



Hamilton

CORPORATE ASSET MANAGEMENT

General Issues Committee

December 6, 2023

- Ontario Regulation 588/17
- Levels of Service
- Non-Core AM Plans – Findings
- Program Update
- Next Steps

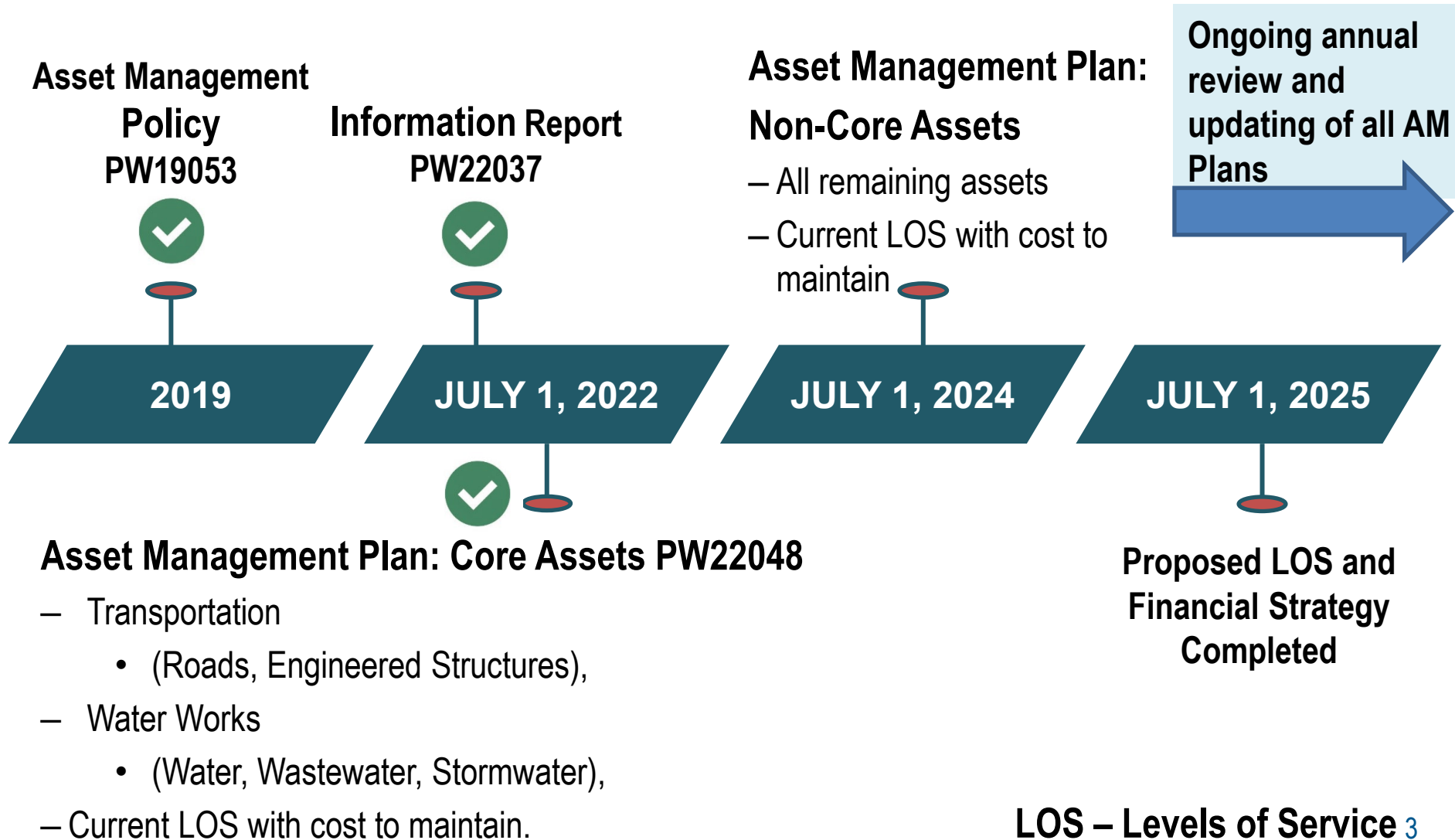
Ontario 

O. Reg. 588/17:
Asset Management
Planning for
Municipal Infrastructure

Recommendation

- To approve the Asset Management Plans as attached to Recommendation Report PW23073 (Appendices “A”, “B”, “C”)
 - Hamilton Police Service;
 - Waste Management;
 - Hamilton Municipal Parking.

Ontario Regulation 588/17 Mandates





Levels of Service

Levels of Service

Why are Levels of Service Important?

They are the cornerstone of asset management planning & decision making



Levels of service evolve over time:

- Start with what you know works for services in the community;
- Maintain targets for what works;
- Revise targets for what doesn't work;
- It's a process of trial and error.

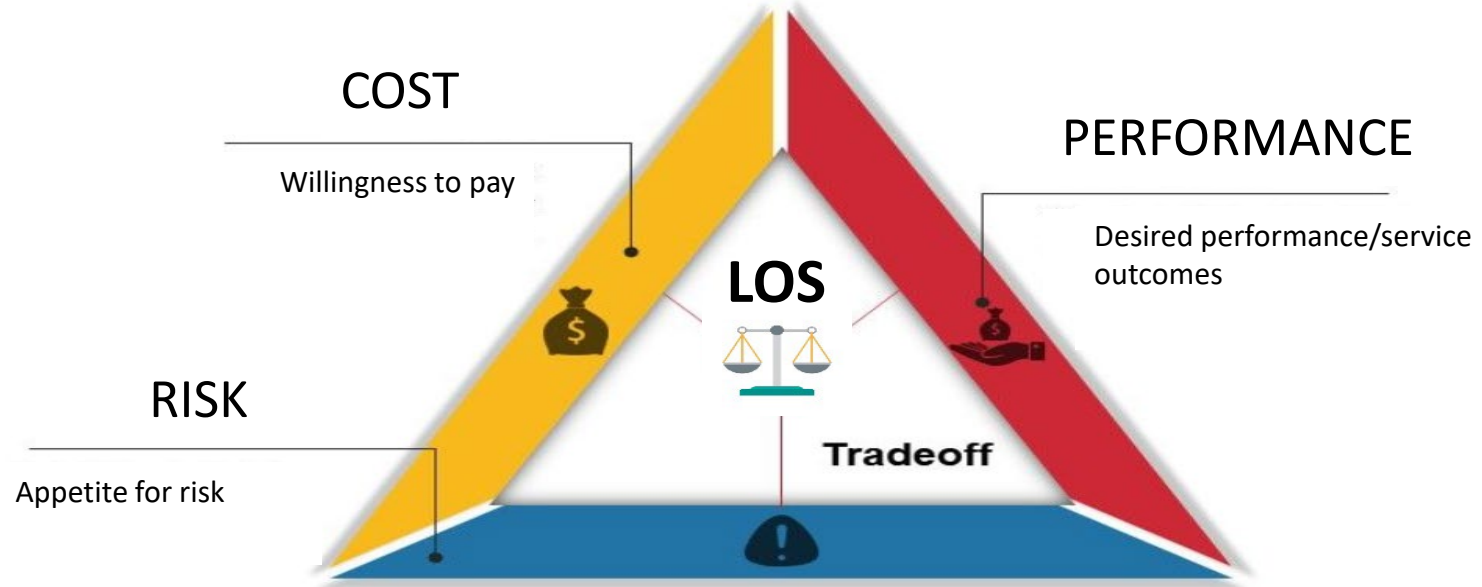
- Means of defining the outcomes that customers can expect from Programs and asset-based activities, measured through the achievement of defined performance measures and targets.
- Link between the outcomes the community desires and the way that Hamilton provides those services, including willingness to pay. These are often referred to as customer and technical levels of service.
- Levels of Service for current (today's service levels) and proposed (desired future service levels) include:
 - a level of service statement;
 - customer values;
 - customer levels of service;
 - technical levels of service.

Levels of Service

Concept	Definition	Examples
Customer Values	Outline what is important to the customer, and if they see value in the service. These values are used to develop level of service statements.	<ul style="list-style-type: none"> • Safety, • Reliability, • Availability, and, • Responsiveness etc.
Customer Levels of Service	How the customer experiences or feels about the services they receive. <ul style="list-style-type: none"> • Condition: How good is the service? What is the condition or quality of the service? • Function: Is it suitable for its intended purpose? Is it the right service? • Capacity/Use: Is the service over or under-used? Do we need more or less of these assets? 	<ul style="list-style-type: none"> • Cleanliness of facilities, • Frequency of disruptions, and, • Ease of dealing with staff.
Technical Levels of Service	What the city does to deliver the services. These should be used internally to measure performance against service levels.	<ul style="list-style-type: none"> • # of times public washrooms are cleaned/day, • Response time to pothole repairs or watermain breaks, • Fit for purpose, and, • Asset average condition.

Example: Waste Management

- **Level of Service Statement:** to provide an effective and efficient waste management system which is essential for preserving and enhancing healthy and safe communities.
- **Customer Value:** e.g. Reliability
- **Customer Level of Service:** Satisfaction level with the reliability of the service
- **Technical Level of Service:** e.g. # of missed collections per 10,000 pickups



- Proposed levels of service will be achieved through the balance of cost, risk, and service/asset performance,
- Prioritization of operating and capital funds becomes critical in order to ensure the best balance is achieved, and
- Must find the balance that delivers the greatest value to the City.



What is Your Role as an Elected Official?

10

Role of Council

Council sets strategic direction

- Level of service
- Resource allocation

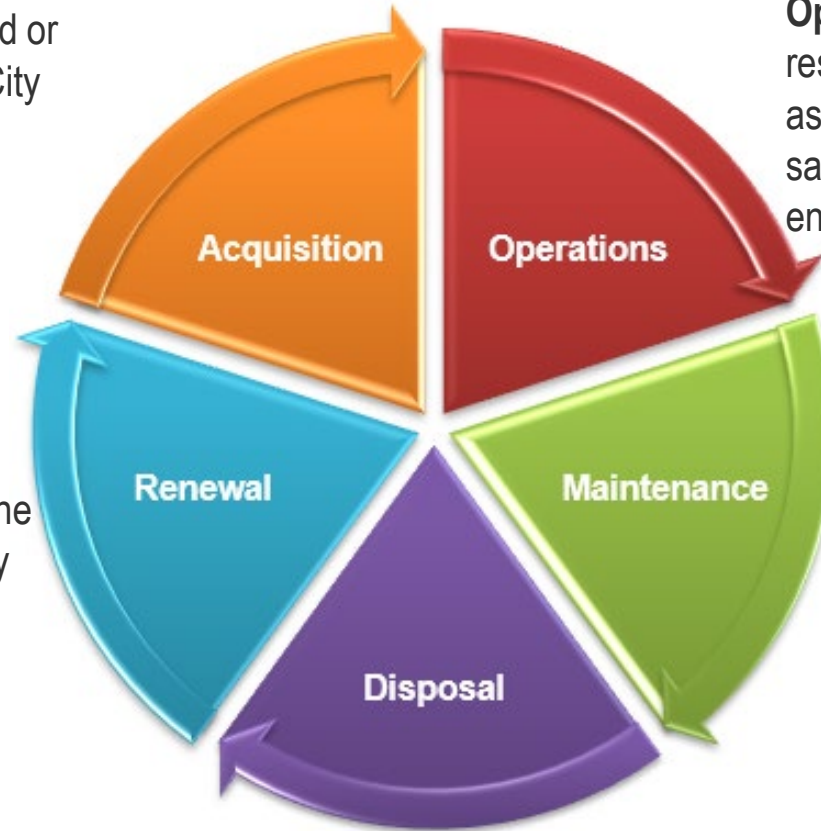


Lifecycle Management

When managing assets the City must consider the whole life cycle cost of an asset

Acquisition: When we buy, build or inherit something new that the City didn't own before including an expansion.

Operations: Everyday activities or resources required to keep the assets/services working (e.g., staff salaries, cleaning, painting, studies, energy costs, internet etc.).



Renewal: When an asset is at the end of life, and we will either buy or build a new similar asset to replace it with like for like.

Maintenance: Planned or reactive activities that restore/fix an asset, so it reaches its expected life.

Disposal: When the asset is at the end of life or service is being discontinued and we're not replacing it with another similar asset.

What is in the Plan?

Background and Registry

What service are we providing and how long have we provided it?
What do we own?

Who are our customers?
Present/Future
Registry Measures
(Condition, Age, expected life, replacement cost)

Life-Cycle

How do we manage these assets?

Acquisitions,
Operate,
Maintain,
Renew and
Disposals

Demand

Who wants to use our service?
What pressures will we face?

Current
Demand and
future demand

Climate Change

How will climate change affect how we manage our assets?

What mitigation/adaptation strategies will we utilize and what demands/risks will we encounter?

What is in the Plan?

Risk Management

How do we manage current and future risks?

Financial,
Environmental,
Human Safety,
Reduction of
Service,
Legal/Reputational,
Cultural/Social
Outcomes

Levels of Service

What are the expectations and how are we delivering on those expectations?

Customer Levels
Technical Levels
of service

Financial Plan

What is our 'financial' health and how does it look in the future?

Long Term Financial
Plan
3 Key Financial
Indicators
(Renewals, Operating,
Debt)

Continuous Improvement

What are our plans to get better?

What do we plan to do
Who's doing it?
For how much?
When will it be done by?

AM Plans - Findings

ASSET CATEGORY	REPLACEMENT VALUE (M)	AVERAGE AGE (YEARS)	AVERAGE CONDITION	RENEWAL FUNDING RATIO	10 YEAR O&M & RENEWAL FUNDING RATIO	FUNDING GAP PER YEAR (M)	FUNDING GAP OVER 10 YEARS (M)
Sample Data	\$504.8	12	Fair	53%	91%	\$2.2	\$22
Data Confidence	Medium	Medium	Low	Medium	Medium	Medium	Medium

Replacement Value:

- Current market value; or
- Purchase price; or
- Historical information, or
- Expert opinion; or,
- When unknown, assumptions are made.

Average Age:

- Based on installation or purchase date; or
- Estimated based on location and similar assets; or
- When unknown, assumptions are made.

Average Condition:

- Condition assessments; or
- Based on estimated service life and age; or
- Expert opinion; or,
- When unknown, assumptions are made.

Approaches are listed from high to low data confidence.

AM Plans - Findings

ASSET CATEGORY	REPLACEMENT VALUE (M)	AVERAGE AGE (YEARS)	AVERAGE CONDITION	RENEWAL FUNDING RATIO	10 YEAR O&M & RENEWAL FUNDING RATIO	FUNDING GAP PER YEAR (M)	FUNDING GAP OVER 10 YEARS (M)
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Renewal Funding Ratio:

[Proposed renewal budget for the next 10 years]

= _____

[Forecast renewal costs for the next 10 years]

10 Year O&M & Renewal Funding Ratio:

[Proposed operations & maintenance and renewal budget for the next 10 years]

= _____

[Forecast operations & maintenance and renewal costs for the next 10 years]

Funding Gap:

- [Operations, Maintenance, and Renewal Proposed Budgets] – [Forecast costs]

AM Plans - Findings

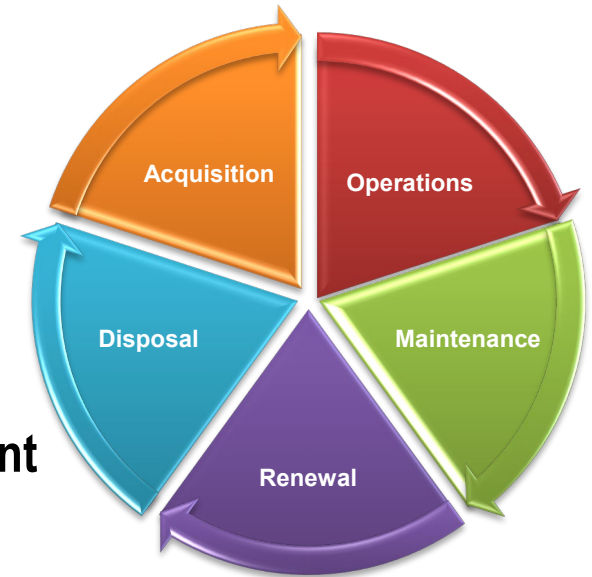
ASSET CATEGORY	REPLACEMENT VALUE (M)	AVERAGE AGE (YEARS)	AVERAGE CONDITION	RENEWAL FUNDING RATIO	10 YEAR O&M & RENEWAL FUNDING RATIO	FUNDING GAP PER YEAR (M)	FUNDING GAP OVER 10 YEARS (M)
Hamilton Police Service	\$351.9	25	Fair	25.9%	93%	\$18.1	\$181
Data Confidence	Medium	High	Medium	Medium	Low	Low	Low
Waste Management	\$560	39	Fair	63.7%	93.8%	\$4.6	\$46
Data Confidence	Low	Low	Low	Low	Low	Low	Low
Hamilton Municipal Parking	\$131	39	Fair	37.5%	87%	\$2.1	\$21
Data Confidence	Low	Low	Low	Low	Low	Low	Low
TOTAL	\$1.04B	Funding Gap \$24.8M annually (data confidence low-med)				\$24.8	\$248

Asset Management Approach

Principles

- Adopt a lifecycle approach,
 - Endorse evidence-based decision-making,
 - Embrace continuous improvement,
 - Provide optimal value,
 - Develop service knowledge.
-
- **50+** opportunities for improvement,
 - 8 key themes,
 - Improvement plan identified on all items (time/resources).

Lifecycle Management





Asset Information (Data)

- AM Planning starts with data (registry – age, location, condition, quantity, etc.),
- Data confidence scale developed in order to quantify concerns,

Data Confidence Grading Scale

Confidence Grade	Reliability	Accuracy
A - Very High	Data based on sound records, procedures, investigations, and analysis, documented properly and agreed as the best method of assessment.	The dataset is complete and Estimated to be accurate +/- 2%
B - High	As above with minor shortcomings e.g. some data old, or missing.	Dataset is complete Estimated to be accurate +/- 10%
C - Medium	Data based on sound records, procedures, investigations and analysis which is incomplete or unsupported, or extrapolated from a limited sample	Dataset is substantially complete but up to 50% extrapolated data and accuracy estimate +/- 25%
D - Low	Data is based on unconfirmed verbal reports and/or cursory inspections and analysis.	Most data is estimated or extrapolated. Accuracy +/- 40%
E - Very Low	None or very little data held.	Dataset does not exist or very little accuracy.

- Data found to be missing, old, incomplete, duplicated, and not aligned to AM processes that are still being developed.

Asset Condition



- No condition process for many assets;
- Lack of condition assessments (CA's); and,
- Use of Estimated Service Life (ESL) and age to approximate condition.



Lifecycle Management



- Not all assets are properly programmed;
- Impact of acquired assets on O&M activities; and,
- Timing of renewals requires more analysis.



Levels of Service



- LOS is critical for asset owners to understand;
- Owners are learning about and starting to embrace LOS;
- LOS sustainability difficult to quantify given current data; and,
- Community engagement is paramount and will be ongoing.

Replacement Cost



- Variations exist in current data; and,
- Need to apply a robust process across all asset classes.

Demand & Risk Management Improvements



- Continued conversation with Asset Owners; and,
- Further refinement of these elements will be included in future plans.

Financial Management Improvements



- Planning horizon expanded from 10 to 30 years;
- Infrastructure gap at low-med confidence; and,
- Future Long-Term Financial Plan will connect the budget to AM Plans.

Governance

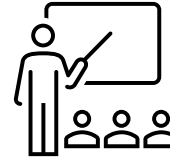


- Need for standard processes evident; currently in development; and,
- Clearly defined asset ownership apparent yet still some gray areas.

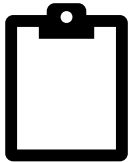
City Wide Engagement



4,145 Page Visits to AM Training Modules on SharePoint



112 City Staff completed some/all of the 8 training modules resulting in **377** instances of module completion



8 Public Engagement Surveys conducted since 2022



Approximately **130** AM meetings/workshops conducted in 2023



24 City Staff have completed the IPWEA Asset Management Planning Course – 6 are currently registered



AM Presentations for all DLT's

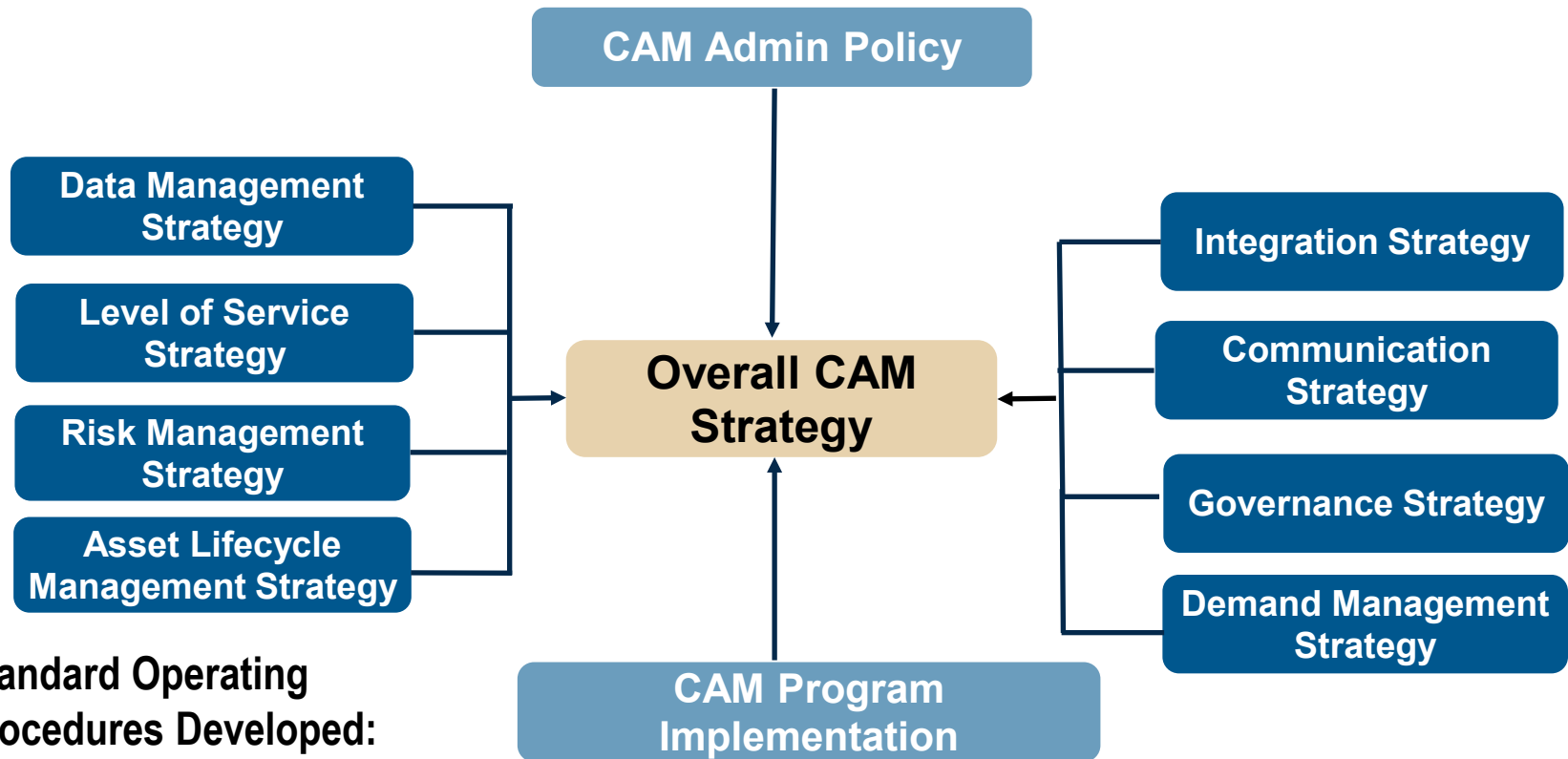


8 CAM Steering Meetings held since 2022



6 Reports related to AM brought forward to Council since 2022

CAM Program Update



Standard Operating Procedures Developed:

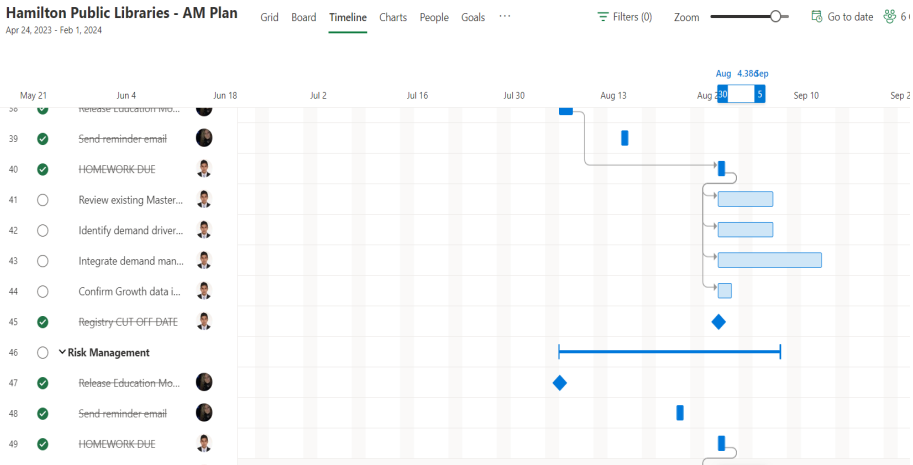
- Risk Management
- Levels of Service
- Nonconformance
- Asset Registry – Best Practices
- AM Plan Template
- Survey Development

Policies and Strategies Developed:

- Updated Strategic Asset Management Policy
- Governance Strategy
- Communications Strategy

CAM Program Update

MS Project for the Web



Project Management:

- Detailed Project Plans built for all Projects including Project Charter approval by Asset Owners
- Power BI Dashboard created to support project monitoring and milestone visibility
- Utilizing a new project platform for enhanced project collaboration

Portfolio Dashboard

Project Progress

In Progress

Project Manager

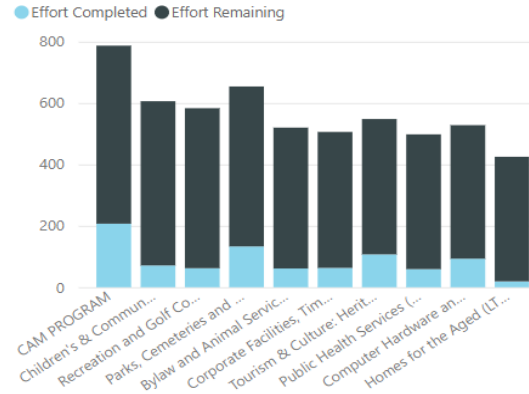
Multiple selections

Projects	23
Effort	11K Hours
Effort Completed	5,937 Hours
Effort Remaining	5,333 Hours

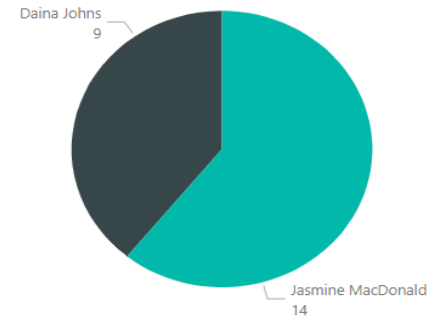
Projects by Progress



Effort by Project



Projects by Project Manager



Project Dashboard

CAM Program Update

CITY OF HAMILTON ASSET MANAGEMENT READINESS ASSESSMENT



Update: Non-Core AM Plans

Plans under development:

- Information Technology
- City Housing
- Transit
- Corporate Real Estate Office
- Libraries
- Parks and Cemeteries
- Recreation and Golf Courses
- Natural Assets
- Corporate Facilities/Tim Hortons Field
- Central Fleet
- Museums and Culture
- Bylaw and Animal Services
- Forestry and Horticulture
- Public Health and Children's Services
- Long Term Care
- Fire

Plans completed in 2023:

- Police
- Waste Management
- Parking
- (Paramedics)



Plans completed in 2022:

- Water
- Wastewater
- Storm Water
- Road
- Engineered Structures



Many Thanks to the Team

CAM Office

- Amber Dewar, Dan Leake, Jasmine MacDonald and Alix Luciani

Corporate Services Financial Planning and Policy Division

Emergency Services

- Hamilton Police Service Asset Owner (Chief Frank Bergen)

Planning and Economic Development

- Hamilton Municipal Parking Asset Owner (Director Brian Hollingworth)

Public Works

- Waste Management Asset Owner (Director Angela Storey)