

## CORPORATE POLICY

**POLICY TITLE:** ASSET MANAGEMENT: CRITICAL ASSETS AND BUSINESS RISKS

**POLICY NO.:** 03.C.04

<b>Section:</b>	Administration & Legal		
<b>Effective Date:</b>	June 19, 2018	<b>Date of Last Review:</b>	Click or tap to enter a date.
<b>Approval Authority:</b>	<b>Policy Owner:</b>		
Council	DCM, Infrastructure Development		

<b>POLICY STATEMENT</b>
The City commits to the development of infrastructure risk management processes that will make the best use of resources to define risk objectives, scope and strategies, including the definition of “unacceptable” risks.
<b>PURPOSE</b>
The purpose of this policy is to define the City’s intent to balance the scope of risk management activities and the effort expended on risk reduction, proportional to the assessed likelihood and consequence of an identified risk event.  Infrastructure risk management processes will identify asset criticality, assess organizational risks related to business planning, management, service delivery, and physical asset failure, and prioritize investments based on risk profiles.
<b>SCOPE</b>
Critical assets and infrastructure risks will be identified through a multi-disciplinary approach for each asset class. The cost of actions necessary to manage and mitigate infrastructure risks will be balanced against the required levels of service and performance delivery through operations and maintenance schedules, disaster response plans, contingency funding, and capital investments.
<b>LEGISLATIVE REQUIREMENTS</b>
Climate change will be considered as part of the City’s risk management approach, embedded in local asset management planning methods.

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The approach to climate change will balance the potential cost of vulnerabilities to climate change impacts and other risks with the cost of reducing these vulnerabilities. The City's asset management plans will encompass this sustainable approach climate change mitigation and adaptation.

The City's contribution to climate change through greenhouse gas emissions will be mitigated in accordance with its financial capacity, stakeholder support and the reduction strategy outlined in the Municipal Energy Plan.

The text below was adopted from Ontario Regulation 588/17 and is compliant. The City must develop and finalize a policy to include:

3.(1)5. The municipality's commitment to consider, as part of its asset management planning:

- i. The actions that may be required to address the vulnerabilities that may be caused by climate change to the municipality's infrastructure assets, in respect of such matters as, A. operations, such as increased maintenance schedules, B. levels of service, and C. lifecycle management,
- ii. The anticipated costs that could arise from the vulnerabilities described in subparagraph i,
- iii. Adaptation opportunities that may be undertaken to manage the vulnerabilities described in subparagraph i,
- iv. Mitigation approaches to climate change, such as greenhouse gas emission reduction goals and targets, and,
- v. Disaster planning and contingency funding.

## **DEFINITIONS**

The following definitions are provided in accordance with the International Infrastructure Management Manual.

- 1. Asset Management (AM):** Systematic and coordinated activities and practices of an organization to optimally and sustainably deliver on its objectives through the cost-effect lifecycle management of assets.
- 2. Asset Management Framework:** Overarching AM hierarchy including the AM Policy, Objectives, Strategy, and the AM Plan.

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- 3. Asset Management Objectives:** Specific outcomes required from the implementation of the AM Framework.
- 4. Asset Management Plan (AM Plan):** Long-term plans that outline the asset activities and programs for each service area and resources applied to provide a defined level of service in the most cost-effective way.
- 5. Asset Management Policy:** Document that broadly outlines the principles and mandated requirements for undertaking AM across the organization in a systematic and coordinated way, consistent with the organizations strategic plan. It provides the framework for the AM Strategy and AM Plan.
- 6. Asset Management Strategy:** High level long-term approach to AM including AM action plans and objectives for managing the assets.
- 7. Asset Management Team:** The team appointed by an organization to review and monitor the corporate AM improvement program and ensure the development of integrated AM information systems, processes, and plans consistent with organizational goals and objectives.
- 8. Condition:** Physical state of an asset.
- 9. Condition Grade:** Measure of the physical integrity of an asset or component.
- 10. Current Replacement Cost:** Cost incurred to acquire a new modern equivalent asset (not second hand) on the reporting date.
- 11. Deferred Maintenance:** Shortfall in maintenance work required to maintain the service potential of an asset.
- 12. Depreciation (amortization):** Systematic allocation of the depreciable amount of an asset over its useful life.
- 13. Depreciated Replacement Cost (DRC):** Replacement cost of an asset less accumulated depreciation calculated on the basis of such cost to reflect the already consumed or expired future economic benefits of the asset.
- 14. Deterioration Rate:** Rate at which an asset approaches failure (end of life).
- 15. Finance Personnel:** Internal or external partners who may design, compose, evaluate, advise, report, manage, direct or supervise activities in or for the portfolio of the Chief Financial Officer & City Treasurer.
- 16. Long-Term:** 5, 10, 20 or 30 years.

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**17. Modern Equivalent Assets:** Assets that replace what is in existence with the most cost-effective asset providing an equivalent level of service.

**18. Rehabilitation:** Works to rebuild or replace parts or components of an asset, to restore it to a required functional condition and extend its life, which may incorporate some modification. Generally, involves repairing the asset to deliver its original level of service without significant upgrade.

**19. Remaining Useful Life:** Time remaining until an asset ceases to provide the required service level or economic usefulness.

**20. Renewal:** Works to replace existing assets with assets of equivalent capacity or performance capability.

**21. Residual Value:** Estimated amount currently obtained from disposal of the asset, after deducting cost of disposal, if the asset were already of the age and in the condition expected at the end of its useful life.

**22. Service Area:** Collaborative partners, typically own infrastructure assets or manage operations and maintenance.

**23. Useful Life:** Period over which an asset or component is expected to be available for use; or the number of production or similar units expected to be obtained from the asset or component by the organization.

**24. Valuation:** Assessed asset value which may depend on the purpose for which the valuation is required, i.e., replacement value for determining maintenance levels, market value for lifecycle costing and optimized deprival value for tariff setting.

## **POLICY**

### **1. Policy Principles**

#### **1.1. Citizen Focused:**

The City of Vaughan will have clearly defined levels of service and apply asset management practices to maintain the confidence of customers in how City assets are managed.

#### **1.2. Service Focused:**

The City of Vaughan will consider all the assets in a service context and take into account their interrelationships as opposed to optimizing individual assets in isolation.

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1.3. Risk-based

The City of Vaughan will manage the asset risk associated with attaining the agreed levels of service by focusing resources, expenditures, and priorities based upon risk assessments and the corresponding cost/benefit, recognizing that public safety is the priority.

1.4. Value-based Affordable

The City of Vaughan will choose practices, interventions, and operations that aim at reducing the lifecycle cost of asset ownership, while satisfying the agreed levels of service. Decisions are based on balancing service levels, risks, and costs.

**2. Policy Objectives**

2.1. Interdepartmental relationships provide infrastructure and services to sustain the City of Vaughan and:

2.1.1. Support the quality of life, urban environment, and cultural fabric appropriate to the City of Vaughan;

2.1.2. Facilitate the changes to infrastructure to cater for changing neighbourhoods and communities for current and future needs;

2.1.3. Enhance the resilience of the City's infrastructure, neighbourhoods and communities and aim to continually lower environmental impacts.

2.2. Implement a life-cycle approach to the management of infrastructure assets where:

2.2.1. Asset planning decisions are based on an evaluation of alternatives that consider the "whole of life" of an asset through acquisition, construction, operation, maintenance, renewal/replacement, and disposal;

2.2.2. The asset management cycle considers the current and future environmental, economic, cultural, and social outcomes.

2.3. Ensure that service delivery needs are the primary driver for infrastructure asset management practices by:

2.3.1. Establishing and monitoring levels of service for each asset class through the Asset Management Plan;

2.3.2. Identifying and monitoring individual and network risks to assets and service levels for each asset class.

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2.4. Provide a sustainable funding model that provides assets aligned with the City's long-term plans and community needs with a:

2.4.1. Funding model for all asset related services extending at least 10 years into the future that addresses the need for funds, considers renewal peaks and troughs, and identifies how the funds will be sourced for current and projected growth both in terms of population and jobs, as provided for in the Official Plan.

2.5. Develop and implement best value asset management practices that are environmentally sustainable and:

2.5.1. Encourage a flexible and scenario-based approach through systems and plans to allow for innovative use of assets, particularly in environmental and resiliency initiatives;

2.5.2. Acknowledge climate change adaptation and environmental protection are fundamental to sustainable asset management planning practices;

2.5.3. Reduce resource use and promote resilience by utilizing clean technology products, services, and processes wherever possible; and

2.5.4. Incorporate local, regional, provincial, federal, and international sustainability criteria including climate resilient codes and standards into greenfield development, intensification, infrastructure projects and procurement.

2.6. Provide reliable asset and infrastructure data through supported digital platforms demonstrated by:

2.6.1. Open sourced for community use, where appropriate, such as with an asset management plan;

2.6.2. Implementation of sound data governance and data quality management;

2.6.3. Access to systems and information by mobile technology wherever possible.

2.7. Implement an integrated decision support system that:

2.7.1. provides systems and knowledge necessary to achieve policy outcomes;

2.7.2. Proactively interrogates and models data to support informed decisions;

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2.7.3. Minimizes the risk of corporate knowledge and data loss;

2.7.4. Manages information as efficiently as possible through the appropriate use of software, hardware and communication tools; and

2.7.5. Reduces data duplication.

2.8. Ensure compliance with legislative requirements by:

2.8.1. Aligning with infrastructure planning principles from the Infrastructure for Jobs and Prosperity Act, 2015; and

2.8.2. Having clear policies, processes and information to ensure that organizational objectives and legislative requirements are met.

#### **ADMINISTRATION**

*Administered by the Office of the City Clerk.*

<b>Review Schedule:</b>	Other (specify) As required by legislation.	<b>Next Review Date:</b>	Click or tap to enter a date.
<b>Related Policy(ies):</b>	03.C.03 – Asset Management: Administrative Umbrella 03.C.05 – Asset Management: Financial Requirements 03.C.06 – Asset Management: Land Use Planning 03.C.07 – Asset Management: Levels of Service		
<b>Related By-Law(s):</b>			
<b>Procedural Document:</b>	PRC.14 – Asset Management: Implementation Procedures and Communication		

#### **Revision History**

<b>Date:</b>	<b>Description:</b>
Click or tap to enter a date.	
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