the wider Asset Management strategy and approach,
- provide a baseline for the current condition of the Building Asset Class,
- provide direction on the 'future state' (ie. where the City wants to go) through Levels of Service discussions, and serve as a strategic and financial document based on 'current' and 'future' state understandings,
- identify gaps and areas for improvement from an Asset Management Perspective related to the Building Asset Class,
- act as a tool to inform staff recommendations and priorities on renewal, upgrade and growth projects for City-owned buildings and sites.

The FAMP aligns with the City's area of focus on 'Asset Management and Infrastructure' as outlined in 2023-2026 Strategic Priorities Plan and the goal to provide resilient infrastructure that meets the community's needs today and into the future. The FAMP is a document developed to support the City in managing its existing Building assets in a sustainable, efficient, and financially responsible manner, while also considering the City's Climate Emergency goals and targets. As the FAMP improves over time, it will help the City understand the balance between existing asset needs and the growth and upgrade considerations to meet the needs of the City's growing and changing population.

Key Findings

- As the City's first FAMP, this document acts more as a baseline document, with future updates progressing toward a tactical plan. The Building Asset Class' Asset Management maturity and the information within the FAMP is anticipated to continually improve with each iteration (planned to be updated for every five years moving forward).
- Average Building Condition (current state) is 'fair': 71.3% of the City's facilities are estimated to be in 'Fair' or better condition. The average condition of 'Fair' means that in general, the average City facility requires attention as it shows signs of deterioration with some elements exhibiting deficiencies.
- Identified Financial Gap: to maintain the current average building condition rating of 'Fair', an additional average budget of $2.5 million per year is needed above the current five-year Capital Plan. The average condition rating is still anticipated to worsen in the upcoming years if the funding gap remains.
- Identified Data Gaps related to Establishing Levels of Service: the FAMP work has demonstrated that additional data is needed to improve the City's overall understanding of Levels of Service for work related to improvements (upgrades) or building capacity (growth/expansion). Some of this

work is already underway through Master Plans and studies, and the next FAMP update is anticipated to close some of these gaps as Master Plans and studies are completed.

Overview

State of the Infrastructure (Current State)

The City's first step in developing the FAMP is understanding the facilities that it owns. The City owns 70 Facilities with an estimated replacement value of $506.5 million (Table ES-1). See Appendix A for a list of City Facilities included in this iteration of the FAMP.

Table ES-1: Replacement Value of City Assets ($M)

Service Area	# of Facilities	Total
Engineering	15*	$91,326,101
Electrical	1	$3,264,000
Culture & Administrative	8	$144,101,032
Fire & Rescue Services	3	$12,630,243
Library	1	$17,989,910
Police Department	1	$28,462,060
Parks	33	$25,636,487
Recreation	8	$183,047,064
Overall	**70**	**$506,456,896**

*Two engineering facilities also have part of the facilities dedicated to Electrical services

The average age of the City's 70 facilities is 36.9 years, approaching the mid-life of the average estimated service life. This age aligns with the City's overall average facility condition, which is estimated to be in 'Fair' condition based on a Facility Condition Index (FCI) of 17.5% (Figure ES-1). An average 'Fair' condition means that the average City facility requires attention, as it shows signs of deterioration and some element deficiencies.

Figure ES-1: Condition Overview

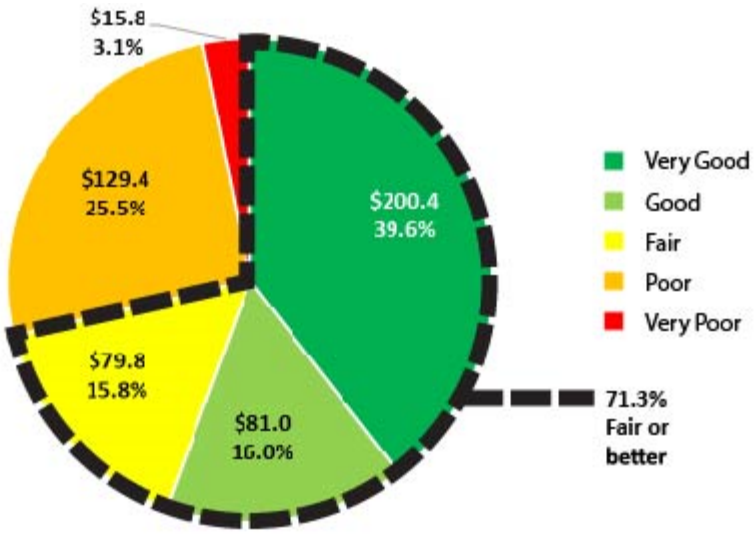
Condition	Facility Condition Index	Condition Description
Very Good	0 to 5%	The facility is generally in very good condition, typically new or recently rehabilitated. A few elements may require minor attention. Facilities staff time will be devoted to regular scheduled maintenance.
Good	>5 to 15%	The facility is in good condition; will look clean and functional some elements show general signs of deterioration that requires attention. Repairs and replacement are more of an aesthetic or general nature, such as wall painting, carpet replacement, roof repair, window caulking. Facilities staff time will be devoted to regular scheduled maintenance.

Condition	Facility Condition Index	Condition Description
Fair	>15 to 30%	The facility is in fair condition; it shows general signs of deterioration and requires attention. Repairs and replacement of specific systems, i.e. boiler, window replacements, interior renovations. Facilities staff time may at times be diverted from regular scheduled maintenance.
Poor	>30 to 60%	The facility is in poor condition, Facilities will look worn with apparent and increasing deterioration. Replacement of specific major systems required, such as heating and plumbing systems, complete interior renovations, building envelope restoration Facilities staff time will likely be diverted from regular scheduled maintenance and forced to "reactive" mode.
Very Poor	>60%	Facilities will look worn with obvious deterioration. Replacement of multiple systems required (i.e. Mechanical, Electrical, Architectural and Structural Staff will not be able to provide regular scheduled maintenance due to high level of "reactive" calls.

Average Current Condition

The condition distribution of the City's Facilities is summarized in Figure ES-2. Approximately 71% of the City's facilities are estimated to be in 'Fair' or better condition. 29% are estimated to be in 'Poor' or 'Very Poor' condition.

Figure ES-2: Condition Overview by Replacement Value



Levels of Service

The City's facilities play a critical role in ensuring the continued delivery of services to the community. Established Levels of Service, when clearly defined, help to identify needs and inform recommendations for renewals and upgrade work in relation to maintaining building components, along with recommendations on when new facilities or new spaces are needed (growth/expansion).

The recently completed Facility Condition Assessment (2022) provides data to inform Levels of Service for renewal ('like for like') work. A key focus of this FAMP is to establish the Levels of Service related to reliability and quality for the Building Asset Class' current state along with associated costs. The goal is to establish service levels from Corporate, Legislated, Customer and Technical perspectives so that the City's facilities are maintained in an appropriate state of good repair. Understanding the current state sets the stage for determining appropriate service level targets (future state) in the next FAMP update.

This iteration of the FAMP has identified that there are some data gaps that limit the City's ability to fully establish the Levels of Service related to planning and budgeting for upgrades and growth/expansion. Additional work is required through Master Plans or studies to improve the City's Level of Service understanding in these areas. Actions are included in the 'Implementation and Continuous Improvement' Section to help address this gap for the next FAMP iteration.

Risk Management Strategy

A preliminary risk analysis was conducted at the facility-level to understand the risk exposure across the asset portfolio and inform work across facilities and service areas. Higher risk facilities that are more critical to service delivery and have significant backlog or upcoming renewal work were identified as Massey Theatre and Arts Complex, City Hall, Queens Park Stadium and Arena, Engineering Operations Main Office and Electrical Office, Mercer Stadium Grandstand, and Queensborough and West End Fire Halls. Staff is developing a criteria to incorporate risk into the capital planning process to provide additional guidance on prioritizing projects.

Lifecycle Management Strategy

Asset lifecycle management strategies are the planned activities that enable assets to provide service levels in a sustainable way, while managing risks. Growth (new facilities or expansions) and upgrade projects are identified in the City's upcoming 2024 to 2028 five-year Capital Plan. As the Levels of Service related to upgrades and growth/expansion will be determined through future Master Plans or studies, this FAMP does not identify the total needs related to growth and upgrades. Currently, the City's main planned growth expenditure if the remaining cost of the new TACC facility in 2024. Currently planned upgrades such as universal washrooms and energy efficiency projects over the next five years are estimated at $12.5 million.

For renewal activity needs, the FAMP forecasts the needs required to maintain service levels related to the quality and reliability of the Building Asset Class. It is estimated that the City will need to spend an average of $6.8 million per year over the next 10 years to maintain the Facility Condition Index at approximately 17% (overall average Fair condition).

Financial Analysis

The City's Facilities Asset Management Plan informs responsible decision-making and financial sustainability. For renewal needs, the FAMP compares four scenarios to demonstrate the funding gap and the impact of additional funding on the overall condition of the City's facilities. The Scenarios were developed to align with the Scenarios presented in the October 16th Workshop: *Budget 2024: Proposed 2024 General Fund Capital Budget & 2024 - 2028 Five Year Capital Plan and Funding Strategy*:

- **Scenario 1**: This funding scenario provided $16.6 million for total renewal over the next five years (2024 to 2028). This scenario assumes no funding through 2029 to 2033. FCI deteriorates to 27.7% (Fair but approaching Poor condition)

- **Scenario 2 – Scenario 1 + $5 million (aligns with the proposed 2024-2028 Financial Plan).** This scenario assumes the funding proposed in Scenario 1, plus an additional $2.5 million in each of 2027 and 2028, for a total of $21.6 million in the five year plan. For a full 10-year forecast, it is assumed that this funding would also be provided in each of the years 2029 to 2033. FCI deteriorates to 24.3% (Fair but approaching Poor condition)

- **Scenario 3 – Scenario 1 + $17.5 million;** this scenario assumes the funding proposed in Scenario 1, with an additional $2.5 million of funding in 2024, with an incremental $0.5 million added to each subsequent year from the previous year (additional $3 million in 2025, $3.5 million in 2026, etc.), for a total of $34.1 million in the five-year capital plan). FCI deteriorates slightly to 18.4% (Fair condition)

- **Scenario 4 – 'Maintain FCI Scenario'; includes the same additional $17.5 million to Financial Plan as Scenario 3, with a continued $6.8M/year in years 6 to 10.** FCI is maintained at 17.5%.

There is an estimated $12.5 million renewal funding gap over the next five years (average $2.5 million/year) comparing Scenario 2 (which aligns with the proposed 2024-2028 Financial Plan) and Scenario 4 (to maintain Facility Condition Index). Scenario 1 was included for analysis as part of 2024 budget discussions. An appropriate level of funding will be determined annually through the annual Capital Planning process, in consideration of the current funding gap and associated impact on facility condition. The financial analysis is based upon data related to renewals as primarily collected through the Facility Condition Assessment and does not include considerations on staff resources at this time. This will be considered as part of the ongoing work related to the Facilities Asset Management Plan.

Figure ES-3: Renewal Forecast and Financing Scenario Comparison

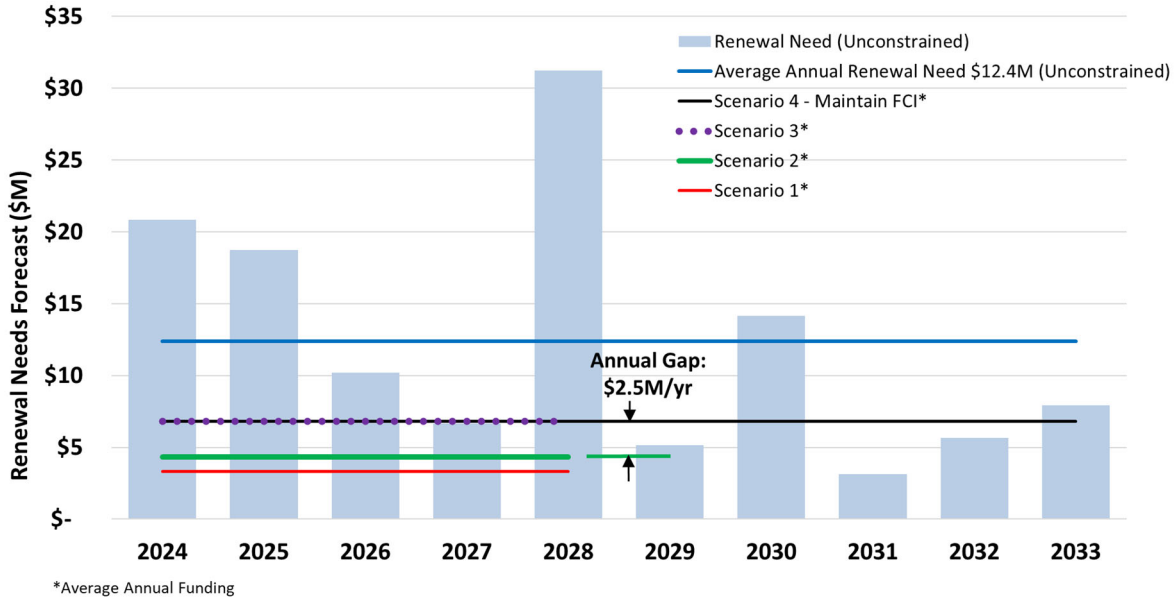


Table ES-2 summarizes the financial sustainability and affordability for growth, upgrade, and renewal to maintain current service levels based on available information.

Table ES-2: Summary of 5-Year Financial Sustainability & Affordability of Current Service Levels

Asset Lifecycle	5-Yr Total Forecast Needs	5-Yr Total Planned Funding	5-Yr Total Gap	Comments
Capital Growth	Not identified	$3.7M	No identified shortfall over 5-year plan	On-going and future Master Plans by Service Areas will confirm growth needs
Capital Upgrade	Not identified	$12.5M	No identified shortfall over 5-year plan	On-going and future Accessibility Plan will confirm upgrade needs
Capital Renewal	Scenario 4 $34.1M ($6.8M/yr)	Scenario 2 $21.6M ($4.3M/yr)	$12.5M ($2.5M/yr)	Scenario 4 funding maintains the average portfolio FCI at 17.5%. Scenario 3 matches Scenario 4 funding over the first 5 years but does not maintain FCI through years 6 to 10. These scenarios are recommended to be reviewed to determine an appropriate service level balanced against the associated costs and risks.

The analysis above focuses on the capital budget, however increases to the operating budget will also be required to accommodate operations and maintenance of the new TACC facility. Consideration should also be given to increasing the budgets for scheduled and unscheduled maintenance, which are currently underbudgeted for managing the existing facilities.

Implementation and Continuous Improvement

Development of AM Plans is an iterative process that requires improving data, processes, systems, staff skills, and organizational culture over time.

Recommended improvement initiatives include the following:

- Improve accuracy of facility replacement values
- Work to develop Service Area Master Plans and studies, and corporate plans such as the Accessibility Plan with specific and measurable Levels of Service measures in order to fill data gaps related to capacity (growth) and functional (upgrades) service levels
- Make improvements to the renewals projects in the Civic Buildings & Properties Capital Plan to align more closely with the renewal data captured through the recent Facility Condition Assessment
- Complete a high level risk registry assessment in line with the framework outlined in the Strategic Asset Management Plan
- Consider facility vulnerability assessments for critical facilities to identify vulnerabilities and increase facility resiliency
- Improve renewal costing estimates such as project soft costs
- Develop long term funding strategies to address funding gaps

Acknowledgements

The Facilities Asset Management Plan was prepared through the insights of City staff. Staff were consulted from the following departments and groups:

- Engineering
- Parks & Recreation
- Electrical
- Climate Action
- Museum & Heritage Services, Community Arts & Theatre, Anvil Centre
- Fire & Rescue Services
- Library Services
- Police
- Finance
- Human Resource
- Information Technology
- The Asset Management Steering Committee.

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Glossary

Term	Description
Asset	An item, thing or entity that has potential or actual value to the City. See also: Tangible Capital Asset
Asset Class	A group of assets with common attributes and/or objectives, such as the transportation asset class
Asset Condition	The measure of the physical state of an asset, but may also include functional and demand considerations
Asset Management (AM)	The coordinated activity of the City to realize value from its assets. This includes making decisions about thexiv stewardship of infrastructure to deliver services in a way that considers current and future needs, manages risks and opportunities, and makes the best use of resources.
Asset Management Policy	The intentions and directions of the City as formally expressed by its senior management in the form of a suite of guiding principles for a structured and cohesive approach to AM.
Asset Management Plan (AMP)	Documented information that specifies the activities, resources and timescales required for an individual asset, or a grouping of assets, to achieve the organization's management objectives.
Business Case	The framework to develop and evaluate business cases for investment decisions.
Consequence of Failure	A measure of the direct and indirect impacts on the City if an asset failure were to occur.
Critical Assets	Assets for which the financial, business, or service-level consequences of failure are sufficiently severe to justify proactive inspection and rehabilitation. Critical assets have a lower threshold for action than non-critical assets.
Facility Condition Assessment (FCA)	A process to visually assess the condition of each facility in the Building Asset Class and to document the identified renewal needs. This process is needed to establish a current building condition baseline (i.e. 'where we are now') in order to inform the FAMP work. The most recent FCA was completed prior to the start of the FAMP. FCAs are completed every five years with the next one scheduled for 2028.

Term	Description
Facility Condition Index (FCI)	A metric, in percentage form, that is used to estimate the condition rating of a building on a five point scale ranging from 'Very Poor' to 'Very Good'. FCI is calculated by dividing the total cost of the needed renewals (as determined in the FCA) over a five year period, by the facility's current total replacement cost. The FCI rating does not consider upgrade or growth work.
Funding Gap	The difference between the current capital funding and the recommended capital funding.
Gap Analysis	"A method of assessing the gap between an organization's current AM practices and the future desirable AM practices" (IIMM, 2015). A gap analysis may also be referred to as a needs analysis or improvement planning.
Growth/Expansion	Work to increase the existing capacity of the Building Asset class. For example, the addition of new space or facilities to the Building Asset Class.
Infrastructure	The system of core assets, facilities and/or equipment.
Level of Service (LOS)	Established objectives that the City intends to deliver through its facilities. Established LOS inform renewals, upgrades and growth work along with the estimated costs to complete this work.
Objectives	A result to be achieved. Objectives can be expressed in a variety of ways and can be either strategic, tactical or operational.
Outcome	The overall desired or actual result of a service. Service level outcomes define what the service is supposed to achieve, for example, a "reliable" service.
Performance Indicator/Measure	A qualitative or quantitative measure of a service or activity used to compare actual performance against a standard or target. Performance indicators commonly relate to statutory limits, safety, responsiveness, cost, comfort, asset performance, reliability, efficiency, environmental protection and customer satisfaction.
Practices	The actual application, execution or use of the processes and procedures. It includes improvisational behaviours to address changing circumstances.
Probability of Failure	The likelihood or chance that an event will occur within a specified time frame.
Procedure	The sequence of steps taken to implement and achieve an activity within a process.

Term	Description
Process	The structured transformation of inputs into outputs. Processes typically operate across many functions and may cross department lines. A complex process may contain many procedures.
Remaining Life	The period from the current point in time to the time that an asset requires renewal.
Renewals	works to replace or rehabilitate existing assets or building components with assets or components of equivalent capacity or performance capability; i.e., rehabilitation or replacement with like for like components or assets
Replacement Cost	The estimated cost to replace a capital asset with a similar asset based on studies, appraisals, industry standards, actual experience and considering escalation costs. Future estimated replacement costs are current replacement costs inflated by an appropriate factor.
Responsibilities	The obligations or expectations to perform certain specific activities or duties according to a particular role.
Risk	The effect of uncertainty on objectives. An event that impacts the achievement of objectives and deals with the uncertainty. It is measured in terms of consequence and likelihood.
Risk Management	The application of a formal process to the range of possible values relating to key factors associated with a risk to determine the resultant ranges of outcomes and their probability of occurrence.
Roles	The position(s) occupied ("the part played") by certain internal stakeholders (and external stakeholders).
Service Area	to add an additional layer of analysis, through the FAMP the City's Buildings are categorized into the following 'service areas' as part of the asset hierarchy: Engineering, Electrical, Culture & Administrative (including: Irving House, Museum Annex, the Fraser River Discovery Centre, Massey Theatre and Arts Complex, City Hall, Bernie Legge Theatre, Anvil Centre), Fire & Rescue Services, Library, Police Department, Parks, Recreation.
Stakeholders	A person, group, or organization that can affected, be affected by, or perceive themselves to be affected by a decision or activity.
Tangible Capital Asset (TCA)	The physical assets addressed by the City's policy; including infrastructure and land.

Term	Description
Upgrades	works to replace existing assets or building components with assets or components of improved performance capability.
Useful Life (Service Life)	The estimate of the number of years over which a capital asset is expected to be used.

Acronyms

Term	Description
FCA	Facilities Condition Assessment
AM	Asset Management
AMP	Asset Management Plan
SAMP	Strategic Asset Management Plan / Asset Management Strategy
FAMP	Facilities Asset Management Plan
TACC	təməsew̓txʷ Aquatic and Community Centre
CEERS	Corporate Energy & Emissions Reduction Strategy
NWPL	New Westminster Public Library
NWPD	New Westminster Police Department
LOS	Levels of Service
NFPA	National Fire Protection Association
DEIAR	Diversity, Equity, Inclusion, & Anti-Racism
BAS	Building Automation System
PIEVC	Public Infrastructure Engineering Vulnerability Committee
CoF	Consequence of Failure
PoF	Probability of Failure
O&M	Operations and Maintenance
OCP	Official Community Plan
SLAM	City's Capital Planning software system (stores data collected from the Facility Condition Assessment)

1 Introduction

The City of New Westminster (the "City") has developed this Facilities Asset Management Plan (FAMP) to serve as a guiding document that will support the ongoing management and long-term stewardship of the City's facility assets. The City's facilities enable service delivery across various areas including, but not limited to electrical, culture, parks, recreation, police, fire, and library.

The City owns and operates these facilities and ensures that they are maintained, repaired, and upgraded as required for reliable, safe, and sustainable service delivery. This iteration of the FAMP includes information on the following:

- Replacement value and condition of the City's facilities
- Current levels of service (LOS)
- Activities required for asset renewal and discussion of new facilities required to deliver services today and into the future
- Investment required to fund the capital works outlined in the FAMP; and
- Overview of risks to be considered in asset management (AM) planning

1.1 Background

Asset Management is identified in the Corporate Strategic Plan as a priority for the City. The City is committed to "implementing a systematic asset management methodology to apply appropriate AM best practices across the organization." The City completed its Asset Management Strategy in 2019 which outlines its AM objectives and improvement roadmap. It also provides an overview of the AM system and its key documents, including an outline to guide AM planning for each service area. The City has identified the priority for greater clarity about its facility investment needs. The City has completed building condition assessments for most of its facilities and are managing the forecasting of required work in the City's SLAM software system. This FAMP is based on data from these improvements in understanding the state of facility assets and improved data collection and tracking.

1.2 Purpose

This document is the City of New Westminster's first Facilities Asset Management Plan ('FAMP'). The FAMP was developed following the strategies and direction of the City of New Westminster's 2019 Asset Management Strategy (SAMP).

The purpose of the first Facilities Asset Management Plan is to:

- form part of the wider Asset Management strategy and approach,
- provide a baseline for the current condition of the Building Asset Class,
- provide direction on the 'future state' (ie. where the City wants to go) through Levels of Service discussions, and serve as a strategic and financial document based on 'current' and 'future' state understandings,
- identify gaps and areas for improvement from an Asset Management Perspective related to the Building Asset Class,

- act as a tool to inform staff recommendations and priorities on renewal, upgrade and growth projects for City owned buildings and sites.

The purpose of this FAMP is to address key questions that will assist the City in the responsible stewardship of facility assets, as well as the long-term sustainability of the facility-related services. The questions addressed by this FAMP are identified in Table 1-1.

Table 1-1: Questions Addressed by the FAMP

#	Questions	FAMP Item or Measure	Section of the AMP
1	What do we own?	Inventory and hierarchy	State of Infrastructure
2	What are our assets worth?	Valuation	State of Infrastructure
3	How long will our assets last?	Age and estimated service lives	State of Infrastructure
4	Which assets are beyond their theoretical service life?	Infrastructure renewal deficit	State of Infrastructure
5	What service levels do our assets need to provide?	Service level measures	Levels of Service
6	What is the relative importance of our assets?	Preliminary criticality assessment	Risk Management
7	What assets do we fix first?	Preliminary risk assessment	Risk Management
8	When do the assets need to be replaced?	Renewal forecast	Lifecycle Management
9	How much will it cost to replace the assets?	Renewal forecast	Lifecycle Management
10	How much money will we need?	Renewal forecast	Lifecycle Management
11	How much money will we have?	Capital Plan	Financial Management
12	What are the next steps on our journey?	Recommendations	Implementation and Continuous Improvement
13	What is the energy performance of this asset? What is the emission profile of this asset?	Future	To be incorporated into future FAMPs

1.3 Scope of the AM Plan

1.3.1 Assets Included in FAMP

The facilities are categorized into the following service areas as part of the asset hierarchy:

- Engineering
- Electrical
- Culture & Administrative
- Fire & Rescue Services
- Library

- Police Department
- Parks
- Recreation

Facilities include those owned by the City even though they may be leased or maintained by third parties. The Wharf Building Heritage facility is owned by the City but is maintained by Metro Vancouver.

1.3.2 Excluded Assets

Excluded assets from this FAMP include:

- Facility components such as fitness equipment, library collections, and furniture that are typically not fixed to the building and are not covered by the facility condition assessments
- Engineering Operations: Fuel Pumping Station
- Structures such as pedestrian bridges (e.g., Pier Park bridge that spans Pier Park elevator and the Front Street Parkade)
- Facilities not owned by the City, such as the Tennis Clubhouse, Curling facility, and Queen's Park Cadets Building

1.4 Stakeholders

The development and execution of this FAMP relies on the collaborative effort of multiple City departments and the perspective of many external stakeholders. Table 1-2 and Table 1-3 identify the internal and external stakeholders and their interests in this FAMP.

Table 1-2: Internal Stakeholders and Interests

Stakeholders	Interest
FAMP Project Group	Managed by Civic Buildings & Properties and comprised of members from the following departments: Infrastructure Planning, Operations, IT, and Finance. This Group is tasked with developing a cohesive FAMP that aligns with the City's objectives.
Asset Management Steering Committee	Provides direction to the City's overall asset management program and will serve as a key audience of the AMP.
City Council and Executive Team	Act as stewards for all City assets and approve the AM policy, establish LOS delivery, and monitor progress and outcomes.
Development Services (Planning Department)	Provides information on the Official Community Plan (OCP) and provides information such as growth and demand.
Finance Department (including Procurement)	Provides financial data and develops/supports financial management strategies related to facility assets. Procurement services develop and execute policies and strategies to retain external services.
Civic Buildings & Properties	Inspects, maintains, and renews the majority of facility assets including the building envelope, HVAC, plumbing, site assets, and facility demolition. This group is fundamental in achieving service delivery and management of the facility assets. It is responsible for determining and monitoring asset condition,

Stakeholders	Interest
	criticality, risk, decision making, performance, and planning. This group also collects and maintains the asset data.
Climate Action	To support and accelerate achieving Climate Action targets.
Engineering Department	Engineering Operations, and inspects, maintains, and renews some facility site assets, .
Electrical Department	Inspects, maintains, and renews electrical assets within facilities; delivers electrical service to all city facilities.
IT Department	Inspects, maintains, and renews communication system assets within facilities, including Data Centres at City Hall, Library Main Branch, and Anvil Centre.
Human Resources	To support alignment with Human Resources Policies.
Parks & Recreation	Involved, through coordination with Civic Buildings & Properties, in Operations, Maintenance, Inspection and Upgrades of a number of Civic Facilities. Inspects, maintains, and renews facility site assets such as trees and landscaping.
Individual Service Areas	Departments including Parks, Recreation, Culture & Administrative, Library, and Police. Responsible for maintenance and renewal of equipment and furnishings within facilities, and specialized construction within facilities such as pools.

Table 1-3: External Stakeholders and Interests

Stakeholders	Interest
Facility customers: -Residents -City staff	Residents rely on City services that are carried out in and supporting by City facilities. City staff work in many of these facilities while carrying out City services.
Metro Vancouver and neighbouring municipalities	Regional objectives may influence the provision of City facility services. The need for new and changing services may be managed in coordination due to population growth and demographic changes with nearby municipalities.
Provincial and Federal Government	These groups enact and enforce facility-related legislation and regulations (e.g. health and safety)

1.5 Alignment with Corporate Direction and Documents

The FAMP was prepared in alignment with existing corporate documents which provide guidance for the City as well as the relevant provincial legislation related to facility services. Table 1-4 describes how this FAMP supports and relates to the City's corporate objectives.

General City objectives, mandate and requirements are contained within the Community Charter, the Local Government Act, and various federal and provincial legislation. The SAMP identifies several additional objectives that have and will be considered in the development and execution of this FAMP.

Table 1-4: FAMP Alignment with City's Corporate Objectives

Corporate Objectives	AMP Section Reference	Alignment Description
Provincial and Federal Legislation	Levels of Service	Levels of service standards include the reporting and other requirements needed to adhere to provincial legislation.
City's Asset Management Strategy (SAMP)	Entire document structure and content	The Facilities AMP follows the guidance of the City's Asset Management Strategy, developed in 2019. The Strategy is commonly referenced as a "Strategic Asset Management Plan", abbreviated as "SAMP". The SAMP provides guidance on the following: 1. Specifics on how City objectives are translated into Asset Management Objectives; 2. Description on how they achieve the Asset Management Objectives (Roadmap); and 3. Information on AMP development standards to maintain consistency among City departments.
Corporate Asset Management Policy	Entire document structure and content	The Corporate AM Policy sets principles for implementing consistent processes and approaches for asset management throughout the City.
2017 Official Community Plan (Updated April 2023)	Levels of Service, Asset Lifecycle Strategies	The Official Community Plan defines future population numbers to the year 2041. The projected population data informs growth needs as part of Master Planning. The Community Plan outlines key priorities which include safety, adequate infrastructure to sustain effectiveness through growth, and conservation goals such as reduction of energy consumption.
2023-2026 Council Strategic Plan	Entire document content	The 2023-2026 Strategic Priorities Plan provides five areas of focus that reflect the needs of the community and in turn guide the management of the City's assets.
Envision 2032 New Westminster's Sustainability Framework	Levels of Service	The Envision Framework provides guiding principles and a detailed plan for sustainability initiatives moving forward. This FAMP builds on these initiatives to identify facility-specific sustainability measures.
Seven Bold Steps and Corporate Energy & Emissions Reduction Strategy (CEERS 2020)	Levels of Service	To support the climate emergency declaration in 2019, the City established a climate action budgeting framework and seven bold steps with the goal of moving New Westminster towards a zero-carbon future by 2050. Through Bold Step number 1, Carbon Free Corporation, the City pledged that it will work to exceed its 2030 climate emergency target of 45% (below 2010 emissions levels) by striving to be net zero by 2030. To reach this aggressive target, the City will need to take significant measures to reduce its emissions.
Service Area Strategic Plans, Master Plans, and other Studies	Levels of Service	Other Service Area specific strategic documents are discussed in Section 3.

1.6 General Methodology

This FAMP is a medium to long range planning document that is used to support the City's goals by providing a rational strategy for proactively and effectively managing the City's assets. The FAMP was developed by SLBC Inc. in collaboration with City staff through:

- Review of background materials available on the City's web site and provided by the City's project team including asset inventories, planning documents, and budgets
- Workshops with internal stakeholders
- Other interim meetings with the City's project team
- Numerous data and information transfers
- Review of interim outputs by the City's project team and other stakeholders, and incorporation of comments into the final FAMP
- State of infrastructure analysis and forecasting based on City's building recommendations tracked in SLAM software system. Supporting methodology underlying the analysis is outlined in the State of Infrastructure Section.

1.7 FAMP Inputs and Data Reliability

Table 1-5 identifies the Data Reliability Grades on a 5-point scale as recommended in the SAMP. This provides definition of the reliability levels of each data source.

Table 1-5: Data Reliability Scale

Grade	Reliability	Description	Accuracy
1	High Reliability	Data based on sound records, procedures, investigations and analysis, documented properly and agreed as the best method of assessment.	Dataset is complete and estimated to be accurate +/- 2%.
2	Reliable	Data based on sound records, procedures, investigations and analysis, documented properly but has minor shortcomings, for example some of the data is old, some documentation is missing and/or reliance is placed on unconfirmed reports or some extrapolation.	Dataset is complete and estimated to be accurate +/- 10%.
3	Uncertain	Data based on sound records, procedures, investigation and analysis which is incomplete or unsupported, or extrapolated from a limited sample for which grade 1 or 2 data are available.	Dataset is substantially complete but up to 50% is extrapolated data and accuracy estimated at +/- 25%.
4	Very Uncertain	Data is based on unconfirmed verbal reports and/or cursory inspections and analysis	Dataset may not be fully complete, and most data is estimated or extrapolated. Accuracy +/- 40%.
5	Unknown	None or very little data held.	

The information collected and used in analysis in the FAMP is based on information available at the time of preparation which includes data that was collected from the following sources. It is expected that with each iteration of the FAMP, the data confidence will improve due to development and implementation of the initiatives listed in the FAMP Improvement Plan.

The main data sources used, and the data reliability (confidence) rating is provided in Table 1-6.

Table 1-6: Data Source and Data Reliability

Data Source	Confidence Grading	FAMP Section Reference	Comments
2017 Official Community Plan (Updated April 2023)	1	Levels of Service	The Official Community Plan provides direction to realize the City's opportunities and manage assets and issues to ensure that the City remains one of the most livable communities in Metro Vancouver.
Envision 2032	1	Levels of Service	Strategy aims to minimize ecological footprint, which is the total impact of production and consumption activities on the earth, whether this takes place within or outside of the City.
Strategic Asset Management Plan (SAMP)	1	Entire Document	The SAMP guided the development of the Facilities AMP including items such as growth statistics, objectives, risk framework, decision-making approach, stakeholder engagement, etc.
Corporate Energy & Emissions Reduction Strategy (CEERS 2020)	1	Levels of Service, Lifecycle Strategy	As part of an ASHRAE Level 1 energy study, a prioritized list of 13 civic facilities underwent a detailed energy assessment. GHG emission reduction in CEERS recommendations ranged from lower cost measures such as recommissioning the building automation system (BAS) controls to higher cost measures such as upgrading mechanical systems. These 13 projects are expected to reduce GHG emissions by 332 tC02e.
SLAM building element recommendations	3	Lifecycle Strategy	SLAM software tracks the renewal work recommended from building condition assessments. Improvements to costing of project work, particularly understanding of soft costs is recommended.
SLAM facility replacement values	3	State of Infrastructure	The City maintains overall facility replacement values in SLAM, which are generally underestimated and were updated as part of this FAMP and documented in the City's Master List of Facilities (MS Excel file).

Data Source	Confidence Grading	FAMP Section Reference	Comments
City 5-year Capital Plan	2	Lifecycle Strategy, Financial Strategy	The City's Capital Plan is used to determine the growth and upgrade needs, as well as the funding available for renewal. Some projects cover both renewal and upgrade, and associated project costs were assumed to be 50% renewal and 50% upgrade.

2 State of Infrastructure

2.1 Facility Overview

This FAMP covers 70 facilities owned by the City. Parkades are also considered a facility and included in this FAMP. Components within facilities cover a broad range of assets, some managed jointly and others separately by the Engineering department (within Civic Buildings & Properties) as well as City departments. The facilities are categorized into the following service areas:

- Engineering
- Electrical
- Culture & Administrative
- Fire & Rescue Services
- Library
- Police Department
- Parks
- Recreation

Facilities include those owned by the City even though they may be leased or maintained by third parties. The Wharf Building Heritage facility is owned by the City, however, is maintained by Metro Vancouver.

Excluded assets from this FAMP are provided in Section 1.3.

2.2 Asset Component Hierarchy

Each facility is also broken down into the building component type per Uniformat II standard, which enables the City to manage its assets by component type (such as structural versus HVAC assets) and enables aggregation and disaggregation of data in terms of cost, performance, and risk metrics. Level 1 of the Uniformat II hierarchy is shown in Table 2-1.

Table 2-1: Uniformat II Level 1

Uniformat Level 1
A Substructure
B Exterior
C Interiors
D Services
E Equipment & Furnishings
F Special Construction
G Sitework

This FAMP includes the facility components covered by the facility condition assessments such as structural and architectural components; building services such as HVAC, plumbing, and electrical; and site works.

2.3 Data Sources

The City maintains a master list of facilities which includes an inventory of all facilities as well as information such as construction year, gross floor area, and number of stories. In 2021 and 2022, the City completed a Facilities Condition Assessment (FCA) for its facilities along with implementation of the data into a Capital Planning software system (SLAM). The forecasted recommendations in SLAM are the main source of data for determining the Facility Condition Index of each facility. The replacement value for each facility is based on the sum of component replacement costs in the SLAM software. Where possible, costs are updated to unit construction costs provided in the 2023 Canadian Cost Guide by Altus Group.

Table 2-2 summarizes the data sources used for the state of infrastructure analysis.

Table 2-2: Data Source Summary

State of Infrastructure Element	Description of Data Sources
Replacement Value	- Unit construction costs per sq.ft (Altus Group 2023 Construction Cost Guide) or, - Sum of component replacement costs in SLAM software including soft costs estimated at an additional 60% of the Facility Condition Assessment component replacement costs
Age	- Construction and last major renovation year as provided in City's Master Facility List (MS Excel)
Condition	- Facility Condition Index (note: numerator is based on SLAM software forecast, which includes estimated additional soft costs (20%) and cost corrector factor (40%) to the facility condition assessment action costs) - For Fourth Street and Front Street parkades, the original Building Condition Assessments reports were used to determine the Facility Condition Index - For new or nearly constructed facilities (TACC (təməsewtxʷ Aquatic and Community Centre)), River Walk Daycare, and 940 Quayside Elevator), it is assumed that the facilities are in Very Good condition

2.4 Inventory and Replacement Value

As indicated in Section 1, understanding the value, age, and condition of its assets is the starting point for a municipality to develop a plan for managing them. The replacement value of an asset represents the expected cost to replace an asset to the same functional standard with a 'like for like' new version based on current market conditions, materials, and construction standards, including soft costs. Land value is not included in the replacement value. The total replacement value for the City's 70 facilities is estimated to be $506.5 million. Table 2-3 provides a breakdown of the replacement value and the number of facilities for each service area.

Table 2-3: Estimated Replacement Value of City Facilities ($M)

Service Area	# of Facilities	Total
Engineering	15*	$91,326,101
Electrical	1	$3,264,000
Culture & Administrative	8	$144,101,032
Fire & Rescue Services	3	$12,630,243
Library	1	$17,989,910
Police Department	1	$28,462,060
Parks	33	$25,636,487
Recreation	8	$183,047,064
Overall	**70**	**$506,456,896**

*Electrical Services Buildings include the Electrical Operations Main Office and Storage Bays, with shared spaces with Engineering Operations, such as the Engineering Operations Main Office Building and the Operations Yard, included as part of the Engineering Service Area.

Engineering facilities include Engineering Operations and associated buildings at 901 First Street, Animal Shelter, Cemetery Building & Tool Shed, Parks Administrative Building, 940 Quayside Elevator, and three parkades. Electrical facilities consist of the Electrical Operations Main Office and Storage building.

Culture & Administrative facilities include the Anvil Centre, City Hall, Bernie Legge Theatre, Fraser River Discovery Centre, Massey Theatre and Arts Complex, River Walk Daycare, Irving House, and the New West Museum & Archives Annex. A full list of facilities in each Service Area is provided in Appendix A.

Recreation and Culture & Administrative categories represent 31.0% and 31.6% of the portfolio value, respectively. The new TACC (təməsewtxʷ Aquatic and Community Centre) recreation facility estimated at $75M is currently under construction and is included in the valuation.

A full list of facility replacement values is provided in Appendix A. The Centennial Community Centre and Massey Gymnasium are planned for demolition and are not included in the count or valuation of facilities in Table 2-3.

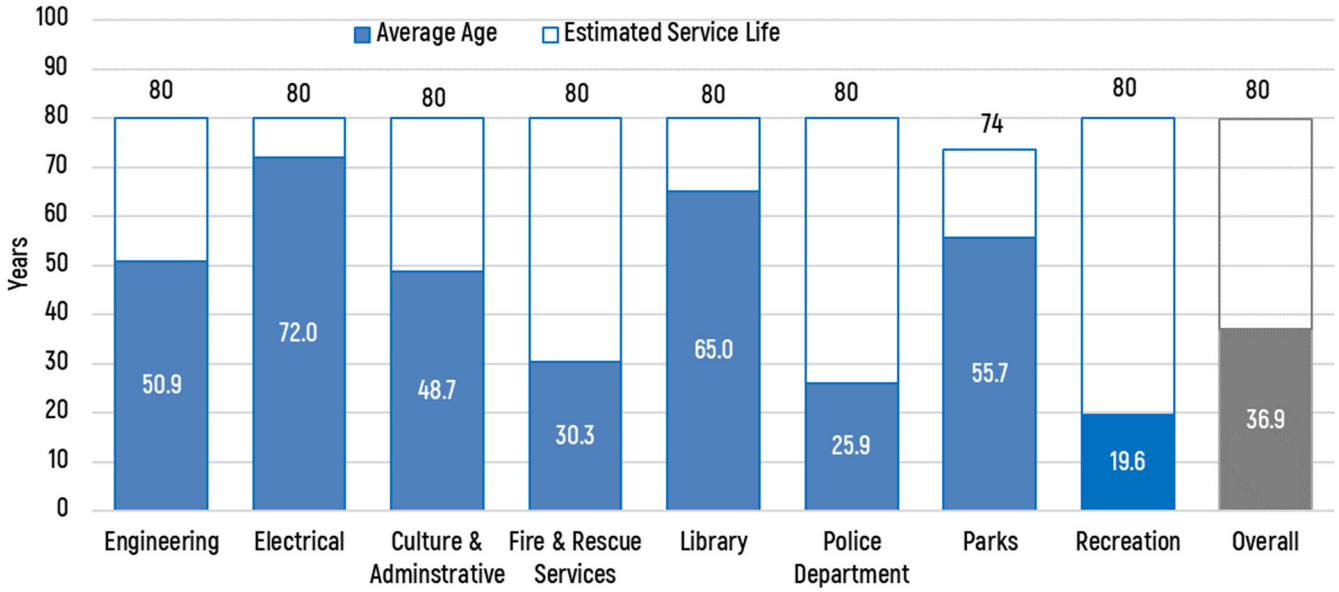
2.5 Average Age

The average age of the City's Facilities, weighted by replacement value and compared to the expected service life, is summarized in Figure 2-1. Facilities are generally expected to last at least 80 years, except for gazebos and picnic shelters that represent part of the park facility portfolio and typically have a shorter expected life of approximately 50 years. The age is based on the year of the original construction year unless a major overhaul renovation for the overall facility was completed more recently. Overall, the average facility age is 36.9 years, approaching the mid-life of the estimated service life.

The Electrical Operations Main Office and some Parks facilities are approaching the end of their estimated service life. For parks facilities, the estimated average service life of 74 years is based on structures such as shelters, gazebos, and sheds estimated to have a service life of 50 years and

washrooms at 80 years. The average age of parks is largely influenced by Mercer Stadium, Queen's Park Stadium and the Queen's Park buildings within the mechanics yard, which were all constructed in 1950 (73 years old). The police services building is 84 years old but had a major renovation in 2001; this building is also listed on the Heritage Register. The Library is also an older building built in 1958 and had a renovation in 2018, but the building envelope is largely still from the original construction.

Figure 2-1: Average Age – Facility Assets



2.6 Condition

Understanding an asset's remaining life and current condition informs the timing of required lifecycle activities to maintain quality and reliability-related service levels. In 2021, the City retained a consultant to complete Facility Condition Assessments based on the ASTM Standard Guide for Property Condition Assessments (Baseline Property Condition Assessment Process E2018-15). The inspections included a visual walk-through of each facility to determine physical deficiencies and recommended actions for the property, building, and related structures.

Using observed asset condition through inspection programs provides a higher degree of confidence in the state of the assets, more than what is provided in a strictly age-based analysis. These assessments help the City manage its facility assets proactively and mitigate potential risks to service levels. Based on the assessment information, an overall condition for State of Infrastructure reporting is determined for each facility based on the Facility Condition Index (FCI). The City uses a 5-year FCI, calculated based on the following formula:

$$\textbf{FCI} = \left[\frac{\text{Total Cost of Needed Repairs/Renewals}}{\text{Current Replacement Value of Facility}} \right]$$

Where:

- **Total Cost of Needed Repairs/Renewals**: Deferred and needed repair/renewal requirements over next 5 years (based on FCA forecast in SLAM software)
- **Current Replacement Value**: Overall facility replacement value (like-for-like)

Higher repairs and renewals result in a higher FCI and worse facility condition. The FCI is converted to a Very Good to Very Poor condition rating based on Table 2-4. Table 2-4 also summarizes the condition description related to each category, in alignment with the 2019 Canadian Infrastructure Report Card.

Table 2-4: Conversion Table for Condition Grades and Facility Condition Index

Condition	Facility Condition Index	Condition Description
Very Good	0 to 5%	The facility is generally in very good condition, typically new or recently rehabilitated. A few elements may require minor attention. Facilities staff time will be devoted to regular scheduled maintenance.
Good	>5 to 15%	The facility is in good condition; will look clean and functional some elements show general signs of deterioration that requires attention. Repairs and replacement are more of an aesthetic or general nature, such as wall painting, carpet replacement, roof repair, window caulking. Facilities staff time will be devoted to regular scheduled maintenance.
Fair	>15 to 30%	The facility is in fair condition; it shows general signs of deterioration and requires attention. Repairs and replacement of specific systems, i.e. boiler, window replacements, interior renovations. Facilities staff time may at times be diverted from regular scheduled maintenance.
Poor	>30 to 60%	The facility is in poor condition, Facilities will look worn with apparent and increasing deterioration. Replacement of specific major systems required, such as heating and plumbing systems, complete interior renovations, building envelope restoration Facilities staff time will likely be diverted from regular scheduled maintenance and forced to "reactive" mode.
Very Poor	>60%	Facilities will look worn with obvious deterioration. Replacement of multiple systems required (i.e. Mechanical, Electrical, Architectural and Structural Staff will not be able to provide regular scheduled maintenance due to high level of "reactive" calls..

Overall, the City's average FCI is 17.5% and the overall facility portfolio is in 'Fair' condition, which means that the average facility is in fair condition; it shows general signs of deterioration and requires attention. Repairs and replacement of specific systems, i.e. boiler, window replacements, interior renovations. Facilities staff time may at times be diverted from regular scheduled maintenance.. Table 2-5 summarizes the average FCI weighted by replacement value by Service Area. Parks facilities have the highest FCI and are on average in poor condition. The TACC is a new facility expected to be completed in

2024 and is therefore considered in Very Good condition. Due to the significant value of the TACC facility ($114.6 million), the facility has a large influence on the overall FCI for Recreation facilities.

Table 2-5: Average Facility Condition Index by Service Area

Service Area	FCI (5-Year)	Average Condition
Engineering	**16.8%**	**Fair**
Electrical	**36.7%**	**Poor**
Culture & Administrative	**23.1%**	**Fair**
Fire & Rescue Services	**28.6%**	**Fair**
Library	**18.4%**	**Fair**
Police Department	**11.3%**	**Good**
Parks	**46.0%**	**Poor**
Recreation	**9.9%**	**Good**
Overall	**17.5%**	**Fair**

The condition distribution of the City's Facilities is summarized in Figure 2-2. Approximately 71% of the City's facilities are estimated to be in 'Fair' or better condition. Approximately $145 million in facility value (29% of the overall portfolio value) is in 'Poor' or 'Very Poor' condition.

Figure 2-2: Condition Distribution

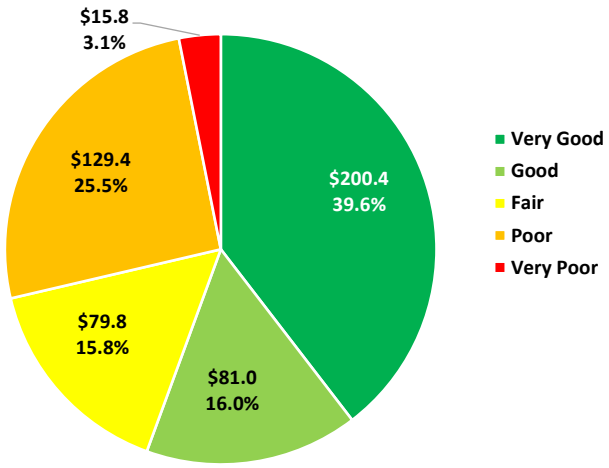
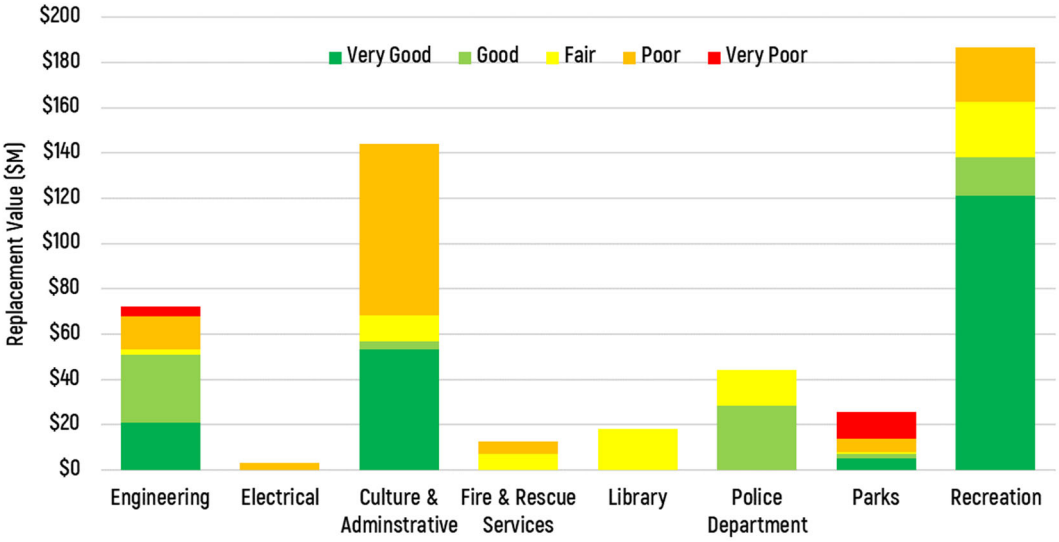


Figure 2-3 summarizes the facility condition profile by Service Area. Park facilities have a higher proportion of facilities in Poor and Very Poor condition based on FCI, as well as the Electrical Operations Main Office. This condition profile aligns with the older age of the Electrical Operations Main Office and park facilities indicated in Section 2.5.

Figure 2-3: Condition Distribution by Service Area



Park facilities categorized as Poor or Very poor include Mercer Stadium and Queen's Park Stadium and other various buildings at Queen's Park. Engineering facilities also have a significant value of facilities in Poor or Very Poor condition. These facilities include several buildings at the Engineering Operations site at 901 First Street and the leased facility at 151 Spruce Street. A full list of the estimated FCI and associated condition for each facility is provided in Appendix A.

3 Understanding Levels of Service

In the State of Infrastructure Section, the value, age, and condition of the City's infrastructure assets were discussed. The Levels of Service (LOS) chapter builds on the State of Infrastructure by defining the performance the City's assets are intended to deliver over their service lives to support higher-level organizational objectives. For example, part of the City's Parks and Recreation vision is to deliver a well-maintained network of facilities that provide creative and innovative services and programs for its residents[1].

LOS are measures that describe the outputs and objectives the City intends to deliver to its residents, businesses, and other stakeholders.

In general, LOS are guided by a combination of customer expectations, legislative requirements, internal policies and procedures, and affordability. Effective asset management requires that LOS be formalized and supported through a framework of performance measures, performance levels, and timeframes to achieve performance levels, such that the costs to deliver the service levels can be determined.

A key focus of the City's 2023 to 2026 Strategic Plan is to deliver resilient infrastructure and sustainable service today and into the future. Developing, monitoring, and reporting on LOS are all integral parts of an overall performance management program which support efficient provision of services to City stakeholders.

The City's facilities play a role in ensuring the successful delivery of essential services to the community. These facilities provide a wide range of spaces, such as offices for City staff as well as critical facilities for fire and police, and operations facilities for staff who oversee roads and parks operations. The City's recreation and culture facilities, including recreation centres, community centres, Anvil Centre, and the museum, support participation in physical and social activities that enrich the lives of residents. Libraries and parks facilities, including parks washrooms, also contribute to the community's overall quality of life.

3.1 Levels of Service and Line of Sight

Figure 3-1 shows the LOS framework and line of sight from high-level Corporate initiatives to detailed asset-specific Technical LOS. Corporate commitments, along with legislated LOS guide Customer LOS that measure the services that the assets need to deliver from the residents' perspective. Customer LOS are categorized to one of the following service attributes:

- **Capacity & Use:** Services have enough capacity and are available at appropriate times to residents and relevant stakeholders
- **Function:** Services meet customer needs while limiting health, safety, security, natural and heritage impacts
- **Quality & Reliability:** Services are provided reliably and to the agreed quality to residents and relevant stakeholders
- **Affordability:** Services are financially sustainable

[1] Reference: City Parks & Recreation website: About Parks & Recreation | City of New Westminster (newwestcity.ca)

Technical LOS define asset performance levels. These LOS drive the required lifecycle activities and associated funding that are needed to mitigate risks to service levels. As shown in Figure 3-1:

- Capacity & Use LOS informs **Growth** needs; *i.e., does a facility or service area have enough physical space?*
- Function LOS informs **Upgrade** needs; *i.e., does a facility function appropriately?*
- Quality & Reliability LOS informs **Renewal, Operations and Maintenance** needs, *i.e., is a facility in an appropriate condition level?*
- Affordability LOS informs **Funding** needs

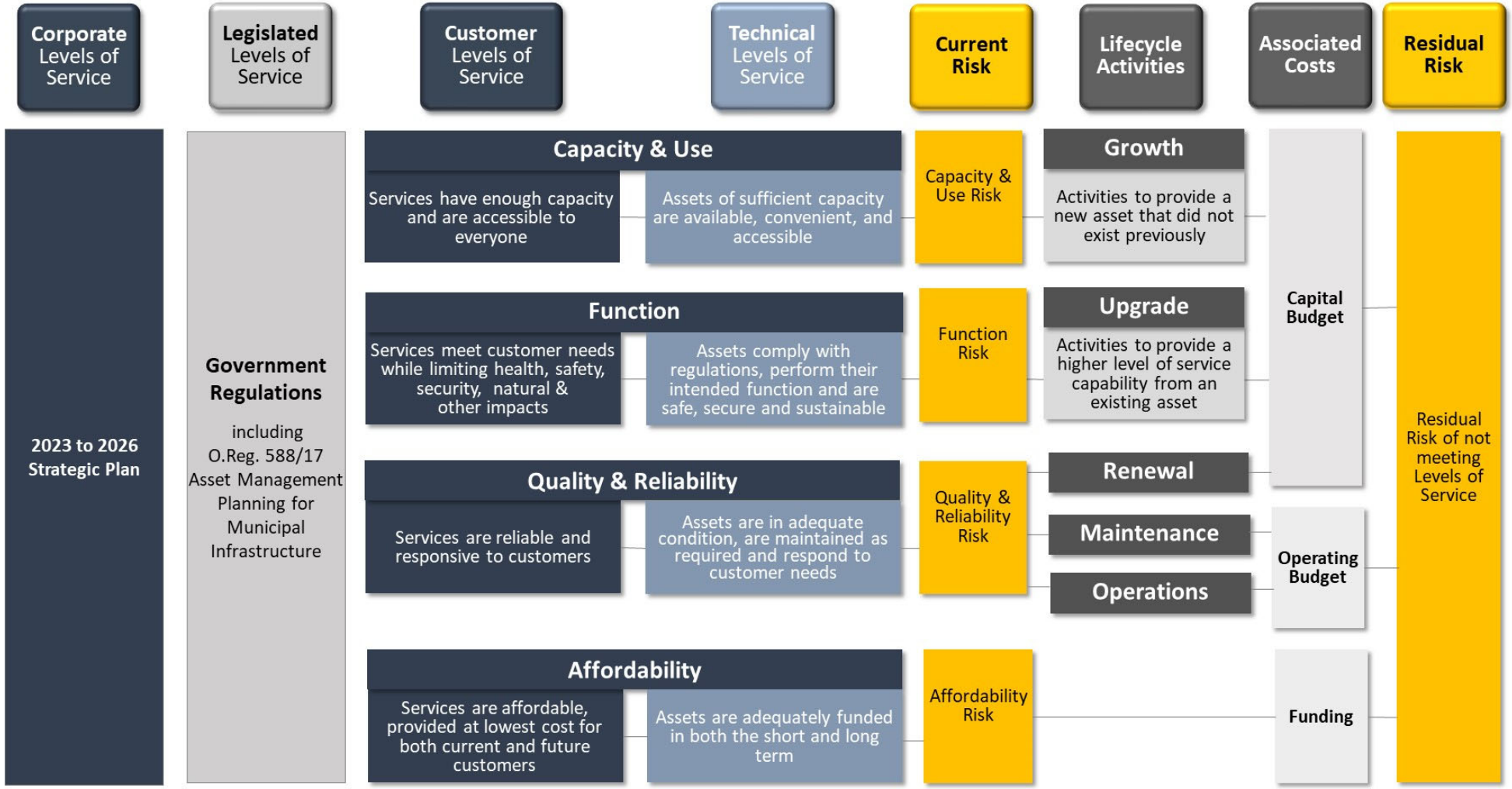
Capacity & Use, and Function LOS are generally informed by Master Plans and studies. In this FAMP, Quality & Reliability LOS relate to building condition and are primarily informed by the Facility Condition Assessment Data.

This Line of Sight establishes the connection of how the day-to-day management of City assets supports the achievement of higher-level strategic priorities.

Identified Data Gaps related to Establishing Levels of Service

The FAMP work has demonstrated that additional data is needed to improve the City's overall understanding of Levels of Service for work related to improvements (upgrades) or building capacity (growth/expansion). Some of this work is already underway through Master Plans and studies, and the next FAMP update is anticipated to close some of these gaps as Master Plans and studies are completed.

Figure 3-1: Levels of Service Framework



3.2 Corporate Levels of Service

The Corporate, or Strategic LOS establish service levels that describe the main vision or objective of service delivery at the City. The 2023-2026 Strategic Priorities Plan provides five areas of focus that reflect the needs of the community and in turn guide the management of the City's assets.

Strategic Plan Focus Area	Supporting Goals
Community Belonging and Connecting	A community where everyone belongs and has the opportunity to connect and contribute.
Homes and Housing Options	Clear the way for all types of homes needed by people today and tomorrow, prioritizing homes for those with the greatest need.
People-Centered Economy	A local, nimble, resilient economy that serves our local community.
Safe Movement of People	Prioritize the movement of people on foot, cycle and transit on streets that are safer for all.
Asset Management and Infrastructure	Resilient infrastructure that meets the community's needs today and into the future.

These focus areas set a framework for the required actions that enable the City to provide services important to the community, and support the City's vision to be a vibrant, compassionate, resilient city where everyone can thrive. The Strategic Priorities Plan is supported by and aligned with other City planning documents and department goals including the following:

2017 Official Community Plan (Updated April 2023)

The Official Community Plan provides direction to realize the City's opportunities and manage assets and issues to ensure that the City remains one of the most livable communities in Metro Vancouver. It describes the kind of community that the municipality wishes to evolve into and acknowledges the importance of shaping growth in a way that is responsive to the City's distinct circumstances.

Goals of the Official Community Plan related to facility assets include:

- **Community and Individual Well-Being**: New Westminster is an equitable, inclusive, safe, and welcoming place where all community members have opportunities to contribute, while feeling connected and accepted.
- **Culture**: New Westminster encourages opportunities to generate and encounter the diverse creative, spiritual, intellectual, and material features of the city and its development.
- **Energy, Emissions, and Climate Change**: New Westminster is an energy-efficient and low-carbon community that takes action to reduce greenhouse gas emissions and is resilient to the impacts of climate change.
- **Heritage**: New Westminster has a strong sense of historic identity, and it values, promotes, and protects its heritage assets.
- **Parks & Recreation**: New Westminster provides excellent programs, events, and recreation opportunities for all within a high-quality, comprehensive network of parks, open spaces, and facilities.

Envision 2032 (Sustainability Framework)

The City developed ten (10) guiding principles within the City's Sustainability Framework, "Envision 2032" to help the City evaluate future decisions and initiatives with a lens on social, economic, and environmental perspectives. The Envision 2032 framework is shown in Figure 3-2 which identifies the environmental and economic factors and further expands on social factors to include: Arts and Culture as well as Community, Liveability and Social Equality.

Figure 3-2: The City' Sustainability Framework



The Envision 2032 Guiding Sustainability Principles that were identified as being relevant to the facility assets are included below:

- Apply long-term thinking to all decision making.
- Achieve lasting economic security and social wellbeing, with vibrant arts and culture.
- Minimize ecological footprint, which is the total impact of production and consumption activities on the earth, whether this takes place within or outside of the City.
- Strive towards continuous measurable improvement in meeting sustainability objectives.
- Institutionalize accountability and transparency in governance practices.

Seven Bold Steps and Corporate Energy & Emissions Reduction Strategy (CEERS 2020)

To support the climate emergency declaration in 2019, the City established a climate action budgeting framework and seven bold steps with the goal of moving New Westminster towards a zero-carbon future

by 2050. Through Bold Step number 1, Carbon Free Corporation, the City pledged that it will work to exceed its 2030 climate emergency target of 45% (below 2010 emissions levels) by striving to be net zero by 2030. In order to reach this aggressive target, the City will need to take significant measures to reduce its emissions. The Corporate Energy & Emissions Reduction Strategy (CEERS) primarily helps the City achieve Bold Step number 1, however many of the recommended strategies within the document also advances other bold steps.

Planning by Service Areas

Several Service Areas and Departments across the City have developed Master Plans, strategies, or Vision/Mission statements that have driven past, on-going, and future projects. Several of these plans are also in development or currently being updated, as indicated in Table 3-1.

Table 3-1: Service-Area Specific Planning Documents and Vision/Mission Statements

Service Area / Department	Planning Document or Vision/Mission Statement
Parks & Recreation	**Parks & Recreation Comprehensive Plan (2008 – update in development)** In the 2008 Parks & Recreation Comprehensive Plan, it was noted that parks and recreation services will be challenged to keep pace with growth, as green space faces pressures due to development, facilities continue to age, and the population ages and becomes more diverse. The City has completed additional plans as required over the years to define a long-term vision for Queen's Park, Riverfront Park, Westminster Pier Park, and Hume Park.
New Westminster Public Library (NWPL)	**2021-2025 Strategic Plan** The City's Public Library's 2021-2025 Strategic Plan ensures the continued provision of core library services expected by the community it serves. NWPL's vision is to provide an inclusive and diverse community where everyone is learning, connected, and inspired.
Child Care	**Child Care Strategy (2016 – update in development)** The Child Care Strategy provides an overall framework and long-term direction for childcare in the City. The update to the Strategy will continue to reflect the City's commitment in the belief that quality, accessible and affordable childcare is necessary in the creation of a healthy community and prosperous economy.
Culture (Museum and Archives)	**Mission and Mandate** The New Westminster Museum and Archives (NWMA) strive to enhance knowledge and deepen understanding of the City and its diverse peoples – from the First Nations cultures to the multicultural community of today – by illuminating past events, exploring current issues, and facilitating conversations around future possibilities. The NWMA is mandated to:

Service Area / Department	Planning Document or Vision/Mission Statement
	• collect, preserve and house the objects, archival materials, natural history specimens and collective memories that best serve to illustrate the first peoples, environment, founding, settlement, relationships, and development of the New Westminster area; • research, make available, interpret and exhibit its collections for the use and benefit of the public • engage with all peoples and organizations that can inform and support the narratives of the New Westminster area
Culture (Arts & Theatre)	**New Westminster Arts Strategy** The City's Arts Strategy recognizes that artists, arts organizations, infrastructure investment and local arts generation are significant and valued components of a healthy and creative community. The Strategy lays the groundwork to create a sustainable, resilient, innovative creative sector that reflects the community's needs. **New Westminster Theatre Strategy** The New Westminster Theatre Strategy grew from the Arts Strategy, and provides a focused plan specific to the City's theatre assets, namely the Massey Theatre and Arts Complex and Complex, Anvil Theatre and the Bernie Legge Theatre. The Strategy lays out a framework for governance and priority of investment, supporting the unique and distinct civic theatre assets in order to provide a stable environment for the continued growth and development of all the disciplines of performing arts.
Fire & Rescue Services	**Vision** Fire & Rescue Services' vision is to proudly serve our communities by providing exceptional and innovative fire and emergency rescue services.
New Westminster Police Department	**2022-2024 Strategic Plan** The Police Department (NWPD) has three strategic goals to define its direction over the next five to ten years: • Listening to the community • Serving the community • Supporting our people

3.3 Legislated Levels of Service

Legislated requirements define the standards according to which the City is legally obligated to provide services to the community, and these standards typically relate to asset safety or reliability. For example,

the B.C. Pool Regulation, B.C. Reg. 296/2010 ensures that public pools meet water quality parameters such as water clarity, temperature, pH, and chlorine. Key legislated service levels are considered in this FAMP but are generally not documented as measures in Section 3.4 as the City has incorporated activities to meet long-standing legislation into its normal day-to-day operations. The City is improving its documentation of preventative maintenance tasks, including legislated activities, within its work order system to better understand the costs associated with these activities. This data will enable the City to consider financial measures related to facility operating costs in the future.

3.4 Customer and Technical Levels of Service

As discussed in Section 3.1, Customer LOS measures services from a resident perspective, and Technical LOS define asset performance levels. The Customer and Technical LOS discussed in this FAMP are focused on measures developed to support achievement of the City's higher-level strategic goals. The City will be completing key planning documents and master plans that will discuss additional service levels for input into future updates of this FAMP.

This FAMP summarizes the City's performance on the measures for 2023 or 2022 based on the data available. The City has determined target performance levels where possible based on currently available information. As the City matures in development of its AM Plans, its goal is to involve the public by ensuring that service level and financial decisions reflect resident concerns and aspirations. Much of this public stakeholder engagement, particularly related to capacity and functional service levels, will be considered as part of the City's master planning process to be completed by individual Service Areas.

3.4.1 Capacity & Use Levels of Service (informs Growth needs)

Capacity and Use LOS related to facility assets provides guidance for ensuring there is sufficient community infrastructure and facilities to meet the current and projected needs of the population. To manage the impacts of the City's growing population, evolving demographics, and recreation trends, the City maintains an appropriate number of facility spaces to ensure that the City's portfolio is aligned with current and future needs. The City considers a wide range of service levels in determining capacity gaps and then considers innovative ways in the use of existing spaces or through partnerships prior to determining that a new facility or expanded space is required.

For recreation facilities, the City maintains data on waitlists, unused time (booked time that is not used), and requests from sports groups and residents to understand potential capacity issues. For Community Centres and gymnasiums, the City considers geographic perspectives and walking distance time for residents and explores opportunities to partner with schools for additional gym space as required to maximize efficiencies, prior to acquiring or building a new facility. Pools and Arenas are considered destination spaces where utilization rates are generally more important than geographic considerations. The City is currently developing an update to the Parks & Recreation Comprehensive Plan which will explore service levels and the potential need for expansion or additional facilities. Strategic priorities can also dictate the need for a new facility.

The City also monitors spaces required for City staff and is planning to develop a facility space planning strategy that would address current challenges within City Hall and any other critical areas. The City also noted that the Engineering Operations Yard has limited capacity and that storage capacity for snow events is limited.

The New Westminster Public Library (NWPL) keeps track of visitors at both locations as well as program-related measures such as program attendance and the number of programs held. The NWPL's 2021-2025 Strategic Plan identified the need to continually improve physical spaces to meet the diverse needs of the community.

The 2016 Child Care Strategy will be updated to examine the current situation for the City including childcare supply and demand factors, while defining the City's role and recognizing the importance of senior levels of government who are primarily responsible for childcare funding and provision. The 2016 Strategy identified the lack of infant/toddler spaces in Queensborough, leading to the development of Riverwalk Day Care Centre. The updated strategy will help identify other gaps and the potential need for additional spaces.

The New Westminster Museum and Archives completes studies as required to ensure adequate and appropriate spaces for collecting, preserving, housing, exhibiting and interpreting its various collections – the 2004 Museum Planning and Feasibility Study informed the museum space needs in the Anvil Centre. Currently, some collections are stored in the Museum Annex, which is to be demolished, and the City may have some challenges regarding storage space in the future. It is recommended that storage needs be considered as part of the City's Space Planning Strategy.

Fire & Rescue Services tracks response times and monitors its performance against the NPFA (National Fire Protection Association) 1710 Standard. The standard covers response time objectives such as 'First Engine Arrive on Scene Time'. A Fire Master Plan is currently being developed to analyze emergency response and protection services across the City and will inform if there is a need for additional fire hall locations or space. Many factors affect response times, including location of fire hall, size of the fire hall response district, traffic patterns and routes within the response district, and fire hall design. Non-facility factors such as the number of staff and apparatus also impact overall service level performance.

For Service Areas without a Master Plan or growth study currently planned, it is recommended that the City confirm the scope of upcoming corporate studies such as the Space Planning Strategy which could cover capacity issues across various Service Areas.

3.4.2 Functional Levels of Service (informs upgrade needs)

Table 3-2 summarizes Technical Functional LOS related to Facilities. Functional measures relate to providing services that meet customer needs while limiting impacts to health, safety, security, and the environment.

The City's Accessibility Committee is currently developing an Accessibility Plan which will guide accessibility actions within the City. The Accessibility Committee is made up of community members and staff liaisons from the New Westminster Public Library, City of New Westminster, and the New Westminster Police Department. A future recommended measure is included in Table 3-2 regarding the number or percentage of washrooms meeting City accessibility standards, as the City already has a few major projects planned for universal and accessible washroom facilities at critical facilities. Performance and targets will be set after the Accessibility Plan is developed. The City strives to be a universally accessible City where all people can exercise their rights and carry out their daily activities independently and without barriers. It is an example of the City's DEIAR (Diversity, Equity, Inclusion, & Anti-Racism) framework, as described in the 2023 to 2026 Strategic Plan, that is woven throughout all the City's work.

Table 3-2: Facilities Levels of Service – Functional

Levels of Service		Technical Performance Measure		
Service Attribute		**Performance Measure**	**Target**	**Current Performance**
Functional	**Accessibility**	**Future:** Number or percentage of washrooms meeting City accessibility standards	TBD	TBD
	Environmental Sustainability	Annual energy consumption (natural gas/electricity) per sq.m. (energy intensity)	*	0.97 GJ/sq.m.*
		Total GHG emissions (tC02e) for City buildings	2030: 1,038 tC02e	2022: 1535 tC02e

*Energy consumption is based on City scorecard of 21 main facilities. The City's goal is to decrease the energy intensity each year, though no specific target levels will be set.

As discussed in Section 3.2, the City established a climate action budgeting framework and seven bold steps with the goal of moving New Westminster towards a zero-carbon future by 2050 and an aspirational target to be carbon neutral by 2030. To monitor its climate action performance for its facilities, the City measures energy consumption on a per square metre basis (energy intensity), and total GHG emissions. For each of these measures, the goal is to reduce consumption and emissions over time.

In the Corporate Energy & Emissions Reduction Strategy (CEERS), as part of an ASHRAE Level 1 energy study, a prioritized list of 13 civic facilities underwent a detailed energy assessment. GHG emission reduction recommendations ranged from lower cost measures such as recommissioning the building automation system (BAS) controls to higher cost measures such as upgrading mechanical systems. These 13 projects are expected to reduce GHG emissions by 332 tC02e. The new təməsew̓txʷ Aquatic and Community Centre (TACC) facility, which replaced the existing Canada games pool, is expected to achieve an additional reduction of 815 tCO2e for the City.

In addition to maintaining accessible and environmentally sustainable facilities, the City's Service Areas and Departments review specific functional needs for its facilities through the master planning process and other studies as needed. For example, the major renovation to the Main Branch library completed in 2018 addressed changes in community needs by adding a new 12-set iConnect LAB used for technology instruction and a new Reading Lounge on the main floor. As discussed in Section 3.4.1 for capacity service levels, upcoming Master Plans and studies will also inform department specific functional service level needs and considerations.

3.4.3 Quality & Reliability Levels of Service (informs renewal needs)

Table 3-3 summarizes Customer and Technical Reliability LOS which manage the quality and reliability of services provided to the community. Quality and Reliability Levels of Service relate to the condition of a building and are informed in this FAMP by the Facility Condition Assessment data.

Currently, the City's buildings have an average Facility Condition Index of 17.5% (Fair condition).

As indicated in the State of Infrastructure, FCI is calculated by:

$$\textbf{FCI} = \left[\frac{\text{Total Cost of Needed Repairs/Renewals}}{\text{Current Replacement Value of Facility}} \right]$$

Municipalities and agencies use different timelines for determining the numerator in the FCI calculation, as well as different thresholds relating the FCI to Very Good to Very Poor condition. The City uses a 5-year FCI which aligns with the British Columbia School Trustees, BC Housing, and the City's building condition assessments completed in 2022. The City recognizes that agencies may update the FCI methodology over time based on new and improved data, and will consider alignment with other municipalities and organizations as appropriate in future updates to the FAMP.

Table 3-3: Facilities Levels of Service – Quality & Reliability

Levels of Service		Customer Performance Measure			Technical Performance Measure		
LOS Category	**Service Value**	**Performance Measure**	**Target**	**Current Performance**	**Performance Measure**	**Target**	**Current Performance**
Quality & Reliability	**Quality**	**% of facilities in Fair or better condition (based on FCI)**	Maintain Current Performance*	71.3%	**Facility Condition Index (Overall Average)**	Maintain ~17%	17.5% (Fair)

*Strive to maintain over 70% based on current performance of 71.3%

From a customer and resident perspective, the condition of a facility is more understandable when represented as a qualitative condition rating rather than the FCI percentage, and therefore the customer performance measure is reported in terms of the percentage of facilities estimated to be in fair or better condition (the conversion of FCI to 5-point condition scale was discussed in Section 2.6, including a summary of average FCI by Service Area).

By value of facilities, 71.3% of facilities are in fair or better condition. Note that the average FCI and 71.3% of facilities in fair or better condition includes the $114.6 value of the TACC[1], which accounts for 23% of the City's overall facility portfolio value.

As the City improves its work order system tracking, it will also consider other reliability measures in the future such as those related to the downtime of critical assets, such as elevators and boilers.

3.4.4 Affordability Service Levels

Table 3-4 summarizes Technical Affordability LOS related to Facilities. The average annual renewal investment rate measures the percentage of capital investment divided by the replacement value of the portfolio. Per industry benchmarks, such as the Canadian Infrastructure Report Card (2016), it is recommended that municipalities invest 1.7% to 2.5% of their facility asset portfolio value into capital renewal each year. Based on the analysis in the Lifecycle Strategy, this FAMP recommends an average annual investment of 1.4% for the $506.5 million facility portfolio over the next 10 years to maintain service levels (Facility Condition Index ~17%). A higher investment of 1.7% will be required to improve service levels, and these investment levels are discussed in further detail in the Financial Strategy section of the FAMP.

Historically, the City has only been investing approximately 1% annually in capital renewal over the past few years, excluding the TACC[1] from the historical investment rate calculation as it is being constructed in 2023. Funding shortfalls will be discussed further in Section 6.

As indicated in Section 2.3, as the City continues to improve its data collection and tracking, a future measure to consider is the operating and maintenance cost of facilities per square foot, which would be enabled by setting up the City's work order system to track hours and costs.

Table 3-4: Facilities Levels of Service – Affordability

Levels of Service		Technical Performance Measure		
LOS Category	**Service Value**	**Performance Measure**	**Target**	**Current Performance**
Affordability	**Financial Sustainability/ Efficiency**	Facility asset renewal annual investment as a % of replacement value	1.4%	2021/2022: Approximately 1%

[1]At the time of writing this FAMP, the TACC is a new facility soon to be completed

3.5 External Trends and Issues Affecting Levels of Service

The City's ability to maintain current service levels may be impacted by external trends and factors. Future updates to the FAMP will consider such factors as they occur and incorporate them into the reporting and setting of appropriate service levels.

- **Demographic Factors**: Population and employment changes can impact the intensity and frequency of infrastructure use, resulting in the need for additional infrastructure or more frequent asset renewal strategies.
- **Social and Economic Factors**: Increases in environmentally conscious behaviour and attitudes among residents and businesses can lead to infrastructure that lasts longer and is more efficient. From an economic perspective, higher costs due to increases to the cost of materials and energy can reduce the ability to maintain the same level of service. Increased tourism initiatives may also have potential impacts on required service levels.
- **Technological Factors**: Changes in technology or asset construction, operation, or maintenance methods may lead to the replacement of obsolete equipment or materials, helping to achieve higher quality service levels and better cost efficiencies over future asset lifecycles.
- **Regulatory Factors**: The City is subject to various policies, programs, and legislative decisions issued by other levels of government (i.e., federal, provincial, and regional), and such legislative changes can impact the City's strategic direction and demand for services. Specific asset-related legislation can also impact the required performance levels of assets.
- **Environmental Factors**: To support the climate emergency declaration in 2019, the City established a climate action budgeting framework and seven bold steps with the goal of moving New Westminster towards a zero-carbon future by 2050. Mitigation and adaptation strategies to minimize the impacts of climate change will continue to be developed and implemented by the City as climate change impacts on service levels are better understood.

4 Risk Management

A key asset management objective is to meet service levels while managing risk and minimizing lifecycle costs. The relative importance of the assets to support service delivery, referred to as asset criticality, is a key driver in the selection and prioritization of appropriate asset management strategies. Critical assets typically have high consequence of failure ratings because failure of these assets will have a high adverse affect on the City's ability to provide the required service levels.

Asset failures pose risks to meeting service levels related to capacity, function, or reliability, and therefore may compromise the delivery of the City's strategic priorities. Lifecycle activities are used to manage the risk of failure by reducing the risks to acceptable levels.

This FAMP follows a six-step risk management process that conforms with the ISO 31000 Risk Management standard and aligns with the City's Strategic Asset Management Plan (SAMP).

1. Risk Context
2. Risk Identification
3. Risk Analysis
4. Risk Evaluation
5. Risk Treatment & Control
6. Risk Monitoring & Review

4.1 Risk Context

Understanding the risk landscape in the context of what the City is trying to achieve is the first component to developing an effective risk management methodology. Asset risks are addressed subjectively by each department and there is no formal risk register or risk treatment plan. The City's SAMP includes a preliminary risk framework for the City, which has now been pilot tested as part of the development of the City's first AM Plans as well as the preliminary risk assessment provided in this FAMP. The future state for the City is to have a fully developed and operationalized risk framework consistent across service areas that is used to make risk-based decisions.

As described in the City's SAMP, risks may be categorized into enterprise and asset risks. The focus of this FAMP is on asset risks, which includes risks associated with facilities with respect to poor condition, service interruptions, accessibility issues, and poor energy efficiency. For this FAMP, the asset risks are defined at the facility level, i.e., the risk to each building. To help with prioritization of projects, further assessment is recommended to assess risks at the component level and the associated impact to the facility.

Enterprise Risk considers higher-level business continuity impacts such as seismic events, pandemics, strikes, and extreme weather events. The main enterprise risk considered in this FAMP is extreme weather events related to climate change.

4.2 Risk Identification

Risk identification is the process of finding and describing risks within the context of the organization. Table 4-1 provides a small sample of risk events that may be contemplated as part of a larger risk

register. The risk register is a work in progress and will need to be updated as part of the City's ongoing asset management journey. One key goal through risk analysis work is to create a formalized approach for communicating risks to key decision makers (i.e., Council). This iteration of the FAMP includes a first step to formalizing risk, but improvements in this area are expected as further risk analysis work is completed with each FAMP iteration. In this FAMP, Step 3 (Risk Analysis) and Step 4 (Risk Evaluation) have been carried out for quality & reliability risk related to asset condition. Risk analysis and evaluation for capacity and functional risks are typically more appropriate to evaluate on a project-by-project basis due to the differing nature and scope of projects addressing these risks. The risks in Table 4-1 are further discussed in Sections 4.2.1 to 4.2.4.

Table 4-1: Risk Register - Asset and Enterprise Risks

Levels of Service		Risk Identification	
Service Attribute		**Risk Event**	**Cause**
Asset Risks			
Capacity		Facility cannot meet capacity requirements, resulting in unmet community needs	Inadequate planning or lack of funding for expansion/ additional facilities
Functional	**Accessibility**	Facility spaces are not inclusive and do not accommodate unique needs of all residents and City staff	Inadequate planning or lack of funding for facility upgrades related to accessibility
	Environmental Sustainability	Facilities contribute to high GHG emissions, increasing operational costs and contributing further to climate change	Inadequate planning or lack of funding for upgrades related to energy efficiency
Quality & Reliability	**Quality**	Facilities are in poor condition, resulting in service disruptions or health and safety risks to residents or staff	Inadequate planning or lack of funding for state of good repair needs (including operations, maintenance and or renewal activities)
Enterprise Risks			
Climate Change Impacts (General impacts to all service attributes)		Extreme weather events damaging facilities and causing faster deterioration of building components	Inadequate understanding of facility vulnerabilities and lack of funding to implement facility upgrades for resiliency. Lack of funding to account for faster deterioration of building components.

4.2.1 Risks to Capacity Service Levels

Ensuring that population growth is managed in a sustainable, efficient, and financially responsible manner is central to the long-term health, prosperity, and well-being of the City and its residents. As discussed in Section 3.4.1, to manage the impacts of the City's growing population and changing demographics (and associated preferences), the City maintains an appropriate number of facility spaces to ensure that the City's portfolio is aligned with current and future needs. The City considers a wide range of service levels in determining capacity gaps and then considers innovative ways in the use of existing spaces or through partnerships prior to determining that a new facility or expanded space is required. Strategic priorities can also dictate the need for a new facility. Master Planning or related

studies by each Service Area should be developed for managing the risks associated to capacity service levels.

4.2.2 Risks to Functional Service Levels (related to upgrades)

The City also plans for service improvements to functional service levels while balancing these risks against capacity and reliability-related needs. As discussed in the 3.4.2, the City's Accessibility Committee is currently developing an Accessibility Plan which will guide accessibility actions within the City. This Accessibility Plan will be developed with the City's DEIAR (Diversity, Equity, Inclusion, & Anti-Racism) lens and will aim to mitigate risks related to inaccessible and inequitable spaces.

For addressing environmental sustainability, the City established a climate action budgeting framework and seven bold steps with the goal of moving New Westminster towards a zero-carbon future by 2050 and an aspirational target to be carbon neutral by 2030. In the Corporate Energy & Emissions Reduction Strategy (CEERS), the City has set specific GHG emission reduction recommendations and targets.

4.2.3 Risks to Quality and Reliability Service Levels (related to renewals)

The Quality & Reliability Level of Service refers to maintaining City facilities in a state of good repair to reduce the incidence of unscheduled service interruptions due to poor asset condition while minimizing lifecycle costs. Depending on the asset, unplanned failures can have wide-ranging consequences including service disruption, damage to surrounding infrastructure and property, risks to public safety, and environmental impacts. This FAMP provides a preliminary assessment of quality and reliability risk in alignment with Step 3 (Risk Analysis) and Step 4 (Risk Evaluation) of the City's SAMP.

4.2.4 Risks due to Climate Change

Climate change risks such as more intense and frequent rainfalls, rain on snow events, heat waves, and ice-storms can have significant implications on facility infrastructure. An increase in extreme weather events will likely lead to increased investment in maintenance and system improvements. Understanding the severity and frequency of these climate change events and incorporation of climate change considerations into the City's asset management planning approach is critical to maintaining service levels and managing risk.

As indicated in Section 4.2.2, the City has implemented initiatives to help mitigate climate change through GHG emission reduction targets. From a climate change adaptation perspective, through its facility condition assessments (FCAs), the City maintains a current understanding of how its facilities are deteriorating with respect to the impacts of extreme weather on its building components. An additional recommendation is for the City to consider vulnerability assessments on critical facilities. Municipalities are starting to carry out vulnerability assessments based on industry standard methodologies such as the Public Infrastructure Engineering Vulnerability Committee (PIEVC) Protocol. The vulnerability assessments, in addition to identifying asset deterioration risks, provide recommendations not typically covered by an FCA. A vulnerability assessment can help identify potential upgrades for increased resiliency and facility design adaptation, such as designing for larger capacity HVAC systems, installing emergency generators, and improving site drainage system design.

4.3 Risk Analysis

The City's preliminary risk strategy in the FAMP estimates the quality and reliability risk exposure of its assets to inform the prioritization of renewal projects across asset classes and service areas. Risk exposure is the multiplication of two factors:

Risk Exposure = Consequence of Failure x Probability of Failure

The criticality or consequence of failure (CoF) is the direct and indirect impact on the City if an asset failure were to occur, and the probability of failure (PoF) is the probability that an asset failure may occur.

4.3.1 Probability of Failure[1]

Probability of Failure (PoF) is estimated based on the condition of the facility from the State of Infrastructure analysis, as summarized in Table 4-2. For facilities, Facility Condition Index is used to assess the overall facility condition.

Table 4-2: Probability of Failure Ratings for Reliability

PoF Rating*	Facility Condition	FCI
1	Very Good	0 to 5%
2	Good	>5 to 15%
3	Fair	>15 to 30%
4	Poor	>30 to 60%
5	Very Poor	>60%

*PoF Rating = Facility Condition

4.3.2 Consequence of Failure

CoF (or asset criticality) reflects the importance of an asset to the City's delivery of services. The following impacts of a potential asset failure are considered to assess consequence of failure:

- **Financial:** damages to City infrastructure or private property, loss of City revenue and/or incurring unbudgeted operating expenses, and fines.
- **Health and Safety:** the degree and extent of potential injury, ranging from negligible injuries to loss of life.
- **Availability/Reliability:** considers the extent (number of people impacted) and length of the service disruption.
- **Legislation:** considers violations to bylaws or regulations.
- **Environmental:** acknowledges the length and extent of damages to the natural environment.

[1] The Probability of Failure (PoF) defined in Table 4-2 is tailored for Facilities at the asset level, and is therefore not aligned with the PoF definition in the SAMP. To ensure consistency across the City, the SAMP's PoF definition should be used when a risk assessment is completed for Enterprise or system wide Risks.

- **Corporate Image:** considers reputational damage to the City.

Table 4-3 summarizes the above listed impacts against an asset criticality rating scale from 1 to 5, with a higher score reflecting a higher consequence of failure. Understanding criticality enables risk to be incorporated into the development of the lifecycle management strategies. More critical assets are prioritized over less critical assets for expansion, inspection, cleaning, maintenance, and renewal, depending on their current and forecasted performance.

Table 4-3: CoF (Asset Criticality) Rating Scale

Consequence Categories	1 Insignificant	2 Minor	3 Moderate	4 Severe	5 Catastrophic
Financial	Damages, losses (including 3rd party) or fines less than $10,000	Damages, losses (including 3rd party) or fines $10k to $100k	Damages, losses (including 3rd party) or fines $100k to $500k	Damages, losses (including 3rd party) or fines $500k to $1M	Damages, losses (including 3rd party) or fines greater than $1M
Health & Safety	No impact to health and safety	Minor injury or illness without lost time	Illness/injury resulting in lost time	Illness/injury resulting in permanent or long-term disability	Illness/injury resulting in fatality
Availability/ Reliability	Small number of customers experiencing disruption/ impact (less than 100 people or up to 2 hours)	Localized service disruption/ impact (100 to 500 people or up to 1 day)	Significant localized disruption/ impact (500 to 1,000 people or up to 1 week)	Major service disruption/ impact (1,000 to 5,000 people or up to 2 weeks)	Organizational wide service disruption/ impact (greater than 10,000 people or loss of services for longer than 2 weeks)
Legislation	No expected violations of regulations, Acts or bylaws	Potential verbal or written warnings/notices	Compliance orders or notice of violations	Potential for charges to individuals or the Corporation	Numerous charges to individuals or the Corporation or labelling as a repeat offender
Environment	Very negligible impact or can be restored within 1 week	Material damage/ improvements of local importance. Minor, short term (within 1 month) very isolated damage/ improvements to the environment	Significant short term (up to 2 months) local damage/ improvements to the environment	Significant long term (up to 1 year) widespread damage/ improvements to the environment. Some Provincial importance.	Major long term (greater than 1 year) or permanent widespread damage/ improvements to the environment. Federal importance.
Corporate Image	Event only of interest to individual. Nil effect or community concern	Minor community interest. Local media report	Public community discussion. Broad adverse media coverage	Loss of confidence in Council. National publicity. Public agitation for action.	Public investigation. International coverage. Management changes demanded

CoF is estimated for each asset type based on the expected impact of a facility failing to provide the required service according to the rating scale provided in Table 4-3. Risk is then assessed with the probability of failure (facility condition) from the State of Infrastructure analysis.

A summary of the CoF scoring for facility assets is provided in Appendix B. For most facilities, the main CoF factor is availability/reliability (the number of people affected by facility closure). For Emergency facilities for Police and Fire Services, health and safety is the main impact. These facilities are critical as there is a potential for fatalities and serious injury if these facilities are not in operation.

The Engineering Operations (Main Office) has the highest rating of 5 due to potential City-wide service disruptions if the facility is not available. Severe impacts (rating of 4) due to service delivery was assigned to City Hall, Massey Theatre and Arts Complex, and Anvil Centre, as well as main recreation facilities such as the arenas, Queensborough Community Centre, Queen's Park Sportsplex, and the new TACC facility.

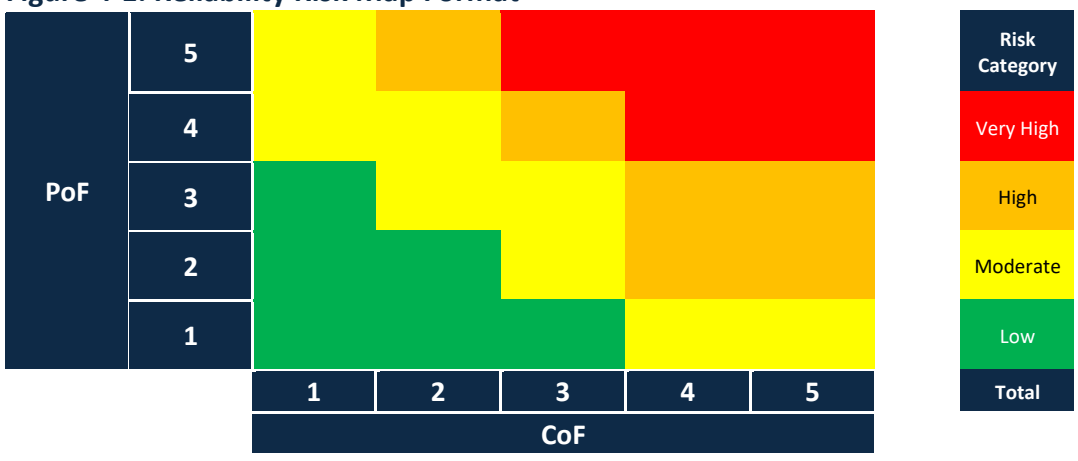
For parks facilities, most are assumed to have a minor CoF score of 2 (localized service disruption of 100 to 500 people affected). A lower score of 1 is assigned to structures such as picnic shelters and gazebos. Facilities with higher public access (Mercer Stadium, Moody Park Little League Stadium, Queen's Park Stadium, and Queensborough Outdoor Stage) are assigned a moderate CoF rating of 3.

Risk Map

As part of the risk strategy, the risk results are plotted on a risk map (example format in Figure 4-1) to show a visual representation of risk exposure across the City's assets. The location of the assets on the map denotes various levels of risk and help to prioritize the City's resources, time, and effort for renewal activities.

- **Very High** risks in the red zone: the risk is intolerable and must be reduced. The potential for failure must be addressed as a high priority.
- **High** risks in the orange zone: the risk is manageable, but consequences are experienced upon failure. Monitoring and maintenance actions are required.
- **Moderate** risks in the yellow zone: The risk can be tolerated if it is as low as reasonably practicable. If a cost-effective action can be identified to reduce the risk, then it should be implemented.
- **Low** risks in the green zones: The risk is acceptable provided there are replacements and contingencies in place to ensure smooth operations. Run to fail strategies may be provided for non-critical assets.

Figure 4-1: Reliability Risk Map Format



The risk assessment in this FAMP is a high-level assessment for understanding the City's risk exposure at a facility-level but does not replace the specific project risks assessed as part of the annual capital budgeting process.

The criticality and risk in this FAMP are estimated for facilities at the overall building level. In the future, the City plans to assign asset risk at the more detailed building component level in line with the building condition assessments. A preliminary CoF assessment for building components is provided in Appendix C, which can be combined with the facility CoF score to generate a rating specific to a building component in a particular facility. This detailed assessment is not provided in the FAMP but can be used by the City to further inform capital project planning at the component level.

4.4 Risk Evaluation

Based on the facility-level risk assessment, the following facilities with a replacement value of $119.2 million are currently estimated to be in the Very High risk category (refer to Figure 4-2):

- Queens Park – Stadium
- Queen's Park - Arena
- City Hall
- Massey Theatre and Arts Complex
- Queensborough Fire Hall
- West End Fire Hall 2
- Engineering Operations: Engineering Main Office
- Engineering Operations: Electrical Operations Main Office
- Mercer Stadium Grandstand and Washroom

Figure 4-2: Current Reliability Risk (by Replacement Value in $M*)

PoF	CoF 1	CoF 2	CoF 3	CoF 4	CoF 5
5	$0.4	$7.6	$7.8	$0.0	$0.0
4	$0.0	$16.1	$1.9	$96.1	$15.3
3	$0.0	$13.4	$47.5	$11.7	$7.2
2	$0.0	$5.3	$33.6	$13.7	$28.5
1	$1.6	$9.6	$15.6	$173.6	$0.0

Risk Category	Replacement Value ($M)	%
Very High	$119.2	23.5%
High	$70.7	14.0%
Moderate	$284.5	56.2%
Low	$32.1	6.3%
Total	**$506.5**	**100.0%**

*Totals may not add up to an exact match with asset values due to rounding

4.5 Risk Treatment & Control

Risk treatment is the process of reducing the risks to acceptable levels. To reduce the risk, options may include the elimination of the causes of risk; reducing the likelihood or consequences of risk; sharing or transferring the risk to other parties through outsourcing, insuring against the risk; or in some cases, simply accepting the risk. Potential risk treatments are described in Table 4-4. Treatments related to asset lifecycle activities (new or expanded facilities, facility upgrades, and asset renewal) are described further in Section 5 (Lifecycle Strategy).

Table 4-4: Asset and Enterprise Risks with Potential Treatments

Levels of Service		Risk Identification	
Service Attribute		**Risk Event**	**Risk Treatment**
Asset Risks			
Capacity		Facility cannot meet capacity requirements, resulting in unmet community needs	Master Planning to understand and address growth and demographic changes, and identifying the funding needed for new or expanded facilities
Functional	**Accessibility**	Facility spaces are not inclusive and do not accommodate unique needs of all residents and City staff	Accessibility Plan with service levels to identify required upgrade projects
	Environmental Sustainability	Facilities contribute to high GHG emissions, increasing operational costs and contributing further to climate change	Implement upgrade projects related to GHG emission reduction targets (as identified in Corporate Energy & Emissions Reduction Strategy) For any energy consuming equipment, identify opportunities to reduce energy consumption and remove fossil fuel use, and identify opportunities to incorporate public and/or fleet electric vehicle charging.
Quality & Reliability	**Quality**	Facilities are in poor condition due to poor renewal practices, resulting in service disruptions or health and safety risks to residents or staff	Implementation of projects from building condition assessments into Capital Plan with identified funding
Enterprise Risks			
Climate Change Impacts (General impacts to all service attributes)		Extreme weather events damaging facilities and causing faster deterioration of building components	Continued understanding of asset deterioration through regular building condition assessments and consideration of building vulnerability assessments to improve resiliency (adaptation measures) to extreme weather events

4.6 Risk Monitoring & Review

Monitoring and reviewing risk levels, emerging risks and risk trends is important to manage the delivery of facility services. Per the City's SAMP, it is recommended that the City develop procedures to regularly check and critically observe the risk register and risk plan. A starting point is to focus on reliability risk and update the risk profile in Section 4.4 on an annual basis to reflect updated risk scores after the implementation of treatment strategies.

Further risk analysis is recommended to apply risks in a formalized way to capital planning (refer to Section 7). This work will assist in decision making regarding the prioritization of capital plan projects.

5 Lifecycle Strategy

The City expands or builds new facilities to meet capacity needs, upgrades assets to meet functional needs, and manages existing assets to meet reliability needs with available funding. Asset lifecycle management strategies are planned activities that enable assets to provide the service levels while managing risk at the lowest lifecycle cost. Asset lifecycle management strategies are typically organized into the categories listed in Table 5-1.

Table 5-1: Asset Lifecycle Management Categories

Lifecycle Activity Category	Description	Examples of Associated Activities
Expand/Grow	Activities to provide a new asset that did not exist previously or an expansion to an existing asset	New or expanded asset construction such as an expansion to a facility
Upgrade	Activities to provide a higher level of service capability from an existing asset to achieve better fit for purpose or meet regulatory requirements	Upgrades for HVAC energy efficiency, upgrades to meet washroom accessibility requirements
Renew	Activities that return the original service capability of an asset	Minor or major asset rehabilitations, asset replacements
Operate	Regular activities to provide services	Inspections, cleaning, utilities
Maintain	Activities to retain asset condition to enable it to provide service for its planned life	Planned maintenance, minor repairs, component replacements within a facility

In addition to the above asset strategies, non-asset solutions are also considered which are actions or policies that can lower costs, lower demands, or also extend asset life. For example, integrated capital planning such as bundling roof rehabilitations across multiple facilities under one contract may enable cost savings by grouping work into one project. Similarly, remote working policies can help lower the demand for facility office space.

5.1 Lifecycle Management Needs

The City intends to use its understanding of risks associated with different service levels to inform the timing and level of investments needed for its facility assets. This section of the FAMP outlines the City's growth needs to support capacity service levels, upgrade needs to address functional service levels, and the operations, maintenance, and renewal activities to support reliability service levels.

Disposals are performed as required when facilities are no longer required, too expensive to rehabilitate, or replaced by a new facility. The City reviews service levels related to condition and capacity to evaluate when a facility should be considered for disposal or replacement. The City recently closed the Canada Games Pool and is planning for the demolition of Centennial Community Centre in 2024. The new TACC facility replaces and provides additional capacity compared to these two previous facilities.

5.2 Planned Capital Growth

The City's main new facility over the next year is the TACC (təməsewtxʷ Aquatic and Community Centre), with planned funding remaining of $3.2 million in 2024. The new facility reinforces the community's cultural identity as an active healthy city by providing an important social and recreation gathering place for all its diverse residents. New facilities such as TACC are required to meet the City's Green Building Policy. Important aspects of the new facility include:

- Providing essential services as the only indoor pool in the community as well as being an important regional asset for fitness, length swimming and competitive training
- Providing a variety of multipurpose spaces that can be programmed for a range of fitness, training, leisure, and rehabilitation uses in order to meet both current and future demands
- Supporting excellence in competitive aquatics with a facility that can uphold the legacy of the Canada Games
- Offering an opportunity for a new, larger facility with improved operating efficiency and reduced energy consumption
- Creating a complete civic precinct with improved vehicular, cycling and pedestrian connections.

In addition to the TACC, the City is also completing a new public free-standing washroom. This washroom is a cross-departmental effort from the Homelessness Response Working Group, to address the need for accessible public washroom facilities for all people. This project is expected to be completed in 2024.

As indicated in Section 3.4.1, the City is currently developing capacity service levels through on-going Master Plans and other future studies. Updates to this FAMP will consider capacity service levels established in these future plans and the potential need for new facilities. Therefore, this FAMP reports on the currently planned growth projects but does not identify the total needs required to meet growth service levels.

5.3 Planned Capital Upgrades

Upgrade needs are identified as the currently planned projects relating to upgrade in the City's 5-year Capital Plan. Major renovations, similar to new facilities, adhere to the City's Green Building Policy. As discussed in the Levels of Service Tech Memo, in the Corporate Energy & Emissions Reduction Strategy (CEERS), the City has set specific GHG emission reduction recommendations and targets. The estimated costs of these projects totaled $1.3M, and the City currently has $1.1M of GHG emission reduction projects planned in the 2024 to 2028 Capital Plan.

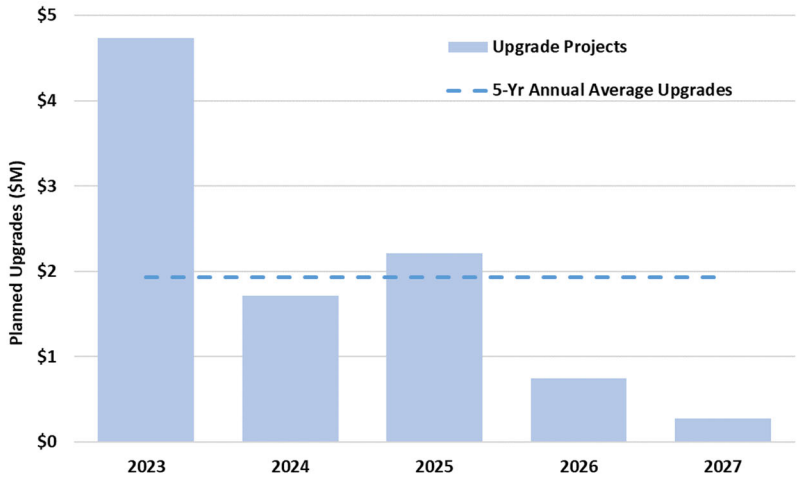
The City's Accessibility Committee is currently developing an Accessibility Plan which will guide accessibility actions within the City to mitigate risks related to inaccessible spaces. Upgrades listed in the current Capital plan include upgrades of the change rooms and washrooms at all three Fire Halls and the police station to be non-gendered and universal.

The average annual expenditure on upgrade projects in the 2024 to 2028 Capital Plan is $2.5/yr, as shown in Figure 5-1. Other upgrade projects include EV charging station infrastructure, new bicycle parking, and upgrades at Massey Theatre and Arts Complex. Several upgrade projects such as Massey

Theatre and Arts Complex are both renewal and upgrade projects. For these projects, it is assumed that 50% of the projects are associated to upgrade needs.

As indicated in Section 3.4.2, the City is currently developing functional service levels through future Master Plans and studies. Therefore, this FAMP reports on the currently planned upgrade projects but does not identify the total needs required to meet functional service levels.

Figure 5-1: 5-Year Planned Capital Upgrades

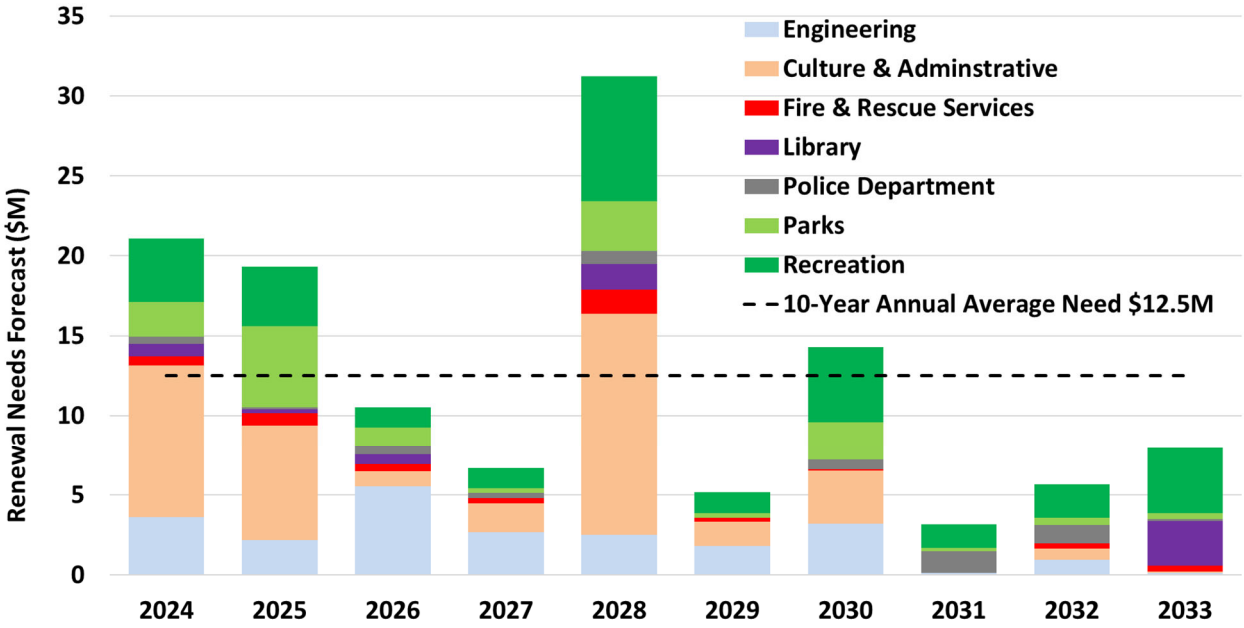


5.4 Capital Renewal Needs

The facility renewal forecast is based on the recommended activities from the facility condition assessments as well as the associated data maintained and updated in the City's SLAM software system. The estimated service lives assumed in the forecast considers the appropriate expected life over which an asset can still provide the required service levels before needing replacement. These typical estimated service lives are summarized in Appendix D. The timing of renewal activities in the forecast is determined based on the asset's current condition or age, and estimated service life from the facility condition assessment. This approach does not account for eventual replacement of the whole building, which may be decided by the City for strategic reasons or changes in functional requirements in addition to, or separate from, state of good repair needs.

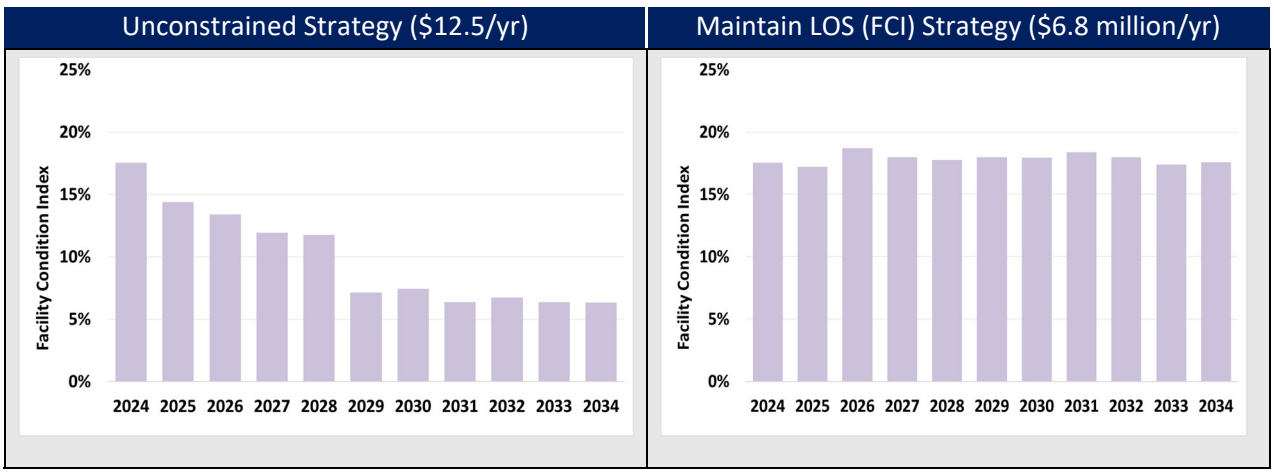
Figure 5-2 summarizes the unconstrained renewal and upgrade needs over the next 10 years for the City's facility assets. The unconstrained scenario represents the expenditures required to replace every building element as recommended by the condition assessment and forecasts in SLAM. The asset renewal and upgrade needs are estimated at an average of $12.5 million per year for the 10-year forecast. In the unconstrained forecast, the expenditure in the first year (2024) includes the expenditures required to clear the backlog of major repairs and replacements. A significant expenditure is expected in 2028 of the forecast due to the recommendations from the building condition assessments, which noted quite a few assets that were nearing end of life but were still in relatively good condition and performance, and not expected to require work until at least 2028. The forecast estimate will be further improved in future updates to the FAMP as the City refines its costing of projects, including soft costs such as engineering and project management.

Figure 5-2: 10-Year Capital Renewal Needs Forecast (Unconstrained)



If the City maintains its Facility Condition Index (FCI) at approximately 17% (overall fair condition), a backlog of needs can be carried through each year to the end of the forecast by deferring renewal on some assets. In this scenario, the estimated average annual renewal need is reduced to $6.8 million per year. A comparison of the FCI over the next 10 years for the unconstrained strategy and the maintain LOS strategy is summarized in Figure 5-3. As the City continues to improve the forecasts from the facility condition assessments and in the SLAM software, the accuracy of the estimated FCI forecast will also improve. Additional financial scenarios are discussed in Section 6.3.

Figure 5-3: Facility Condition Index Forecast (Unconstrained versus Maintain LOS Strategy)



The $6.8 million/yr expenditure represents an average annual investment of 1.4% of the facility portfolio replacement value. Though the FCI is maintained at approximately 17% at this expenditure, a significant

backlog is carried throughout the forecast, increasing the risk of higher overall lifecycle costs due to the impact of deferring maintenance work. The Canadian Infrastructure Report Card recommends a 1.7% to 2.5% annual investment for maintaining the state of good repair of facility assets. For the City, a lower investment compared to this benchmark can be anticipated due to the TACC facility, which is a high value asset; as a new facility, it should not require the 1.7% rate of investment during its first 10 years of operation. The affordability and service level impacts of various scenarios is discussed in Section 6.

5.5 Operations and Maintenance Needs

The City supports asset reliability service levels through operations and maintenance (O&M) work. Table 5-2 summarizes typical asset-related O&M activities for facility assets.

Table 5-2: Typical Operations and Maintenance Activities for Facility Assets

Asset	Operations & Maintenance Activities
Overall Facility	• Utilities: Gas, electricity, water • Re-painting • Conduct Building Condition Assessments
Structural / Architectural	• Foundation wall/waterproofing repairs • Brick and masonry block repairs • Interior wall and ceiling finish repairs • Roof repairs • Other minor investigations and repairs
Elevators, Life Safety Devices	• Inspections and testing per regulations • Preventive maintenance • Maintenance/repair as needed • Other minor repairs
HVAC, Plumbing, Electrical	• Preventive maintenance • HVAC component replacements and repairs • Piping and valve repairs • Generator testing • Emergency light testing • Other minor repairs
Site	• Snow clearing and general grounds maintenance • Parking lot asphalt repairs, crack sealing • Sidewalk and walkway repairs • Concrete stair and ramp repairs • Guard and handrail repairs/replacements • Other minor repairs

Table 5-3 summarizes the $1.8 million operating budget related to utility costs, subcontracts, scheduled maintenance, and unscheduled maintenance based on the City's current 2023 budget. The average annual increase beyond 2023 will be impacted by the estimated growth in the asset portfolio due to the

new TACC facility. Table 5-3 does not include salaries, insurance, and other non-asset related accounts in the operating budget.

Table 5-3: 2023 Operating Budget for Facilities Maintenance (Utilities and Maintenance)

Operating Budget Account	Library	Parks & Recreation Facilities	Facilities	Total
Electricity* (if provided externally, such as BC Hydro)	$0	$7,763	$20,118	$27,881
Gas	$17,568	$156,652	$156,875	$331,095
Scheduled Maintenance	$34,931	$238,024	$371,606	$644,561
Unscheduled Maintenance	$21,880	$59,960	$441,885	$523,725
Subcontracts	$70,608	$523	$170,180	$241,311
Total	**$144,987**	**$462,922**	**$1,160,664**	**$1,768,573**

*Note: While the majority of the City's facilities use electricity provided by the City of New Westminster Electrical Utility, some areas of the City rely on electricity from an external provider (generally in locations near the City Border). This table shows the operating budget for electricity provided by an external electricity provider. Data for City of New Westminster electricity use is captured outside of the Operating Budget and will be incorporated into future FAMP iterations.

The City is underfunded for both scheduled and unscheduled maintenance, with actual expenditures in quarter 1 of 2023 higher than the budgeted amounts for that quarter. The City has recently improved its preventive maintenance programs and formalized these activities into service contracts, increasing the costs for the scheduled maintenance program. For unscheduled maintenance, the City has focused on finding and fixing the root cause of problems and costs are therefore higher than repairs that only treat surface-level issues. The root-cause approach is best practice and expected to reduce costs over the longer-term.

6 Financial Strategy

The financial analysis is informed by the preceding sections of the Asset Management Plan: the value and condition of the assets, the current levels of service, the risks to service delivery, and the lifecycle activities needed to reduce the risks to acceptable levels. The financial strategy considers the affordability of the recommended asset management actions to maintain service levels.

A key challenge to financial sustainability is balancing level of service decisions with risk and affordability. This section of the FAMP provides preliminary funding shortfall estimates demonstrating the impacts of various funding scenarios. Forecast and funding gap analysis limitations are discussed in Section 6.5.

6.1 Budgeting Principles

Through the City's budgeting process, capital project and operating activity expenditure information is gathered from each service area, including investment needs, trends, and priorities, to prepare the capital and annual operating budget plans.

The setting of the annual budget and 5-year Capital Plan is guided by Financial Sustainability Principles that align with the City's core values and ensures that the City's budget is:

- Sustainable - Maintain assets in a state of good repair through reasonable tax/rate hikes, and without disruptions to services; living within our means;
- Adaptable - The ability to change debt levels or leverage reserves; ability to ramp up or down on spending;
- Stable - Predictability of City's Sustainable Revenue Sources, and less reliance on external funding or 3rd party funding; and
- Accountable - Fiscally prudent & responsible; the ability to ensure that the City's financial decisions are in the best interest of all.

6.2 Funding Sources

Each year, an updated 5-year Capital Plan is presented to Council, and the first year is reviewed for approval. The Operating Budget is also approved annually. Once the expenditure plans are finalized, a financing plan is developed which includes several key sources of funding.

The funding for the new TACC facility is mainly financed with debt and a minor portion funded through grants/contributions. Funding for the renewal and upgrade of existing facilities in the Capital Plan is mainly through reserves. The reserves are managed and guided by the City's Reserve Policies and support the delivery of services to residents, businesses and industries both today and into the future. Reserves are essentially savings accounts of the City and promote long-term sustainability and stability for asset renewal, replacement, growth, and rate stabilization. For energy and emission reductions and EV Charging initiatives that strive to do better than business as usual, the City will be releasing a decision-making framework to support funding opportunities through the Climate Action Reserve Fund.

The General Fund operating budget funds the operating expenditures such as facility utilities and maintenance discussed in Section 5.5. The main sources of revenues that pay for the City's General Fund include taxation, the sale of services, and grants/contributions.

6.3 Financial Sustainability

6.3.1.1 Capital Growth

As discussed in Section 5.2, the remaining cost for the new TACC facility is estimated to total $3.2 million in 2024. In addition to the TACC, the City is also installing a new public free-standing washroom. These growth projects are planned to maintain current service levels and are fully funded in the Capital Plan. The City may identify the need for additional facilities through on-going or future Master Plans, which will need to be incorporated into future updates to this FAMP.

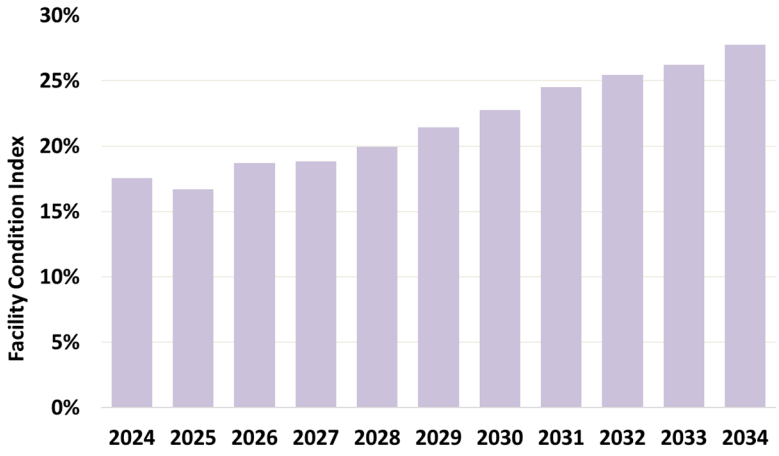
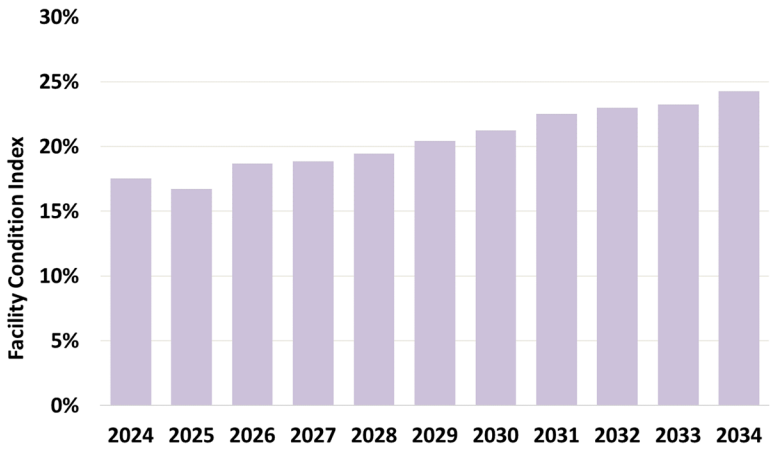
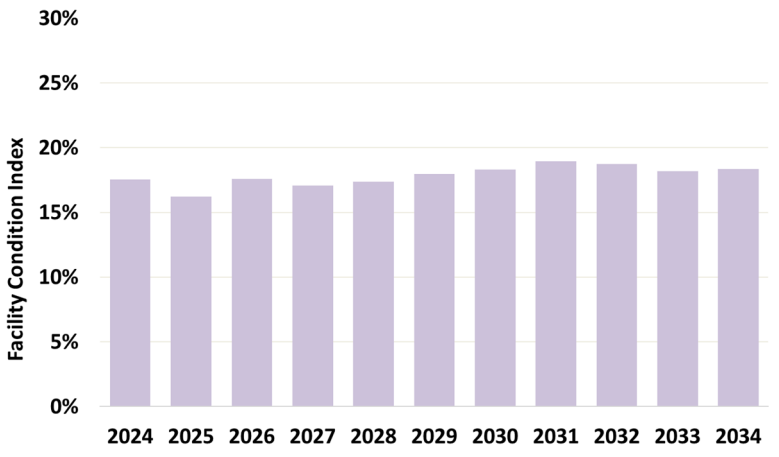
6.3.1.2 Capital Upgrade Needs

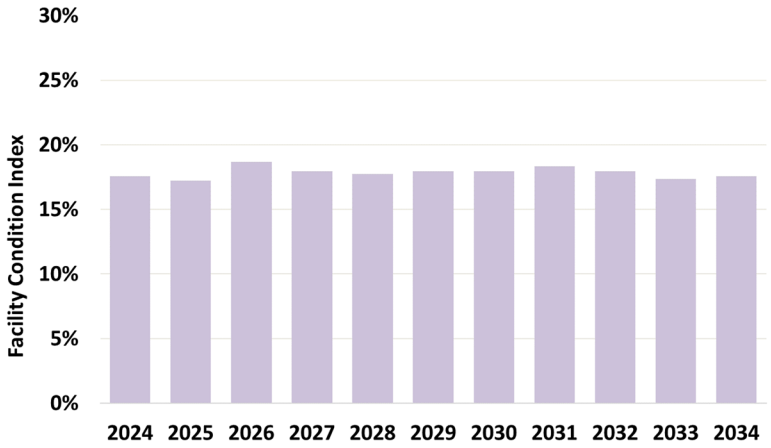
The average expenditure on upgrade projects in the 2023 to 2027 Capital Plan is $2.5M/yr for a total 5-year spend of $12.5 million. As discussed in Section 5.3, the City currently has $1.1M of GHG emission reduction projects planned in the 2024 to 2028 Capital Plan to support its GHG emission reduction targets. Other projects address accessibility upgrades, EV charging station infrastructure, new bicycle parking, and upgrades at Massey Theatre and Arts Complex. No funding shortfall is identified in this FAMP for upgrade needs, while recognizing that additional needs may be identified in on-going and future Master Plans, as well as the future Accessibility Plan.

6.3.1.3 Capital Renewal Needs

This FAMP considers four scenarios for capital renewal funding and their impact on reliability service levels (FCI). The first three scenarios align with the funding scenarios discussed as part of the Council Budget Workshop on October 16th, 2023 regarding the 2024 General Fund Capital Budget and 2024-2028 Five-Year Financial Plan. For subsequent years (2029 to 2033), this FAMP assumes similar funding strategies as used for each scenario from 2024 to 2028. The four funding scenarios and associated impact on Facility Condition Index are summarized in Table 6-1.

Table 6-1: Funding Scenario Descriptions and Facility Condition Index Forecast

Scenario	Facility Condition Index Forecast
Scenario 1: this funding scenario provided $16.6 million for total renewal over the next five years (2024 to 2028). This scenario assumes no funding through 2029 to 2033. FCI deteriorates to 27.7% (Fair but approaching Poor condition).	
Scenario 2 – Scenario 1 + $5 million (aligns with the proposed 2024-2028 Financial Plan): this scenario assumes the funding proposed in Scenario 1, plus an additional $2.5 million in each of 2027 and 2028, for a total of $21.6 million in the five year capital plan. For a full 10-year forecast, it is assumed that this funding would also be provided in each of the years 2029 to 2033. FCI deteriorates to 24.3% (Fair but approaching Poor condition)	
Scenario 3 - Scenario 1 + $17.5 million: this scenario assumes the funding proposed in Scenario 1, with an additional $2.5 million of funding in 2024, with an incremental $0.5 million added to each subsequent year from the previous year (additional $3 million in 2025, $3.5 million in 2026, etc.), for a total of $34.1 million in the five-year capital	

Scenario	Facility Condition Index Forecast
plan). FCI deteriorates slightly to 18.4% (Fair condition).	
Scenario 4 - 'Maintain FCI Scenario'; same additional $17.5 million in five-year Financial Plan and continued $6.8M/yr in years 6 to 10 : $6.8 million annual expenditure in each of the 10 years which maintains FCI at ~17% (Fair) as discussed in Section 5.4. This scenario requires an additional $51.9 million total over 10 years).	

The unconstrained need, four scenarios, and average annual funding gap are shown in Figure 6-1.

Figure 6-1: Renewal Forecast and Financing Scenario Comparison

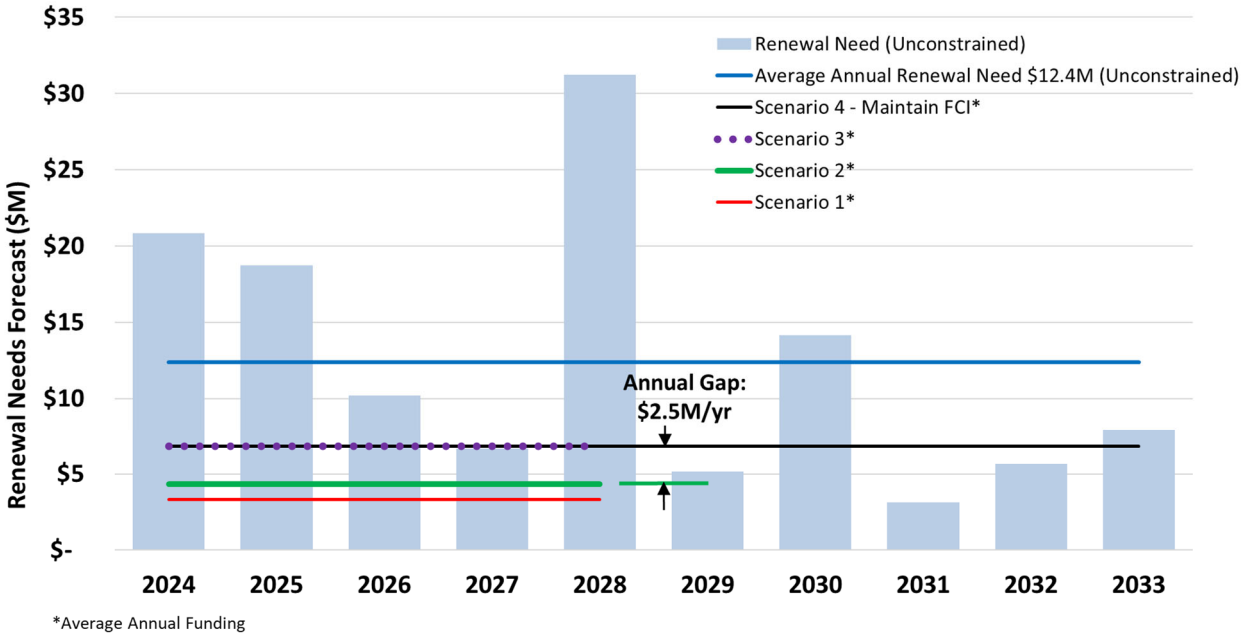


Table 6-2 summarizes the funding assumed for each of the four scenarios and the impact on FCI over the next 10 years in tabular format. With Scenario 2 funding, the FCI increases (lowers condition) from 17.5% to 20.4% by the end of 2028 and further increases to 24.3% at the end of 2033. The 'Renewal Need (unconstrained)' is determined by the Facility Condition Assessment data.

Table 6-2: Funding Values ($M) and Impacts on FCI Forecast by Funding Scenario

Scenario	Current	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	5-yr Total	10-yr Total
Scenario 1													
Additional Funding	-	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Total Renewal Funding	-	$9.4	$4.3	$2.3	$0.2	$0.5	$0.0	$0.0	$0.0	$0.0	$0.0	$16.6	$16.6
FCI (at end of year)	17.5%	16.7%	18.7%	18.9%	19.9%	21.4%	22.7%	24.5%	25.5%	26.2%	27.7%	-	-
Scenario 2													
Additional Funding	-	$0.0	$0.0	$0.0	$2.5	$2.5	$2.5	$2.5	$2.5	$2.5	$2.5	$5.0	$17.5
Total Renewal Funding	-	$9.4	$4.3	$2.3	$2.7	$3.0	$2.5	$2.5	$2.5	$2.5	$2.5	$21.6	$34.1
FCI (at end of year)	17.5%	16.7%	18.7%	18.9%	19.4%	20.4%	21.3%	22.5%	23.0%	23.2%	24.3%	-	-
Scenario 3													
Additional Funding	-	$2.5	$3.0	$3.5	$4.0	$4.5	$5.0	$5.5	$6.0	$6.5	$7.0	$17.5	$47.5
Total Renewal Funding	-	$11.9	$7.3	$5.8	$4.2	$5.0	$5.0	$5.5	$6.0	$6.5	$7.0	$34.1	$64.1
FCI (at end of year)	17.5%	16.2%	17.6%	17.1%	17.4%	18.0%	18.3%	19.0%	18.7%	18.2%	18.4%	-	-
Scenario 4													
Additional Funding	-	-$2.5	$2.5	$4.5	$6.7	$6.4	$6.8	$6.8	$6.8	$6.8	$6.8	$17.5	$51.6
Total Renewal Funding	-	$6.8	$6.8	$6.8	$6.8	$6.8	$6.8	$6.8	$6.8	$6.8	$6.8	$34.1	$68.2
FCI (at end of year)	17.5%	17.2%	18.7%	18.0%	17.7%	18.0%	17.9%	18.3%	18.0%	17.4%	17.5%	-	-

6.3.1.4 Operations and Maintenance

As discussed in Section 5.5, the City has a 2023 operating budget of $1.8 million related to utility costs, subcontracts, scheduled maintenance, and unscheduled maintenance. This budget is currently underfunded for both scheduled and unscheduled maintenance. Finding an appropriate balance of scheduled and unscheduled maintenance is important for risk management and reliability of service levels. Maintenance expenditure is also critical where asset replacement is not affordable and the City needs the asset to continue providing a service beyond its optimum lifespan. The operating budget will also need to be increased to account for the addition of the new TACC facility to the City's asset portfolio.

6.4 Affordability of Current Service Levels

Table 6-3 summarizes the financial sustainability and affordability for growth, upgrades, and renewal activities based on the discussions in Section 6.3. The focus is on the next 5-year period to align with the City's upcoming 2024-2028 Financial Plan. An infrastructure gap for capital renewal needs is estimated at $12.5 million over the next five years. An appropriate level of renewal funding will be determined through the annual Capital Planning process, in consideration of the current funding gap and associated impact on facility condition. For the operating budget, a 5-year forecast is not provided in this FAMP, but future year budgets should incorporate the impacts of the new TACC facility.

Table 6-3: Summary of 5-Year Financial Sustainability and Affordability of Current Service Levels

Asset Lifecycle	5-Yr Total Forecast Needs	5-Yr Total Planned Funding	5-Yr Total Gap	Comments
Capital Growth	Not identified	$3.7M	No identified shortfall over 5-year plan	On-going and future Master Plans by Service Areas will confirm growth needs
Capital Upgrade	Not identified	$12.5M	No identified shortfall over 5-year plan	On-going and future Master Plans by Service Areas and future Accessibility Plan will confirm upgrade needs
Capital Renewal	$34.1M (Scenario 4)	Scenario 2 $21.6M ($4.3M/yr)	$12.5M ($2.5M/yr)	Scenario 4 funding maintains the average portfolio FCI at 17.5%. Scenario 3 matches Scenario 4 funding over the first 5 years but does not maintain FCI through years 6 to 10. These scenarios are recommended to be reviewed to determine an appropriate service level balanced against the associated costs and risks.

6.5 Forecast and Funding Gap Limitations

The forecasts and funding gap estimates in this FAMP are based on currently available data. The City has relatively up-to-date data maintained in SLAM software which documents facility condition assessment

recommendations. As the City continues to refine the estimated project costs, the confidence in forecasts and funding gap estimates will also improve.

For the City's newer facilities without building condition assessment data (TACC, Quayside Elevator, and Riverwalk Daycare), it was assumed that a 0.5% annual investment rate will be required over the next 5 years, increasing to 1% in years 6 to 10. The forecast for these facilities will be replaced with more accurate recommendations from future building condition assessments as they are completed.

The four scenarios for capital renewal incorporate varying amounts of deferred maintenance (backlog) that increases throughout the forecast. Deferring capital work may result in more expensive rehabilitations or replacements, shorter asset life, or increases in unscheduled maintenance. These additional cost impacts are not included in the FCI forecast analysis and may result in worse FCI values over the forecast period than estimated in Table 6-2.

As indicated in Section 4.2.2, climate change risks can result in facility elements deteriorating faster than anticipated due to the impacts of extreme weather on building components. The potential impacts of climate change on state of good repair costs are currently difficult to estimate and are not included in the forecasts in Section 6.4.

The financial analysis is based upon data related to renewals as primarily collected through the Facility Condition Assessment and does not include considerations on staff resources at this time. This will be considered as part of the ongoing work related to the Facilities Asset Management Plan.

7 Implementation & Continuous Improvement

The City is committed to continually improving the way assets are managed and how services are delivered. This FAMP will require continual improvement of the asset management practices employed as part of the City's asset management journey.

7.1 Governance and Implementation

Supporting the continuous improvement for the FAMP will involve commitment from active stakeholders engaged in the advancement of asset management at the City. Roles and responsibilities in supporting the successful implementation of the FAMP are discussed in the stakeholder summary in Section 1.4.

Governance, related to asset management, involves identifying the ways in which an organization makes decisions and assigns responsibility related to asset classes, asset components and projects. Civic Buildings & Properties is currently developing an asset management governance model for City facilities that will identify the responsibilities of City departments and divisions in regards to the planning and delivery of asset operations, maintenance, renewal, upgrade, and acquisitions. Additional work is needed at the City-wide level related to City-wide Asset Management Governance.

Key activities for implementation of the FAMP include:

- Regularly communicating the FAMP objectives and strategies which will further advance the culture of asset management;
- Considering the FAMP recommended renewal investment in financial planning;
- Tracking performance to determine if outcomes are being achieved and determine where additional supports may be required;
- Implementing the FAMP's Improvement Plan through multi-departmental initiatives; and
- Reviewing and updating the FAMP.

7.2 Delivery Risks and Uncertainties

The City faces several uncertainties that may impact effective service delivery. Notable risks include:

- **Not providing adequate funding for increased capital investment**: In order to deliver the renewal needs to maintain service levels, increased funding is required compared to the current 10-yr Capital Plan. Not securing the increased funding will likely result in a deterioration of asset condition across the portfolio and shorter asset lifespans which will increase the demand for investment in asset renewals. High investment needs also make it challenging for the City to build its reserve funds.
- **Not providing adequate resourcing for increased capital investment**: Both internal and external resources will need to be increased to provide effective system design, coordinate investment planning and construction with other teams, manage projects and contracts, and provide sufficient operations, procurement, human resources, and financial support.
- **Potential additional Metro Vancouver levies or fees:** There is a risk that Metro Vancouver will place additional fees or levies on the City, which would place additional strain on the budget

- **Inadequate coordination of capital projects**: Successful delivery of the FAMP will require effective integration of capital projects from across the City's service areas as each seeks to deliver the required investment to sustain services. This will require advanced definition and scoping of projects, which will have the added benefit of being first-to-market in a high- cost construction environment.
- **Inadequate resources to implement the City's climate action related policies**: Sufficient staff resources and funding need to be provided to implement policies such as the City's Green Building Policy.

7.3 Implementation Roadmap

The FAMP serves as the guiding document to manage the City's facility infrastructure effectively and efficiently. Table 7-1 identifies recommended activities that support the implementation of the FAMP.

Table 7-1: Implementation Activities

Item	Frequency
Endorsement of FAMP by the AM Steering Committee: Presentation to AM Steering Committee for FAMP review and adoption. Assigning support to implement the FAMP.	Every 4 or 5 years
Update FAMP	Every 4 or 5 years
Coordinate, Engage, Collaborate and Communicate the FAMP: Implement Standing Meeting Agenda covering Condition of assets; Repairs, replacements and renewals of assets and associated budgeting; Risk assessment conducted and changes in risk status of assets	Annual
Incorporate FAMP findings: Use FAMP forecasts to inform budgeting processes and long-range financial plans.	Annual (aligned with capital and operating budget process)
Develop Business Cases: Develop and submit business cases for proposed capital projects as part of the annual budget requests to demonstrate options to address needs and the benefits to service delivery.	Annual
Prepare Benefits Summary: Measure the success of projects based on whether service levels have been achieved and high risks have been mitigated or addressed.	Annual
Implement FAMP Improvement Plan: Prioritize and plan for the implementation of the FAMP improvement activities. Assign and review roles and responsibilities, set timelines and milestones	Annual
Implement Quality Assurance Audit: Assess the level of effort of the current data collection methods and quality of information.	Annual
Review Climate Change Impacts: Monitor climate change impacts to facility infrastructure to understand ongoing resilience of facility assets. Incorporate findings into capital plans and revisions to the FAMP.	Annual

The broader City asset management roadmap is outlined in the SAMP and provides guidance on corporate capability improvements in asset management. Like the FAMP implementation activities, these asset management efforts need to be championed and communicated effectively by City Council and the Executive team and resources need to be assigned to carry out the activities.

7.4 Improvement Plan

This FAMP has revealed some gaps and opportunities for improvement.

Table 7-2 identifies recommendations that will help the FAMP evolve and improve through each iteration.

Table 7-2: Recommended Improvement Plan

AM Plan Section	Gap	Improvement Recommendation	Led by Division(s)
State of Infrastructure	Improve accuracy of Facility Condition Index	Continue to improve accuracy of Facility Condition Index ratings (refer to improved forecast recommendations in Lifecycle Strategy)	Civic Buildings & Properties
	Complete facility inventory	Add Facilities and Structures not currently included in the AMP such as the Fuel Pumping Station (Engineering Operations) that should be considered as part of the Building Asset Class. Document those structures that may not be suited for the Building Asset Class, so that they can be included in another Asset Class.	Civic Buildings & Properties
	Improve accuracy of facility replacement values.	Replacement costs were updated based on benchmark unit construction costs for some facilities. Additional review of unit construction costs and modifying costs by individual facility is recommended in future updates of replacement value.	Civic Buildings & Properties
	Improve accuracy of component replacement values	Review and improve accuracy of replacement costs at the building component level including appropriate soft costs.	Civic Buildings & Properties
	Facility Audits	Complete Energy and Accessibility Audits on all Civic Facilities to provide baselines for capital planning and for considering improvements.	Civic Buildings & Properties

AM Plan Section	Gap	Improvement Recommendation	Led by Division(s)
Levels of Service	Establish capacity and functional service levels as part of Service Area Master Plans and studies, and corporate plans such as Accessibility Plan	Service Area or Department Master Plans, Strategies, and studies should inform the service measures and performance levels used to make recommendations regarding growth, expansion, and upgrades for facility assets. AMP to incorporate these measures as appropriate in future updates.	Individual Service Areas
		The scope of the upcoming Facility Space Planning Strategy should consider which Service Areas and facilities it will include in its analysis, as well as consideration of both staff and storage space needs.	Civic Buildings & Properties
		Accessibility Plan to set service levels regarding accessibility of facilities, such as universal washrooms and removal of barriers.	Accessibility Advisory Committee (future)
	Establish tracking and monitoring process for LOS measures	Track and monitor performance on measures included in this FAMP, on an annual basis. Establish what data needs to be collected to track indicators and develop an understanding of the current LOS. Determine what data is currently being collected, and what gaps exist where additional data is required to generate the required reports. Determine targets once the current performance is well understood. Review and update service levels as required to reflect alignment with other City plans and studies.	Civic Buildings & Properties
	Update Green Building Policy	Update Green Building Policy to include renewal projects in existing facilities.	Civic Buildings & Properties

AM Plan Section	Gap	Improvement Recommendation	Led by Division(s)
	Accessibility Policy	Develop Accessibility Policy	Accessibility Advisory Committee/ Multiple Departments
Risk Management	Complete risk assessment at building component level and Risk Register	Build on the facility-level risk assessment in this FAMP and apply risk assessment at the building component level to better understand the level of risk across asset types (such as roofs, HVAC, and electrical components). This risk assessment would help apply risk in a formalized way to capital projects and inform decision-making regarding the prioritization of projects as part of the capital budgeting process. This work could become basis for a Risk Register.	Civic Buildings & Properties
	Formalize Risk Analysis Review	Develop procedures to regularly check and critically observe a Risk Register. A starting point is to focus on reliability risk and update the risk evaluation in Section 4.4 of this document on an annual basis. Further risk analysis is recommended to apply risks in a formalized way to capital planning. This work will assist in decision making regarding the prioritization of capital plan projects.	Civic Buildings & Properties

AM Plan Section	Gap	Improvement Recommendation	Led by Division(s)
	Develop system-level risk assessment	Develop a system-level risk assessment that supports the facility and building component level risk assessment. The system-level assessment considers broader risks that could affect facility services such as power failure, inadequate staff resources to delivering capital projects, missing or lack of critical asset data, and extreme weather events. Evaluation of these broader risks supports overall budgeting decisions when decisions are required between City initiatives, such as deciding to spend funding on state of good repair programs versus increasing the resilience of buildings to extreme weather events.	Civic Buildings & Properties
	Monitor and plan for impacts due to climate change	Monitor for faster deterioration of building components. Consider facility vulnerability assessments for critical facilities to understand risks due to extreme weather events and implement upgrades for increased facility resiliency.	Multiple Departments
Lifecycle Strategy	Develop O&M forecasting	Improve understanding of the level of effort (cost/resource needs) and frequency of operations and maintenance activities to increase accuracy of forecasting of annual O&M requirements for asset-related maintenance accounts, such as scheduled maintenance. This will enable the City to start assessing funding gaps in specific operating budget accounts.	Civic Buildings & Properties
	Improve capital planning	Make improvements to the renewals projects in the Civic Buildings & Properties Capital Plan to align more closely with the renewal data captured through the Facility Condition Assessments. This work will also provide	Civic Buildings & Properties

AM Plan Section	Gap	Improvement Recommendation	Led by Division(s)
		a baseline for better quantifying upgrades (such as those related to Climate Action).	
	Align completion of project delivery and building condition assessment recommendations	As projects are completed, the forecasts in the City's SLAM software should be updated to reflect needs that are no longer required. As facility condition assessments are typically completed every 5 years (or longer), this ensures that the forecast is up-to-date and does not overestimate the renewal forecast.	Civic Buildings & Properties
	Capture electrical use data	Capture data on electricity used by facilities as supplied by the City's Electrical Utility into future FAMP iterations	Civic Buildings & Properties/ Finance with Climate Action support
	Improve renewal costing estimates	Improve accuracy of project costs from building condition assessments reported in SLAM software, in particular increase understanding of expected soft costs. The project costs influence the forecast but also the Facility Condition Index ratings in the State of Infrastructure analysis.	Civic Buildings & Properties
Financial Strategy	Develop long term funding strategies.	Work with Finance to identify funding strategies to meet expenditure requirements and build reserves. Be proactive in planning for future needs and update forecasts on a regular basis.	Civic Buildings & Properties
	Extend capital planning from 5 to 10 years	Move towards a 10-year Capital Plan which will allow for increased understanding of needs over the longer term, identify gaps in funding, and enable more proactive planning regarding the funding gap and ways to address it.	Senior Management Team

AM Plan Section	Gap	Improvement Recommendation	Led by Division(s)
Overall FAMP Improvements	Dedicated Staff resource to FAMP Improvements	Identify staff role or person to manage the Improvement Actions to assist with improvements	Civic Buildings & Properties

Appendix A –Facility List with Replacement Value and Condition

Note that unit cost in the following table is specified where used to determine facility replacement value. Where unit cost is not specified in this table, the sum of component replacement costs per the FCA (SLAM software) has been used to determine the replacement value. Industry standard unit costs are not typically available for park facilities or structures such as pavilions. FCA costs were also used where replacement values based on unit construction costs were less than the FCA costs.

Service Area	Building Name	Unit Cost (per sq.ft.)	Replacement Value Final	FCI	Condition
Culture & Administrative	Queen's Park - Bernie Legge Theatre	$875	$3,304,875	9.3%	Good
	Fraser River Discovery Centre (FRDC)	$525	$8,999,025	18.7%	Fair
	River Walk Childcare	$400	$855,432	2.5%	Very Good
	Massey Theatre and Arts Complex	$875	$49,875,000	34.7%	Poor
	City Hall	$400	$23,087,200	49.9%	Poor
	Irving House*	$525	$6,877,500*	14.2%	Good
	New West Museum & Archives Annex	$525	$2,677,500	29.8%	Fair
	Anvil Centre	$500	$52,551,000	1.4%	Very Good
Electrical	Engineering Operations: Electrical Operations Main Office and Storage	$400	$3,264,000	36.7%	Poor
Engineering	Animal Shelter		$4,028,695	0.0%	Very Good
	Cemetery Building & Tool Shed		$226,161	431.4%	Very Poor
	Moody Park - Lawn Bowling Storage Shed		$152,020	89.6%	Very Poor
	Engineering Operations: Engineering Main Office; shared with electrical.	$400	$9,850,400	31.8%	Poor
	Engineering Operations: Engineering Storage Bays	$400	$2,400,000	42.1%	Poor
	Engineering Operations: Equipment and Tire Storage	$400	$780,800	59.2%	Poor
	Engineering Operations: Salt Shed		$159,280	39.6%	Poor
	Engineering Operations: Yard		$2,086,000	27.5%	Fair
	Parks Administration Building	$400	$1,614,400	49.0%	Poor
	151 Spruce Street Building		$3,778,301	68.8%	Very Poor
	940 Quayside Elevator (Quayside Drive)		$1,300,000	2.5%	Very Good
	Front Street Parkade (stand alone parkade)		$30,261,000	5.4%	Good
	Anvil Parkade		$15,495,612	4.7%	Very Good
Fire & Rescue Services	Glenbrook Firehall 1	$500	$7,228,500	21.1%	Fair
	West End Fire Hall 2	$500	$1,887,500	47.9%	Poor
	Queensborough Fire Hall		$3,514,243	33.5%	Poor

Service Area	Building Name	Unit Cost (per sq.ft.)	Replacement Value Final	FCI	Condition
Library	Public Library	$430	$17,989,910	18.4%	Fair
Parks	Moody Park - Lawn Bowling Clubhouse		$835,064	41.0%	Poor
	Grimston Park - Washroom Building		$190,992	25.6%	Fair
	Hume Park - Washroom and Storage/ Caretakes/ Maintenance Building		$775,308	37.5%	Poor
	Hume Park – Concession and Spray Park Service Building		$160,408	30.6%	Poor
	Lower Hume Park - Picnic Shelter		$365,499	3.2%	Very Good
	Lower Hume Park - Washrooms and Storage		$330,329	19.2%	Fair
	Mercer Stadium Grandstand and Washroom		$2,747,900	85.0%	Very Poor
	Mercer Storage Shed (BP007567)		$586,225	4.2%	Very Good
	Moody Park - Washroom and Storage		$357,212	7.4%	Good
	Quayside Park Washroom		$127,651	24.3%	Fair
	Queen's Park - Bandshell		$671,475	65.4%	Very Poor
	Queen's Park - Picnic Shelter #2 - Checkerboard		$113,557	0.0%	Very Good
	Queen's Park - Gazebo (rose garden)		$88,464	2.7%	Very Good
	Queen's Park - Greenhouses		$2,545,080	33.9%	Poor
	Queens Park - Picnic Shelter #1		$244,451	0.0%	Very Good
	Queens Park - Stadium		$5,069,225	64.1%	Very Poor
	Queen's Park - Concession/		$852,999	0.0%	Very Good
	The Farm		$976,874	14.0%	Good
	Queens Park - Mechanics Yard - Main building (including Mechanic Shop, Offices, Equipment Bays and Paint Shop)		$1,604,345	87.6%	Very Poor
	Queens Park - Mechanics Yard - Carpenter's building		$1,007,102	79.7%	Very Poor
	Queensborough - Ryall Park Picnic Shelter		$127,392	6.5%	Good
	Sapperton Park - Dressing Rms &Washrooms		$473,799	85.0%	Very Poor
	Pier Park Concession Washroom, Elevator and timber structure		$2,422,998	1.0%	Very Good
	Simcoe Park Washroom (In SD 40 bldg)		$62,192	6.0%	Good
	Moody Park - Diamond #1 Storage and Scorekeeper Box		$131,822	20.0%	Fair
	Moody Park: Little League Stadium & Fieldhouse		$124,869	40.5%	Poor
	Queensborough - Old Schoolhouse Park - Shelter		$160,338	1.2%	Very Good
	Queensborough Port Royal - Central Park Picnic Shelter and Washroom		$284,045	5.1%	Good

Service Area	Building Name	Unit Cost (per sq.ft.)	Replacement Value Final	FCI	Condition
	Queensborough Port Royal garden shed and overhead trellis		$205,864	1.4%	Very Good
Parks	Queen's Park - Boardroom / Gardner Lunch Room (Staffroom/ Gardener's Building)		$842,399	59.0%	Poor
	Queensborough Outdoor Stage		$122,282	0.0%	Very Good
	Terry Hughes Washroom (attached to school)		$71,504	80.6%	Very Poor
	Wharf Building Heritage Asset		$956,824	60.0%	Poor
Police Department	Police Service Building	$530	$28,462,060	7.9%	Good
	Fourth Street Parkade (air space in strata bldg) and elevator		$15,742,500	17.5%	Fair
Recreation	Moody Park - Pool Building and Washroom		$3,450,931	11.5%	Good
	Century House and Youth Centre (Pilot)	$505	$12,570,460	18.7%	Fair
	Queen's Park - Centennial Lodge, Queen's Park Preschool, and Gallery		$2,734,374	30.1%	Poor
	Hume Park - Pool & Dressing Room Bldg (Upper)		$1,340,174	45.7%	Poor
	Moody Park – Arena (Ice Rink)		$11,725,541	21.1%	Fair
	Queensborough Community Centre, Library and Daycare	$505	$13,746,100	8.2%	Good
	Queen's Park - Arena	$345	$19,891,665	39.2%	Poor
	Queens Park - Sportsplex	$505	$6,438,750	0.0%	Very Good
	TACC		$114,600,000	2.5%	Very Good

* A factor of 250% was added to the calculated replacement value for Irving House to accommodate for the fact that Irving House is a Heritage Asset and the replacement value should not be defined in the same manner as a non-heritage asset. The FAMP State of Infrastructure analysis in Section 2 uses the original replacement value for reporting purposes.

Appendix B – Preliminary Risk Ratings

	Service Area	Building Name	PoF	CoF	Highest CoF Reason	Risk Category
	Culture & Administrative	Queen's Park - Bernie Legge Theatre	2	3	Availability/Reliability	Moderate
		Fraser River Discovery Centre (FRDC)	3	3	Availability/Reliability or Financial	Moderate
		River Walk Childcare	1	2	Availability/Reliability or Corporate Image	Low
		Massey Theatre and Arts Complex	4	4	Availability/Reliability	Very High
		City Hall	4	4	Availability/Reliability	Very High
		Irving House	4	2	Corporate Image	Moderate
		New West Museum & Archives Annex (Pilot)	3	3	Availability/Reliability	Moderate
		Anvil Centre	1	4	Availability/Reliability	Moderate
	Electrical	Engineering Operations: Electrical Operations Main Office and Storage	4	4	Availability/Reliability	Very High
	Engineering	Animal Shelter	1	2	Availability/Reliability	Low
		Cemetery Building & Tool Shed	5	1	-	Moderate
		Moody Park - Lawn Bowling Storage Shed	5	1	-	Moderate
		Engineering Operations: Engineering Main Office (including lunchroom, fleet, stores); shared with electrical.	4	5	Availability/Reliability	Very High
		Engineering Operations: Engineering Storage Bays (south of the Main Office)	4	2	Availability/Reliability	Moderate
		Engineering Operations: Equipment and Tire Storage	4	2	Availability/Reliability	Moderate
		Engineering Operations: Salt Shed	4	3	Availability/Reliability	High
		Engineering Operations: Yard	3	3	Availability/Reliability	Moderate
		Parks Administration Building	4	3	Availability/Reliability	High
		151 Spruce Street Building	5	2	Financial	High
		940 Quayside Elevator (Quayside Drive)	1	2	Availability/Reliability	Low
		Front Street Parkade (stand alone parkade)	2	3	Availability/Reliability	Moderate
		Anvil Parkade	1	3	Availability/Reliability	Low
	Fire & Rescue Services	Glenbrook Firehall 1	3	5	Health and Safety	High
		West End Fire Hall 2	4	5	Health and Safety	Very High
		Queensborough Fire Hall	4	5	Health and Safety	Very High

	Service Area	Building Name	PoF	CoF	Highest CoF Reason	Risk Category
	Library	Public Library	3	3	Availability/Reliability	Moderate
	Parks	Moody Park - Lawn Bowling Clubhouse	4	2	Availability/Reliability	Moderate
		Grimston Park - Washroom Building	3	2	Availability/Reliability	Moderate
		Hume Park - Washroom and Storage/ Caretakes/ Maintenance Building	4	2	Availability/Reliability	Moderate
		Hume Park – Concession and Spray Park Service Building	4	2	Availability/Reliability	Moderate
		Lower Hume Park - Picnic Shelter	1	1	Availability/Reliability	Low
		Lower Hume Park - Washrooms and Storage	3	2	Availability/Reliability	Moderate
		Mercer Stadium Grandstand and Washroom	5	3	Availability/Reliability or Financial	Very High
		Mercer Storage Shed (BP007567)	1	1	Availability/Reliability	Low
		Moody Park - Washroom and Storage	2	2	Availability/Reliability	Low
		Quayside Park Washroom	3	2	Availability/Reliability	Moderate
		Queen's Park - Bandshell	5	2	Availability/Reliability	High
		Queen's Park - Picnic Shelter #2 - Checkerboard	1	1	Availability/Reliability	Low
		Queen's Park - Gazebo (rose garden)	1	1	Availability/Reliability	Low
		Queen's Park - Greenhouses	4	2	Availability/Reliability	Moderate
		Queens Park - Picnic Shelter #1	1	1	Availability/Reliability	Low
		Queens Park - Stadium	5	3	Availability/Reliability or Financial	Very High
		Queen's Park - Concession/	1	2	Availability/Reliability or Financial	Low
		The Farm	2	2	Availability/Reliability	Low
		Queens Park - Mechanics Yard - Main building (including Mechanic Shop, Offices, Equipment Bays and Paint Shop)	5	2	Availability/Reliability	High
		Queens Park - Mechanics Yard - Carpenter's building	5	2	Availability/Reliability	High
		Queensborough - Ryall Park Picnic Shelter	2	2	Availability/Reliability	Low
		Sapperton Park - Dressing Rms &Washrooms	5	2	Availability/Reliability	High
		Pier Park Concession Washroom, Elevator and timber structure	1	2	Availability/Reliability or Financial	Low
		Simcoe Park Washroom (In SD 40 bldg)	2	2	Availability/Reliability	Low

	Service Area	Building Name	PoF	CoF	Highest CoF Reason	Risk Category
		Moody Park - Diamond #1 Storage and Scorekeeper Box	3	2	Availability/Reliability	Moderate
		Moody Park: Little League Stadium & Fieldhouse	4	3	Availability/Reliability	High
		Queensborough - Old Schoolhouse Park - Shelter (stand alone at Ewen and Derwent)	1	2	Availability/Reliability	Low
		Queensborough Port Royal - Central Park Picnic Shelter and Washroom (note: near res. Tower)	2	2	Availability/Reliability	Low
		Queensborough Port Royal garden shed and overhead trellis	1	1	Availability/Reliability	Low
		Queen's Park - Boardroom / Gardner Lunch Room (Staffroom/ Gardener's Building)	4	2	Availability/Reliability	Moderate
		Queensborough Outdoor Stage	1	3	Availability/Reliability	Low
		Terry Hughes Washroom (attached to school)	5	2	Availability/Reliability	High
		Wharf Building Heritage Asset	4	2	Availability/Reliability	Moderate
	Police Department	Police Service Building	2	5	Health and Safety	High
		Fourth Street Parkade (air space in strata bldg) and elevator	3	3	Availability/Reliability	Moderate
	Recreation	Moody Park - Pool Building and Washroom	2	2	Availability/Reliability	Low
		Century House and Youth Centre (Pilot)	3	2	Availability/Reliability	Moderate
		Queen's Park - Centennial Lodge, Queen's Park Preschool, and Gallery	4	2	Availability/Reliability	Moderate
		Hume Park - Pool & Dressing Room Bldg (Upper)	4	2	Availability/Reliability	Moderate
		Moody Park – Arena (Ice Rink)	3	4	Availability/Reliability	High
		Queensborough Community Centre, Library and Daycare	2	4	Availability/Reliability	High
		Queen's Park - Arena	4	4	Availability/Reliability	Very High
		Queens Park - Sportsplex	1	4	Availability/Reliability	Moderate
		TACC	1	4	Availability/Reliability	Moderate

Appendix C – Uniformat Element Preliminary CoF Ratings

Uniformat Level 1	Uniformat Level 3	CoF	Main Impact
A - Substructure	A1010 - Foundations	5	H&S (Minimum CoF)
	A1030 - Slab on Grade	3	H&S (Minimum CoF)
	A2020 - Basement Walls	5	H&S (Minimum CoF)
B - Shell	B1010 - Floor Construction	3	H&S (Minimum CoF)
	B1020 - Roof Construction	5	Financial, H&S (Minimum CoF), Service Delivery
	B1030 - Structure	5	H&S (Minimum CoF), Service Delivery
	B2010 - Exterior Walls	2	Financial
	B2020 - Exterior Windows	2	Financial
	B2030 - Exterior Doors	2	Financial
	B3010 - Roof Coverings	3	Financial, Service Delivery
	B3020 - Roof Openings	3	Financial, Service Delivery
C - Interiors	C1010 - Internal Partitions	1	
	C1020 - Interior Doors	2	Service Delivery
	C1030 - Fittings	1	
	C2010 - Stair Construction	3	H&S (Minimum CoF)
	C2020 - Stair Finishes	1	
	C3010 - Wall Finishes	1	
	C3020 - Floor Finishes	1	
	C3030 - Ceiling Finishes	1	
D - Services	D1010 - Elevators	3	H&S (Minimum CoF)
	D1020 - Escalators & Moving Walkways	3	H&S (Minimum CoF)
	D1090 - Other conveying Systems	3	H&S
	D2010 - Plumbing Fixtures	1	
	D2020 - Domestic Water Distribution	Match facility	Service Delivery
	D2030 - Sanitary Waste	Match facility	Service Delivery
	D2040 - Rain Water Drainage	1	
	D2090 - Other Plumbing Systems	1	
	D3010 - Energy Supply	Match facility	Service Delivery
	D3020 - Heating System	Match facility	Service Delivery
	D3030 - Cooling Generating Systems	Match facility	Service Delivery
	D3040 - Distribution System	Match facility	Service Delivery
	D3050 - Terminal Package System	Match facility	Service Delivery
	D3060 - Controls and Instrumentation	Match facility	Service Delivery
	D3090 - Other HVAC Systems & Equipment	Match facility	Service Delivery
	D4010 - Sprinklers	5	H&S (Minimum CoF)
	D4020 - Standpipes	5	H&S (Minimum CoF)
	D4030 - Fire Protection Specialties	5	H&S (Minimum CoF)

Uniformat Level 1	Uniformat Level 3	CoF	Main Impact
	D4090 - Other Fire Protection System	5	H&S (Minimum CoF)
	D5010 - Electrical Service and Distribution	Match facility	Service Delivery
	D5020 - Lighting & Branch Wiring	2	Service Delivery
	D5030 - Communication & Security	4	H&S, Service Delivery (Minimum CoF)
	D503001 Fire Alarm Systems	5	H&S, Service Delivery (Minimum CoF)
	D503002 Telecommunication Systems	Match facility	Service Delivery
	D503004 Public Address and Music Systems	2	Service Delivery
	D503008 Security Systems - Intrusion Alarm Systems	4	H&S (Minimum CoF)
	D503018 Access Control System	2	Service Delivery
	D503031 Video Surveillance System	3	H&S (Minimum CoF)
	D5090 - Other Electrical Systems (including generator)	5	H&S, Service Delivery (Minimum CoF)
E - Equipment and Furnishings	E1010 - Commercial Equipment	1	
	E1020 - Institutional Equipment	2	
	E1030 - Vehicular Equipment	2	
	E1090 - Other Equipment	1	
	E2010 - Fixed Furnishings	1	
F-Special Facilities	F1010 - Special Structures	Unique to structure	
	F1040 - Special Facilities (Aquatic Facilities, Ice Rinks)	Match facility	
G - Site	G2010 - Roadways	2	Service Delivery
	G2020 - Parking Lots	2	Service Delivery
	G2030 - Pedestrian Paving	3	Financial; H&S (Minimum CoF)
	G2040 - Site Development	1	
	G2050 - Landscaping	1	
	G3010 - Water Supply	Match facility	
	G3020 - Sanitary Sewer	Match facility	
	G3030 - Storm Sewer	2	Service Delivery
	G3060 - Fuel Distribution	Match facility	
	G4010 - Electrical Distribution	Match facility	
	G4020 - Site Lighting	2	H&S (Minimum CoF)
	G4090 - Other Site Electrical Utilities	1	

Appendix D – Typical Component Service Lives

Uniformat Level 1	Uniformat Level 3	Estimated Service Life (Years)
A - Substructure		75
B - Shell	B1010 - Floor Construction	75
	B1020 - Roof Construction	75
	B1030 - Structure	75
	B2010 - Exterior Walls	10 to 75
	B2020 - Exterior Windows	30 to 40
	B2030 - Exterior Doors	15 to 35
	B3010 - Roof Coverings	15 to 40
	B3020 - Roof Openings	25 to 40
C - Interiors	C1010 - Internal Partitions	25 to 75
	C1020 - Interior Doors	20 to 40
	C1030 - Fittings	20 to 35
	C2010 - Stair Construction	40 to 75
	C2020 - Stair Finishes	15 to 20
	C3010 - Wall Finishes	10 to 50
	C3020 - Floor Finishes	10 to 50
	C3030 - Ceiling Finishes	15 to 40
D - Services	D1010 - Elevators	25 to 35
	D1020 - Escalators & Moving Walkways	30
	D1090 - Other conveying Systems	30
	D2010 - Plumbing Fixtures	15 to 35
	D2020 - Domestic Water Distribution	12 to 40
	D2030 - Sanitary Waste	25 to 50
	D2040 - Rain Water Drainage	50
	D2090 - Other Plumbing Systems	25
	D3010 - Energy Supply	40
	D3020 - Heating System	18 to 30
	D3030 - Cooling Generating Systems	10 to 30
	D3040 - Distribution System	20 to 50
	D3050 - Terminal Package System	10 to 30
	D3060 - Controls and Instrumentation	15 to 40
	D3090 - Other HVAC Systems & Equipment	5
	D4010 - Sprinklers	40
	D4020 - Standpipes	40
	D4030 - Fire Protection Specialties	10
	D4090 - Other Fire Protection System	20
	D5010 - Electrical Service and Distribution	20 to 40
	D5020 - Lighting & Branch Wiring	20 to 50

Uniformat Level 1	Uniformat Level 3	Estimated Service Life (Years)
	D5030 - Communication & Security	15 to 25
	D5090 - Other Electrical Systems (including generator)	20 to 40
E - Equipment and Furnishings	E1010 - Commercial Equipment	15 to 30
	E1020 - Institutional Equipment	25
	E1030 - Vehicular Equipment	20
	E1090 - Other Equipment	20
	E2010 - Fixed Furnishings	25 to 30
F-Special Facilities	F1010 - Special Structures	30
	F1040 - Special Facilities (Aquatic Facilities, Ice Rinks, Special Equipment)	15 to 75
G - Site	G2010 - Roadways	25 to 30
	G2020 - Parking Lots	25 to 30
	G2030 - Pedestrian Paving	20 to 40
	G2040 - Site Development	15 to 50
	G2050 - Landscaping	20 to 50
	G3010 - Water Supply	50
	G3020 - Sanitary Sewer	50
	G3030 - Storm Sewer	50
	G3060 - Fuel Distribution	30 to 35
	G4010 - Electrical Distribution	50
	G4020 - Site Lighting	25 to 30
	G4090 - Other Site Electrical Utilities	20