EXECUTIVE COMMITTEE
AGENDA
(available also at www.citywindsor.ca)
Monday, September 25, 2017
6:00 o'clock p.m.
Council Chambers, 3rd Floor, Windsor City Hall

Members:

Mayor Drew Dilkens
Ward 10 - Councillor Paul Borrelli
Ward 3 - Councillor Rino Bortolin
Ward 2 - Councillor John Elliott
Ward 1 - Councillor Fred Francis
Ward 6 - Councillor Jo-Anne Gignac
Ward 4 - Councillor Chris Holt
Ward 7 - Councillor Irek Kusmierczyk
Ward 8 - Councillor Bill Marra
Ward 9 - Councillor Hilary Payne
Ward 5 - Councillor Ed Sleiman
1. CALL TO ORDER

2. DISCLOSURE OF PECUNIARY INTEREST AND THE GENERAL NATURE THEREOF

3. ADOPTION OF THE MINUTES
3.1. Minutes of the Executive Committee meeting held May 29, 2017 (SCM 116/2017)

4. REQUEST FOR DEFERRALS, REFERRALS OR WITHDRAWALS

5. PRESENTATIONS AND DELEGATIONS
   PRESENTATION: (10 minute maximum)
5.1. Stephen MacKenzie, CEO, WindsorEssex Economic Development Corp. to provide Mayor & Council with an update.

6. BUSINESS ITEMS
6.2. Workforce Management Project Request for Additional Implementation Services - City Wide (S 172/2017)

7. COMMITTEE REPORTS

8. ADJOURNMENT
Subject: Minutes of the Executive Committee meeting held May 29, 2017
Members Present:

Mayor
Mayor Dilkens

Councillors
Ward 10 - Councillor Borrelli
Ward 3 - Councillor Bortolin
Ward 2 - Councillor Elliott
Ward 1 - Councillor Francis
Ward 6 - Councillor Gignac
Ward 4 - Councillor Holt
Ward 7 - Councillor Kusmierczyk
Ward 9 - Councillor Payne
Ward 5 - Councillor Sleiman

Members Absent
Ward 8 - Councillor Marra

1. CALL TO ORDER

Mayor Dilkens calls the meeting of the Executive Committee of Council to order at 8:49 o’clock p.m.

2. DISCLOSURE OF PECUNIARY INTEREST AND THE GENERAL NATURE THEREOF

None disclosed.

3. ADOPTION OF THE MINUTES
3.1 Executive Committee Minutes January 30, 2017

Moved by: Councillor Francis  
Seconded by: Councillor Gignac

THAT the Minutes of the Executive Committee meeting of Council held January 30, 2017 BE ADOPTED as presented.  
Carried.

4. REQUEST FOR DEFERRALS, REFERRALS OR WITHDRAWALS

None requested.

5. PRESENTATIONS AND DELEGATIONS

5.1 PwC Manage the Daily Operations of Service Delivery

Christopher O’Connor, Partner, PwC

Christopher O’Connor, Partner, PwC, appears before the Executive Committee regarding the “PwC Manage the Daily Operations of Service Delivery”, including the project summary (scope, positive findings, findings and conclusion)

Moved by: Councillor Sleiman  
Seconded by: Councillor Francis

Decision Number: EC 295  
THAT the report of PriceWaterhouseCoopers (PwC) dated March 22, 2017 regarding “Manage the Daily Operations of Service Delivery” BE RECEIVED for information.  
Carried.

Report Number: SCM 93/2017  
Clerk’s File: AF/11247

5.2 Management Action Plan for PwC "Manage Daily Operations of Service Delivery"  
Internal Audit Report - City Wide
Moved by: Councillor Holt
Seconded by: Councillor Bortolin

THAT City Council AUTHORIZE administration to proceed to implement the Management Action Plan created in response to the findings of the “Manage the Daily Operations of Service Delivery” internal audit report; and,

THAT Administration BE DIRECTED to report back on Finding #1 of the Management Action Plan for PwC “Manage Daily Operations of Service Delivery” Internal Audit Report, which pertains to “Enhanced Data Analytics”, so that Council can determine the possible allocation of resources required to establish trends and targets that may identify links to the 20 year vision for Council consideration; and further,

THAT City Council DIRECT administration to report on the progress of the implementation of the Management Action Plan; and that such reports should coincide with Pricewaterhouse Coopers LLP’s quarterly updates to Council.

The motion is put and is lost.
Aye votes: Councillors Holt, Payne and Bortolin.
Nay votes: Councillors Sleiman, Francis, Kusmierczyk, Elliott, Gignac and Borrelli.
Abstain: None.
Absent: Councillor Marra.

Moved by: Councillor Gignac
Seconded by: Councillor Sleiman

Decision Number: EC 296
THAT City Council AUTHORIZE administration to proceed to implement the Management Action Plan created in response to the findings of the “Manage the Daily Operations of Service Delivery” internal audit report; and,

THAT City Council DIRECT administration to report on the progress of the implementation of the Management Action Plan; and, that such reports should coincide with Pricewaterhouse Coopers LLP’s quarterly updates to Council.
Carried.

Report Number: S 80/2017
Clerk’s File: AF/11247

5.3 PwC Cybersecurity Assessment May 2017
Christopher O’Connor, Partner - PwC

Christopher O’Connor, Partner - PwC, appears before the Executive Committee of Council regarding the “PwC Cybersecurity Assessment May 2017”, including the project summary, industry comparison overview and benchmarking results by security maturity areas.

Moved by: Councillor Francis
Seconded by: Councillor Sleiman

Decision Number: EC 297
THAT the report of PriceWaterhouseCoopers (PwC) dated May 2017 regarding “Cybersecurity Assessment” BE RECEIVED for information.
Carried.

Report Number: SCM 94/2017
Clerk’s File: AF/11247

5.4 Internal Audit Risk Assessment and Plan 2017/2018

Christopher O’Connor, Partner, PwC

Christopher O’Connor, Partner, PwC, appears before the Executive Committee of Council regarding the “Internal Audit Risk Assessment and Plan 2017/2018”, including the 2017/18 planned projects and summary of internal audit effort.

Moved by: Councillor Payne
Seconded by: Councillor Sleiman

Decision Number: EC 298
THAT the report of PriceWaterhouseCoopers (PwC) dated May 29, 2017 regarding “Internal Audit Risk Assessment and Plan 2017/2018” BE APPROVED as presented.
Carried.

Report Number: SCM 95/2017
Clerk’s File: AF/11247
5.5 PwC Internal Audit Performance Dashboard March 31 2017
Christopher O’Connor, Partner, PwC

Christopher O’Connor, Partner, PwC, appears before the Executive Committee of Council and is available for questions regarding the “PwC Internal Audit Performance Dashboard March 31, 2017”.

Moved by: Councillor Gignac
Seconded by: Councillor Sleiman

Decision Number: EC 299
THAT the report of PriceWaterhouseCoopers (PwC) dated March 31, 2017 regarding “Internal Audit Performance Dashboard” BE RECEIVED for information.
Carried.

Report Number: SCM 91/2017
Clerk’s File: AF/11247

5.6 PwC Internal Audit Report 2017 - Report on Findings Status as of February 28, 2017
Christopher O’Connor, Partner, PwC

Christopher O’Connor, Partner, PwC, appears before the Executive Committee of Council and is available for questions regarding the “PwC Internal Audit Report 2017 – Report on Findings Status as of February 28, 2017”.

Moved by: Councillor Gignac
Seconded by: Councillor Sleiman

Decision Number: EC 300
Carried.

Report Number: SCM 92/2017
Clerk’s File: AF/11247
5.7 Summary of Hotline Issues Referred to Management by PwC - 2017 Q1 - City Wide

Moved by: Councillor Gignac
Seconded by: Councillor Bortolin

Decision Number: EC 301
THAT City Council RECEIVE FOR INFORMATION the Summary of Hotline Issues Referred to Management by PwC from January 1, 2017 – March 31, 2017 (attached as Appendix A).
Carried.

Report Number: S 76/2017
Clerk’s File: AF/11247

5.8 Status Report on Implementation of Audit Recommendations - 2017 Q1 - City Wide

Moved by: Councillor Gignac
Seconded by: Councillor Francis

Decision Number: EC 302
THAT City Council RECEIVE FOR INFORMATION the Status Report on Implementation of Audit Recommendations as of 2017 Q1 (attached as Appendix A).
Carried.

Report Number: S 77/2017
Clerk’s File: AF/11247

5.9 Code of Conduct for Members of Council and Local Boards (Appendix B to By-law 98-2011)

Bruce Elman, Integrity Commissioner

Bruce Elman, Integrity Commissioner, appears before the Executive Committee of Council regarding the draft update/revisions to the “Code of Conduct for Members of Council and Local Boards (Appendix B to By-law 98-2011)”, including formatting changes; content changes – articles of interpretation, rules and schedules.

Moved by: Councillor Sleiman
Seconded by: Councillor Elliott
Decision Number: EC 303
THAT the report of the Integrity Commissioner regarding the update/revisions to the “Code of Conduct for Members of Council and Local Boards (Appendix B to By-law 98-2011)” **BE APPROVED** as presented.
Carried.

Report Number: SCM 96/2017
Clerk’s File: GM/12076

6. BUSINESS ITEMS

6.1 Compliance with Applicable Laws & Regulations, 2017 Q1 - City Wide

Moved by: Councillor Gignac
Seconded by: Councillor Francis

Decision Number: EC 304
THAT City Council **RECEIVE FOR INFORMATION** the Status Report on Compliance with Applicable Laws and Regulations, 2017 Q1.
Carried.

Report Number: S 75/2017
Clerk’s File: AF/11247

7. COMMITTEE REPORTS

7.1 City and School Board Liaison Committee minutes from meeting held March 1, 2017

Moved by: Councillor Sleiman
Seconded by: Councillor Francis

Decision Number: EC 305
THAT the minutes of the City and School Board Liaison Committee meeting held March 1, 2017 **BE RECEIVED** for information.
Carried.

Report Number: SCM 100/2017
Clerk’s File: MB2017
7.2 Report No. 3 of the City and School Boards Liaison Committee held March 1, 2017

Moved by: Councillor Sleiman
Seconded by: Councillor Francis

Decision Number: EC 306
THAT report No. 3 of the City and School Boards Liaison Committee of its meeting held March 1, 2017 stating “that the Draft Terms of Reference and Mandate for the City and School Boards Liaison Committee, attached as Appendix A, BE ADOPTED as amended” BE APPROVED as presented.
Carried.

Report Number: SCM 48/2017
Clerk’s File: MB2017

8. ADJOURNMENT

Moved by: Councillor Kusmierczyk
Seconded by: Councillor Borrelli

There being no further business, the meeting of the Executive Committee of Council is adjourned at 9:55 o’clock p.m.
MISSION STATEMENT
“Our City is built on relationships – between citizens and their government, businesses and public institutions, city and region – all interconnected, mutually supportive, and focused on the brightest future we can create together”

REPORT #: S 160/2017  
Report Date: 8/22/2017

Author’s Contact:  
Melissa Osborne  
Senior Manager Asset Planning  
mosborne@citywindsor.ca  
519-255-6100 x6111

Date to Council: 9/25/2017

Clerk’s File #: MMF/4762

To:  Mayor and Members of City Council

Subject:  Asset Management - Policy and 2018 Asset Management Plan

RECOMMENDATION:

THAT City Council APPROVE the Asset Management Policy and Asset Management Philosophy / Framework documents as presented in this report and

THAT City Council APPROVE the modifications to the project listing for Asset Planning as outlined in this report

EXECUTIVE SUMMARY:

n/a

BACKGROUND:

This report is intended to address the following:

1. Approval of the Policy and Philosophy / Framework documents, included as Appendix A, B and C, and resulting from the objectives of the Leadership in Asset Management Program (LAMP)

3. Inform Council of the connection and relevance of the LAMP and 2018 AMP to the Province of Ontario’s proposed Municipal Asset Management Planning Regulation (Bill 6).

4. Request changes to the original list of Asset Planning projects, approved February 3, 2014 report 16966, CR27/2014

Council approved report 16966 on February 3, 2014 which outlined several asset planning project initiatives. Since that date several of the projects have been completed. The results have been applied to various Council reports and will serve to inform the development of the 2018 Asset Management Plan. These project completions include; Levels of Service, Risk, Facility Condition Analysis, Energy Data Management and Transit Life Cycle Costing.

The list of projects also included development of a life cycle management approach and procedures, which stems from a previous internal audit report. This particular project was approved by Council (report 18082) in December 2015 for submission to FCM’s Leadership in Asset Management Program (LAMP). FCM selected 12 municipalities, including Windsor, to work both collectively and independently on Asset Management related projects.

**DISCUSSION:**

**Leadership in Asset Management Program – LAMP**

As stated above, the City of Windsor was one of 12 municipalities across Canada who were selected and awarded funding for FCM’s Leadership in Asset Management Program (LAMP). The program has two phases with the first being mandatory and the second one optional. Funding of $62,500 was awarded to Windsor to complete both phases.

Approval of the documents developed for Phase 1 (Appendices A, B and C) will ensure the City’s compliance with both the FCM’s grant funding requirement as well as one of the requirements in the proposed Municipal Asset Management Planning regulation, included as Appendix D and discussed further in this report.

**Phase 1 – Policy and Philosophy/Framework**

All 12 municipalities to collaborate on the following:

- Selection of a consulting company to assist with the project;
- Development of best practices for asset management policies, frameworks, governance models, roadmaps and strategies, of which a main component was also to include climate change impacts and elements;
- Development of individual policies, frameworks, governance models and strategies, as required for each municipality;
- Individual documents to be approved by respective municipal Councils.

The City of Windsor in 2010 developed, approved and subsequently implemented an Asset Management Governance model and project roadmap. As a result, the Asset Planning division was created and staffed in 2013 and has since been implementing various projects outlined in the roadmap approved by Council in February 2014, CR 28/2014.

Two documents originally drafted in 2010 but not brought to Council were the AM Policy and Philosophy / Framework documents. The LAMP program offered the opportunity to revisit these documents and update them to reflect current realities and needs, including acknowledging the relationship between climate change and asset management. The project also provided the City of Windsor the opportunity to share our experience and expertise with other municipalities who are just starting their AM journey as well as learn from other municipalities who are further along in asset management and climate change adaptation.

In September of 2016, the City of Windsor AM team began meeting with the 11 other partnering municipalities and consulting firms to develop industry best practice standards for sound AM and infrastructure management. The meetings were held regularly throughout the remainder of 2016 and through to May 2017 when the consulting team finalized the deliverables of LAMP Phase 1. In November 2016, City Administration met individually with the consultants to review our current Asset Management Policy and Framework and implemented appropriate revisions and updates to these two primary guiding AM documents. Final versions of these documents as approved by the Asset Planning Steering Committee are presented to Council for review and approval within this report (Appendices A, B and C)

**Phase 2 – Life Cycle Management**

The Life Cycle Management project was approved and preliminary work has begun on this project. In May 2016, several people participated in a workshop to review various work completed to date at the City on life cycle costing and triple bottom line development. Those discussions resulted in a work plan which has been approved and will begin in late September 2017. The project has 3 major deliverables:

1. Development of a template and procedures for determining the life cycle costing of various assets owned by the City of Windsor.
3. Development of a triple bottom line assessment tool to bring into balance the social, economic and environmental value associated with assets and projects.

The project is expected to be completed in Fall 2018.

2018 Asset Management Plan (AMP) & Proposed Municipal Asset Management Planning Regulation

The first Corporate Asset Management Plan for the City of Windsor was presented and approved by Council December 2013. The 2013 AMP stated that future updates to the AMP would be done every 5 years. As such, we are currently in the process of planning and organizing data for a 2018 AMP to be presented to Council in Q1 2019.

The first report focused on assembling all pertinent information about our core assets and providing a high level understanding on the current state of our infrastructure, as well as high level estimates on how assets might age and what impact that may have on our infrastructure gap. Since that report, several initiatives have taken place which will enhance the 2018 AMP by providing more specific and accurate data on our assets condition and life cycle trends.

One of the most significant changes are the number of assets which previously had subjective condition ratings and for 2018 will have objective ratings. Subjective ratings which are developed based on expertise, observed maintenance and logical patterns of deterioration. Objective condition ratings result from actual technical observations and testing of the asset increasing the reliability of the resulting condition of the asset. This information is critical to determining the accuracy of our infrastructure deficit and options to addresses the gap. A list of data enhancements which will be used for the 2018 AMP include but are not limited to:

1. Increasing objective sewer condition ratings from 20% to over 90% of the entire network, expected completion Q2 2018).
2. Increased objective condition rating on facilities from 0% to approximately 50%.
3. Increased objective condition ratings on transit fleet from 0% to 100%
4. Increased objective condition ratings for playgrounds from 0% to 100%
5. Development of Level of Service and Risk indicators.
6. Implementation of asset deterioration and financial modelling tools to determine the expected impact various funding levels are likely to have on specific assets.

All of the completed initiatives listed will provide for more accurate data projections and resulting recommendations to address the City’s infrastructure challenges.

Since our first AMP, several Provincial and Federal initiatives have taken place to drive municipalities towards the development and use of Asset Management Plans. The
most immediate examples of this are that Federal Gas Tax infrastructure funds as well as the fact that many grants now require Asset Management Plans in order to receive funding.

The Province of Ontario has taken an even more focused direction on municipalities and asset management. In 2015 the Infrastructure for Jobs and Prosperity Act received Royal Assent and included asset management elements. In June 2017 Ontario released the proposed Municipal Asset Management Planning regulation and requested feedback by July 24, 2017. Amendments based on the feedback has not yet been issued. A second reading of the regulation is expected shortly however has not yet been scheduled. The proposed regulation is included as Appendix D in this report.

Highlights of the proposed regulation and relationship to LAMP and 2018 AMP

1. Municipalities must have a strategic asset management policy by January 1, 2019. The Policy and Philosophy / Framework documents before Council this evening addresses this requirement. Should Council approve these documents this evening, we will not only complete the requirements for our LAMP grant funding but we will also have met this potential regulation requirement.

2. The second major element of the regulation relates to Municipal Asset Management Plans and what they must include by:
   a. January 1, 2020
   b. January 1, 2021 and

At this time Administration is well positioned to present the 2018 AMP with all necessary requirements to meet the proposed 2020 and 2021 expectations. For 2022 additional work, currently planned for, will need to be completed and will require time and resources to implement this for all of the City’s infrastructure assets.

While it is unclear if any or all of the proposed timelines and or requirements will remain as presented in the proposed regulation, the City is well positioned to meet the initial objectives.

Requested Changes to Original Project Plan

As mentioned above, February 3, 2014 Council approved funding for the several projects for the Asset Planning Division (CR27/2014). Since that date several of the projects have been completed. While there are some projects which no longer are as viable or required based on the various changes noted above, the Asset Planning Steering Committee was only given authority to reallocate funding to other initiatives provided the original list of projects was not put at risk.
We require Council approval to allow the Asset Planning Steering Committee to determine if the following 3 projects should be cancelled and or reduced in scope such that funding can be allocated to other initiatives (also listed below).

Projects to be reconsidered:

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Brief Description</th>
<th>Support for change to project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobile Hansen System</td>
<td>To allocate funding for devices needed to put mobile devices in the field to capture various inspection and maintenance details on linear assets. This will result in significant efficiencies.</td>
<td>The solution has been reviewed by Information Technology and Public Works and is not in a position to proceed. Implementation of a bulk upload tool has greatly improved the data logging process further reducing the need for a mobile solution.</td>
</tr>
<tr>
<td>*Interface Fleet System/Hansen System</td>
<td>To create interfaces between the Fleet and Hansen systems allowing changes in the source data in the operational areas to be updated to the TCA ledger creating much needed efficiencies in this area.</td>
<td>The process to upload the Fleet data has been completed. The complexity and value of the interface with Hansen has been assessed and deemed no longer required.</td>
</tr>
<tr>
<td>*Facility Breakdown TCA</td>
<td>To break out the facility assets in TCA to the 10 major facility components (roof, windows, HVAC, etc.). This combined with the Building Condition information will be essential to future Asset Management Plans and identification of funding needs.</td>
<td>The project has been assessed and deemed not required as detailed level data will reside in 360 facility and used by myPredictor for deterioration projections.</td>
</tr>
</tbody>
</table>

Projects to be funded within the reallocated budget:

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Brief Description</th>
<th>Support for change to project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parks Application</td>
<td>Implementation of a maintenance management solution to track all park asset data and maintenance activity. Project includes funding for application as well as funding necessary to implement solution and collect asset data.</td>
<td>There is currently no solution for managing park asset data, work orders and or inspections. There are over 100 park assets to be considered and eventually migrated to a solution. While much of the work is being done internally there are significant costs expected to gather data, implement a solution and create business processes and procedures to sustain the system. The original budget is not likely to be sufficient.</td>
</tr>
<tr>
<td>Pollution Control Antero System</td>
<td>To provide any funding necessary to assist in the Antero upgrade and expansion of asset data in the system for the various pollution control plants and pumping stations.</td>
<td>Additional funding is expected to be needed to complete objective condition ratings on our plants and equipment. This data is critical to understanding the viability of these assets and plan for their rehabilitation and replacement. These systems are critical to the</td>
</tr>
<tr>
<td>Regulation</td>
<td>The implementation of various projects and changes to existing systems will be required to meet the AMP expectations outlined in the proposed regulation for 2020, 2021 and 2022.</td>
<td>While the regulation is pending and final efforts and impacts not completely clear immediate needs include changes to Questica for development of our Capital budget beyond a 5 year window.</td>
</tr>
</tbody>
</table>

**RISK ANALYSIS:**

There is a risk that if the policy is not approved, we will not be in compliance with Bill 6 regulations once it comes into effect.

There is a risk that if the Policy and Framework documents are not approved that funding from FCM for the project will be lost as we would not be in compliance with the deliverables for the grant. This risk is mitigated by providing Council the report in September 2017 and allowing time for any revisions, if necessary, to be made and presented to Council prior to February 2018.

There is a risk that if the projects recommended for review by the Asset Planning Steering Committee to determine if they should be cancelled or scaled back is not provided additional funding to complete other projects may be required.

**FINANCIAL MATTERS:**

There is no financial obligation associated with this report. There is only a risk that if the policy and framework are not approved by February 2018, we risk losing FCM funding for the project.

The projects identified for reallocated funding are expected to be fully funded within the existing asset management budget that was previously approved by City Council. Budgets for project elements that will not proceed will be reallocated to fund these new elements of the overall program.

**CONSULTATIONS:**

The Asset Management Network and Asset Planning Steering Committee members have been involved in the resulting Policy and Philosophy / Framework documents which are before Council.

**CONCLUSION:**
That Council approve the Policy and Philosophy / Framework documents attached and further that Council support allowing the Asset Planning Steering Committee the ability to determine what changes to the projects identified above should be made including how funding is then reallocated to other Asset Planning initiatives.

PLANNING ACT MATTERS:

N/A

NOTIFICATIONS:

N/A

APPROVALS:

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melissa Osborne</td>
<td>Senior Manager Asset Planning</td>
</tr>
<tr>
<td>Mark Winterton</td>
<td>City Engineer</td>
</tr>
<tr>
<td>Jan Wilson</td>
<td>CLT – Parks, Recreations, Culture and Facilities</td>
</tr>
<tr>
<td>Joe Mancina</td>
<td>Chief Financial Officer / City Treasurer</td>
</tr>
<tr>
<td>Jelena Payne acting for Onorio Colucci</td>
<td>Chief Administrative Officer</td>
</tr>
</tbody>
</table>

APPENDICES:

1 Appendix A - AM Policy
2 Appendix B - AM Policy Exec Summary
3 Appendix C - AM Philosophy Framework
4 Appendix D - Bill 6 Proposed AM regulation
1. **POLICY**

1.1 The City of Windsor manages the community assets by striving to meet a defined upon levels of service at the lowest asset lifecycle costs and at acceptable levels of risk.

1.2 In order to achieve the goals and benefits of Asset Management (AM), the Senior Manager Asset Planning (SMAP) will endeavour to apply the following principles across all aspects of the AM System:

   1.2.1 **Holistic** – a comprehensive approach that looks at the “big picture” (i.e. the combined implications of managing all aspects rather than a compartmental approach). This includes the functional interdependencies and contributions of assets within asset systems and the different management of assets across all lifecycle phases.

   1.2.2 **Systematic** – a methodical approach to the management of assets which is formal, repeatable and consistent, leveraging available data for evidence-based decision-making.

   1.2.3 **Systemic** – making asset investment decisions in an asset system context, not just optimized for each individual asset itself.

   1.2.4 **Risk-based** – risk associated with target levels of service is managed by ensuring that resources, expenditures and priorities are allocated based on risk and associated cost/benefit and risk tolerance.

   1.2.5 **Optimal** – best possible asset investment decisions are chosen based on evaluations of alternatives that take into account trade-offs between the competing factors of service level benefits (including asset performance), risk and cost over the long term and full lifecycle of assets.

   1.2.6 **Sustainable** – the approach to service delivery is financially achievable over the long term, is not wasteful of resources, minimizes or reverses environmental damage, and continuously improves social and inter-generational equality. The approach for estimating asset investment need and developing AM strategies is based on achieving triple-bottom-line outcomes over the long term, and considers the full lifecycle of assets.
1.2.7 Integrated – all of the above principles are coordinated to ensure the delivery of justified services and well-defined outcomes.

1.2.8 Aligned – the AM System complements and contributes to achievement of the strategic objectives of the City, as well as complying with relevant legislation and regulations.

2. PURPOSE

This Asset Management Policy describes the City of Windsor’s intentions and directions for asset management, as formally expressed by its senior management. It confirms the City’s commitment to managing community assets in a short and concise document and sets out the principles that will be adopted in applying asset management to achieve the Council’s strategic objectives.

2.1 Establish responsible governance for the practice of asset management by the City.

2.2 Document the City’s commitment to asset management and the continuous improvement of asset management practices.

2.3 Guide staff in the development and administration of an asset management approach by defining over-arching principles for asset management which are appropriate for the City’s business, and are reasonable, logical, and necessary for delivery of sustainable, affordable services.

3. SCOPE

3.1 This Policy applies to those departments within the City of Windsor that manage or influence community assets or asset systems that deliver services to the community and citizens in the City of Windsor. City policies are approved by Council and while staff, public and other agencies may provide input on the nature and content of the policy, Council retains the authority to approve, update, amend or rescind policies.

3.2 The City of Windsor’s asset management system should inform existing corporate strategy, business planning and budget management systems and processes already in place. The asset management system complements and aligns to these initiatives.

3.3 The implementation, review and reporting back regarding this policy is expected to be integrated within the City’s business processes. Due to the importance of this policy, it will be reviewed in concert with the Asset Management Plan.

3.4 This policy will endeavour to work in concert with Council strategic direction and related plans and policies which impact on scope.
4. **RESPONSIBILITY**

4.1 The Organizational Structure for AM Governance shall be as follows:

<table>
<thead>
<tr>
<th>Oversight</th>
<th>Council, CAO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advocacy &amp; Leadership</td>
<td>Asset Planning Steering Committee (Chair appointed by CAO)</td>
</tr>
<tr>
<td>Management &amp; Implementation</td>
<td>Senior Manager Asset Planning</td>
</tr>
<tr>
<td>Collaboration &amp; Support</td>
<td>Asset Planning Coordinator</td>
</tr>
</tbody>
</table>

*Note: CMMS = Computerized Maintenance Management System*

4.1.1 The Council will be responsible for:

4.1.1.1 Maintaining the necessary corporate capacity (including, but not limited to, resourcing, financial support, staff competencies, business processes, data and integrated information systems) to support the elements and practices of an AM System.

4.1.1.2 Setting priorities for Asset Management and articulating community values.

4.1.1.3 Approving asset funding through five year capital budget and 20 year long range financial plans.

4.1.2 The CAO is responsible for:

4.1.2.1 Directing/facilitating the review of this Policy at a minimum of every five (5) years, or as often as necessary.

4.1.2.2 Implementation of this AM Policy and supporting AM System, including the provision of appropriate and timely advice regarding its effectiveness in the supporting achievement of Council’s strategic objectives.

4.1.2.3 Establishing an Asset Planning Steering Committee and appointing of the cross-functional representatives from relevant business areas to serve on the Steering Committee as well as Chair for the Steering Committee.

4.1.3 The Steering Committee Chair is responsible for;

4.1.3.1 Ensuring an acceptable accounting structure is developed that supports the sustainable management of assets.
4.1.3.2 Ensuring the development and implementation of funding strategies to support implementation of this policy, based on available resources.

4.1.3.3 Serving as Chair of the Asset Planning Steering Committee

4.1.4 Detailed responsibilities within the governance structure are assigned in the AM Framework.

5. **GOVERNING RULES AND REGULATIONS**

5.1 At the direction of City Council the City of Windsor shall use best efforts to:

5.1.1 Make informed decisions, based on TBL understanding of service performance, cost, and risk associated with community asset decisions, including additions and deletions. Tradeoffs should be articulated and evaluated, and the basis for the decision recorded.

5.1.2 Integrate corporate, financial, business, land-use, environmental, community, technical, regulatory and budgetary planning for community assets.

5.1.3 Establish a clear structure of organizational accountability and responsibility for service delivery, managing risk, and the inventory, condition, use and performance of assets.

5.1.4 Define and articulate service levels and outcomes, including required levels of operations, maintenance, and replacements linked to new infrastructure.

5.1.5 Consult with stakeholders where appropriate and when sufficient information is available in a format that is useful to stakeholders to make an informed decision.

5.1.6 Manage assets to achieve sustainable service delivery, considering financial, social and environmental sustainability goals, including awareness of intergenerational equity, climate change, resource scarcity, and the precautionary principle.

5.1.7 Pursue best appropriate practices as applicable to the state of AM, state of the assets, and the data available for evidence-based decision-making.

5.1.8 Maintain a prioritized improvement plan for the continuous improvement of the AM System.

5.1.9 Recognize that there are constantly changing financial, social and environmental opportunities, constraints and challenges that surround all services and assets delivered by the City, and that asset management practices must be proactive and responsive to changing environments.

5.1.10 Consider climate change impacts, how they may directly affect levels of service, and systematically build resiliency characteristics into assets, systems, and services.

5.2 Terms and definitions used to describe actions required.
5.2.1 Asset Management Plans - will contain strategic, tactical and operational guidance for asset classes. These Asset Management Plans will assess the current status of types of assets and will become guiding documents for data management, condition assessment, operations, maintenance, renewal and replacement, and Capital Improvement Plan planning. They will be developed for all major asset classes (e.g., roads, bridges, water, wastewater, storm water, buildings, vehicles.). These plans will have, at a minimum, a 20-year outward focus and will be updated on a 5-year basis.

5.2.2 Organizational Capacity - The City will work to clarify roles and responsibilities throughout the organization and ensure that the right skills and competencies are available for effective asset management.

5.2.3 Risk Management - The City will have a good understanding of its corporate, asset, and operational risks in order to be confident that it is appropriately investing in any risk mitigation activities needed to manage service levels. In addition, the City will need to assess and quantify risk and consider the probability and consequence of failure when making Capital Improvement Plan, Operation & Maintenance, and other resource allocation decisions.

5.2.4 Triple Bottom Line (TBL) Approach – staff will assess projects and initiatives based on a TBL and Life Cycle Cost (LCC) approach, wherein the City will consider financial, social and environmental costs and benefits.

5.2.5 Asset Data and Business Support Systems - Asset data and supporting data systems, such as computerized maintenance management systems (CMMS) and geographic information systems (GIS), will be used by staff to enable asset management business processes and decision making.

5.2.6 Life Cycle Management - investment decisions (Capital and Operating), whether large or small, are based on an understanding and optimizing the balance between total life-cycle costs, risks and benefits.

5.2.7 Regulations – The City will adhere to all applicable regulations regarding their assets.

5.3 References and Related Documents

5.3.1 Asset Management Philosophy and Framework

6. RECORDS, FORMS AND ATTACHMENTS

6.1 Identify the filing and retention requirements of items generated.

6.2 List names of relevant forms and form numbers.

6.3 List attachments.

6.3.1 Schedule A - Key Asset Management Terms and Definitions
Key Asset Management Terms and Definitions

**Asset Management (AM):** Co-ordinated activity of an organization to realize value from its assets. AM involves the balancing of costs, opportunities and risks against the desired performance of assets, to achieve organizational objectives (balancing may need to be considered over multiple timeframes). AM enables an organization to examine the need for, and performance of, assets and asset systems at different levels and in conjunction with non-asset solutions. Additionally, it enables the application of analytical approaches towards managing assets over the different stages of their lifecycle.

**Asset Management System (AM System):** The complete set of interrelated or interacting elements used to effect the AM Policy and objectives and the processes to achieve those objectives. These elements that make up the AM System can include documents, procedures, tools, data, and the assets.

**Asset Management Strategy (AM Strategy):** Documented information that specifies: how organizational objectives are converted into AM Objectives; the scope and role of the asset management system in supporting achievement of the AM Objectives; and the approach for developing AM Plans. (Framework)

**Asset Management Plan (AMP):** A plan developed for the management of infrastructure assets that combines multi-disciplinary management strategies (including technical and financial) over the lifecycle of the asset in the most cost-effective manner to deliver a specified level of service. It specifies the activities, resources and timescales required for individual assets (or asset groups) to achieve the organization’s AM Objectives. A significant component of the AMP is therefore a long-term program of works and cash flow projection for the activities. Examples of AMPs include Pavement Management Plans, Bridge Management Plans, and Fleet Management Plans. Each plan will vary in complexity depending on the asset group it pertains to.

**Community assets** – Assets managed or stewarded by the city on behalf of the community to deliver, or support delivery of, essential services. Includes traditional assets (roads and utilities), cultural assets (museums, monuments), and natural resources that are used in or impacted by the delivery of services (trees, parks, land, water).

**Business Case Evaluation (BCE) -** A formal process undertaken to evaluate the best alternative for a project or initiative. The evaluation involves documenting the activity’s Benefits/Cost ratio using life-cycle analysis.

**Level of Service (LOS):** the parameters or combination of parameters that reflect the social, political, economic, and environmental outcomes that the organization delivers. Levels of service statements describe the outputs or objectives an organization or activity intends to deliver to customers

**Lifecycle Costs:** Lifecycle costs refer to the total cost of ownership over the life of an asset. This may include but is not limited to capital costs, operating costs, maintenance costs, renewal costs, replacement costs, environmental costs, and user delay.

**Probability of Failure** - The likelihood that a risk will occur (ref: CoW risk policy).

**Risk Management** - The application of a formal process to assess organizational risks in order to determine the resultant ranges of outcomes, their probability of occurrence, and what actions may be taken to reduce the organization’s overall risk exposure.

**Triple Bottom Line:** Expands on the traditional view of an organization’s financial bottom line by also measuring the organization’s commitment to economic, socio-cultural and environmental factors.
Asset Management Policy

The Corporation of the City of Windsor provides services to its citizens and its communities. This is done by managing its community assets and striving to meet defined levels of service, for present and future customers through planning, design, construction, acquisition, operation and maintenance, renewal and disposal of our assets.

When making decisions regarding our assets we will select the best investment by considering the asset lifecycle cost, the level of risk and our agreed upon levels of service.

Our asset management approach will complement the City's corporate strategy, its key business systems, existing processes, legislation and regulation. We will ensure alignment between our asset management strategy, policy and procedures and our other corporate policies.

Specifically, the Corporation of the City of Windsor is committed to the following principles within our asset management approach:

**Sustainable**
The approach to service delivery is financially achievable over the long term, is not wasteful of resources, minimizes or reverses environmental damage, and continuously improves social and inter-generational equality. The approach for estimating asset investment need and developing AM strategies is based on achieving triple-bottom-line outcomes over the long term, and considers the full lifecycle of assets.

**Holistic**
A comprehensive approach that looks at the “big picture” (i.e. the combined implications of managing all aspects rather than a compartmental approach). This includes the functional interdependencies and contributions of assets within asset systems and the different management of assets across all lifecycle phases.

**Systematic**
A methodical approach to the management of assets which is formal, repeatable and consistent, leveraging available data for evidence-based decision-making

**Optimal**
Best possible asset investment decisions are chosen based on evaluations of alternatives that take into account trade-offs between the competing factors of service level benefits (including asset performance), risk and cost over the long term and full lifecycle of assets

**Systemic**
Making asset investment decisions in an asset system context, not just optimized for each individual asset itself

**Integrated**
All of the above principles are coordinated to ensure the delivery of justified services and well-defined outcomes

**Aligned**
The AM System complements and contributes to achievement of the strategic objectives of the City, as well as complying with relevant legislation and regulations

**Risk-based**
Risk associated with target levels of service is managed by ensuring that resources, expenditures and priorities are allocated based on risk and associated cost/benefit and risk tolerance
Asset Management Governance Project

Asset Management Philosophy and Framework

Final Report

Prepared for
City of Windsor

April, 2017
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Abbreviations and Acronyms

ALM asset lifecycle management
AM asset management
BCE business case evaluation
CAMRA comprehensive asset management review and assessment
CAPEX capital expenditure(s)
CIP capital improvement (or investment) program
CMMS computerized maintenance management system
CWMS computerized work management system
KPI key performance indicator
LCC lifecycle cost
LOS level(s) of service
O&M operation and maintenance
OPEX operating expenditure(s)
RCFA root cause failure analysis
RCM reliability-centered maintenance
RPM  reactive and preventative maintenance
SCADA  supervisory control and data acquisition
TBL  triple bottom line
1. Introduction

1.1 Background

Public infrastructure is central to our prosperity and our quality of life. The City of Windsor provides a wide range of services to the community that require the ownership and responsible operations, maintenance and rehabilitation of physical assets including land, buildings, equipment, transportation, drainage, sewer and water infrastructure.

The City’s challenge is to ensure cost-effective management of these assets in a changing regulatory environment, where rate pressures, property taxes and public scrutiny are paramount considerations, legacy infrastructure is aging, and both environmental and social sensitivity are necessities.

Resolving Windsor’s infrastructure challenges begins with improved asset management. The City views this as a prerequisite for a productive discussion with the community about sustainable solutions, including funding and affordability.

Asset Management (AM) is an integrated approach, involving all City departments, to effectively manage existing and new assets. The intent is to maximize benefits, reduce risks and provide satisfactory levels of service to the community in a sustainable manner. Good asset management practices are fundamental to achieving sustainable communities.

The City has begun to implement asset management (AM) with the expectation that it will make the City, its staff, and its services the very best. Although full realization of all of its enterprise-wide asset management (AM) goals is still many years away, departmental AM initiatives have been implemented in a number of areas (e.g. Public Works, Facilities, Fleet) and have already resulted in benefits to the citizens.

The City of Windsor has been developing its corporate AM program since 2009 when we embarked on an AM Governance project. Since that time, many of the recommendations have been implemented including the creation of a corporate Asset Planning Division. The City’s recent AM journey is reflected in the following documents, developed through the new Asset Planning Division:

- Current Asset Management Readiness Assessment – 2010
- Asset Management Governance Strategy – 2010
- Asset Management Philosophy and Framework – 2010
- Asset Management Roadmap – 2010
- Corporate Asset Management Plan – 2013
- Levels of Services Template and Process – 2014
- Corporate Asset Risk Assessment Template and Process – 2015
20 year Roads Needs and Funding Assessment – 2015

Current priorities for further development of the AM Program include:

- Developing an Asset Management Policy that strengthens the links with sustainability
- Developing Lifecycle Management templates and processes
- Development of 2018 Corporate Asset Management Plan
- Developing a business case evaluation process that assesses the social, economic and environmental benefits and risks of projects.

The City is continuing to methodically cement a holistic AM culture and approach by: forming consensus around a core philosophy that incorporates a triple bottom line basis for creating value; implementing key AM processes; building staff understanding and confidence; and celebrating early gains. In the future, City intends to regularly assess and track progress on its AM journey and benchmark the program to itself and other cities.

The following corporate Vision and Mission Statements provide the basis for City’s AM philosophy:

**Vision**

The City of Windsor will endeavor to be a leader in achieving a sustainable community by balancing environmental, social and economic values with a view to the future.

**Mission**

The mission of the Windsor AM program is to implement comprehensive AM practices that strive to: build a sustainable community for current and future generations; deliver efficient and effective services; manage the overall cost of asset ownership; protect the environment; support staff and stakeholders in decision making; communicate a common purpose such that all actions are unified in pushing a path of progress; and support the use of current and accurate information to best manage all community assets and serve all customers.

**Definition**

The following definition of asset lifecycle management has been adopted by the City and fully meets the needs of our vision and mission for asset management:

*Asset Lifecycle Management is an integrated set of processes that minimize the lifecycle costs of providing (planning, creating, operating, maintaining, replacing and disposing) networks of assets and other measures to deliver an defined standard of service over the long term at an acceptable level of risk.*

### 1.2 Purpose and Scope

The Asset Management Philosophy and Framework is a governance document in the AM System that sets the Context, Goals and Objectives for AM at the City. It defines the framework for AM practices at the City and the roles and responsibilities for the governance of the AM System. It also contains a detailed vision and philosophy/principles to govern the development and implementation of the AM System.
The asset based services included within the AM System are:

- Water Reclamation
- Facilities and Structures
- Parks, Horticulture, and Forestry
- Fleet
- Arts and Culture
- Finance
- Information Technology Systems
- Storm, and Sewers
- Transportation systems
- Energy Systems

As the asset management program becomes established and advances, it is anticipated that the range of community assets within the scope of the AM System will continue to expand. In particular, inclusion of natural assets and ecosystem services is expected to be an important enhancement to meet the sustainability and climate change resiliency aspirations and obligations of the City.

It should be noted that the focus of the 2018 AMP is ensuring compliance with the pending Ontario Infrastructure for Jobs and Prosperity regulation. The regulation requires the inclusive of all core infrastructure assets, as defined by the pending Ontario Infrastructure for Jobs and Prosperity regulation as well as all other assets which are part of a City’s Tangible Capital Asset reporting and listing. Inclusion of all assets reported in the City’s 2013 AMP will ensure compliance with this part of the regulation. Expansion of the list of assets and asset categories is expected to be developed for the 2023 AMP as many of those assets are currently in the early stages of developing asset management data and practices and to attempt to bring them into the 2018 AMP may result in less focus on the required assets which must be included for compliance to the regulation.

Each of the service areas within the scope of the AM System manages their assets in an environment with various inputs, goals and priorities. A detailed description of assets is provided in the Asset Management Plans.
2. Asset Management Philosophy

The City’s asset lifecycle management philosophy can be summarized as follows:

Asset Lifecycle Management at the City of Windsor will focus on the delivery of cost-effective services to customers – today and into the future. We will make deliberate decisions regarding assets and resources in a transparent manner using decision making processes and criteria that demonstrate clear linkages between the asset programs, and budgets. Asset lifecycle management will penetrate every facet of capital and operational resource allocation decision making, and requires engagement of City Council and the City’s workforce at all levels. Key missing practices that must be adopted to become a sustainable municipality include:

1. Integrated risk management, including climate change awareness and planning for climate resiliency;
2. A focus on community and environmental service outcomes in addition to financial sustainability through comprehensive triple-bottom line and life-cycle costing, and tracking and reporting of performance;
3. Integrating land use and infrastructure planning practices;
4. Integrated and collaborative planning for service delivery across internal and external stakeholders; and
5. Documentation of the business case for significant expenditures.

We think of asset management as synonymous with best-in-class city management and creating sustainable communities.

The key elements of this AM philosophy, and the vision presented below, are discussed in greater detail in Section 3 – Asset Management Framework.

2.1 Asset Management Vision

When fully implemented and practiced in the City’s organization, Asset Management will demonstrate the following characteristics and attributes:

- **Customer Focus**
  - Clear understanding of the City’s core services and the values and needs of customers..
  - Understanding the City’s priorities through established service levels that are clearly linked to the values of elected officials, customers, ratepayers, regulators, regional partners, and other stakeholders.
  - Transparency to stakeholders and customers on the quality and sustainability of current and future service delivery. This will include regular reporting to Council on
current and forecast service performance, cost, and compliance with all relevant legislative, regulatory and statutory requirements.

- Being open and responsive to customer feedback.
- Knowledge of asset emergencies, failures, other incidents, and broader trends such as climate change that impact the City’s ability to deliver services and plan proactively how the City can and will respond to these events.
- Decision processes manage the relationships between stakeholders; preserve and develop our story and sense of place; and reflect our culture and values in how we set priorities and resolve our differences.

**Risk Management**

- Robust understanding of the City’s corporate, asset, service, and operational risk exposures, tolerances, and management strategies.
- There is a risk framework in place that has created a common language and terms of reference to enhance dialogue about risk and allow comparison of risk across the City.
- Management and resource allocation decisions are made in a way that achieves defined levels of service and benefit at an acceptable balance between cost and risk.
- Active communication, discussion, and agreement between the City’s stakeholders regarding appropriate and/or acceptable levels of asset risk and risk management strategies.

**Decision Making Process**

- AM decision making and budgets are clearly linked to the achievement of organizational priorities and objectives.
- Decisions are made transparently and deliberately. Decisions are justified and documented. Decision models are developed to ensure consistency, efficiency, and timely decision making use of the right information. The decision processes connect the appropriate departments and service functions to build effective working relationships and the sharing of information.
- Decision-makers at the City understand their role and functional relationships in the decision making process as well as understanding and applying the concepts of AM to their jobs.
- The City explores, presents, and selects alternative solutions to defined problems based on objective data and reasoning, not on intuition, or the most impassioned side of a debate, or ulterior motivation.
- Asset investment decisions are made in an asset system context, not just optimized for each individual asset or project itself. The City considers the inter relationships between services and assets, both in a cross-asset context and within the operational system (e.g. roads vs roads, roads vs water).
- Decisions are based on financial, social, and environmental implications (the triple bottom line, or TBL), and the decision processes are integrated between strategic, tactical and operational levels (integration of short and long term decision making).

- Project drivers, comprehensive problem definition, and alternative solutions are identified, analyzed, and documented early in the asset/program creation or modification process, and reevaluated when appropriate, in order to maximize cost savings and ensure overall implementation success. In particular, the City ensures that proposals for new assets or services go through appropriate due diligence and are evaluated against defined levels of service and sustainability criteria, and that they are supported by a valid business case and cost benefit analysis.

- Decisions on large investments are made only after rigorous analysis of alternatives by appropriate individuals empowered to make important investment decisions. The original project intent is preserved but allows for changes in asset plans when the decision making inputs change.

- **Asset Operation and Maintenance (O&M), Information, and Technology**
  - O&M strategies have been developed and documented based on the City’s asset management principles and framework. O&M Strategies are developed within the parameters set out in the service masterplans and tactical asset strategies.
  - Staff will have greater knowledge of all assets, optimal lifecycle strategies, and the linkages between cost and level of service, and are thus better able to ensure robust and defensible financial planning and management.
  - Staff will have good information about the condition of the assets and a good sense of how the condition of the infrastructure will change in the future.
  - Staff will have reliable information about what it costs to perform the work.
  - Staff will have timely information regarding the achievement of service levels and meeting key performance indicators, as well as any adverse impacts associated with assets, services, or workforce.
  - Staff understand the concepts of AM, appreciate the bigger picture and use their initiative to pursue opportunities for improvement. They have a complete understanding of their role and do not see their job as a series of tasks, but as an essential function that has a deeper purpose to achieve results and fulfill the mission.
  - Staff will have enough information and direction to help them make timely resource allocation decisions and risk mitigation plans.
  - Technology solutions will be driven by City-wide needs and therefore will be coordinated and structured to meet organizational objectives.
  - The City will have effective data systems and core business software tools in place to capture, store, and provide the data and analysis needed to make informed decisions.
• **Employee Engagement**
  
  - There will be team-based culture that is respectful of individuals, abides by basic values and work expectations of the City, and that honors new ideas aimed at improving the City’s operations.
  
  - Each employee will understand his or her role in the organization and how it relates to the objectives of the organization.
  
  - Staff will be able to describe their work and explain why they do it.
  
  - Asset Management goals are a natural part of how staff will think, plan and act.
  
  - The City will foster a work environment where people are collaborative, hard-working and analytical. Employees at the City are comfortable in routinely searching for innovation and best practices and are proactive in gaining new skills.
  
  - Employees will understand the organizational objectives, and on a project-by-project basis will be better able to explain the reasons behind the implementation of solutions.
  
  - Employees will seek innovative solutions because there is a clear process for evaluating alternatives and quantifying future benefits of creative solutions.
  
  - Leadership shall model the attributes of collaborative working and making evidence based decisions. They will establish processes that encourage and empower staff to work in cross-functional groups and avoid silo decision making.

• **Organizational Performance**
  
  - The Senior Manager of Asset Planning routinely monitors and reports on the performance of the AM System and service delivery to the Asset Planning Steering Committee, who make thoughtful decisions about how to remedy those areas where the performance should be improved to better meet the needs of the AM System and customers.
  
  - Staff shall demonstrate a stewardship ethic that embodies the responsible planning and management of assets and resources. They will be efficient and effective in project and program implementation and the use of resources, and shall be responsible for their performance.
  
  - The City will provide skills development programs to assure necessary competencies are in place to support the AM System and function as a high-performing organization.
  
  - Staff will track their decisions and their ability to successfully implement approved solutions. Staff will routinely track budget, schedule, scope, and performance outcomes, and use this information to focus improvement efforts.
2.2 Benefits of Asset Management to the Community

Asset management benefits the community in many ways but primarily by more effectively and consistently meeting agreed upon levels of service at the lowest cost of asset ownership. The City will achieve this by:

- Establishing customer outreach and involving stakeholders, including the community and staff, in defining and developing strategies, policies, levels of services, in the decision making concerning the City’s infrastructure.
- Monitoring and reporting on service delivery against defined service levels.
- Incorporating TBL and risk in decision making.
- Developing Comprehensive asset management plans to guide investment decisions and demonstrate fiscal responsibility and optimization of strategies.
- Ensuring that the local economy is supported through adequate and competitive taxes and rates, and that those who benefit directly from municipal infrastructure pay for the service whenever feasible.

2.3 Internal Relationships

The City will be adapting organizational capacity, roles and responsibilities, and important work processes as part of the asset management improvement agendas. This involves assuring that cross-functional interests are represented in organizational decision making, on working teams/committees, and by the Corporate Asset Planning Division. The Corporate Asset Planning Division will provide corporate oversight, management, coordination, and sustainability of the corporate asset management program. The Corporate Asset Planning Division in concert with the implementation AM Steering Team, Departmental asset managers (AM Network) will provide process planning, tool development, implementation oversight, and quality control over the work plan. The AM Steering Team will be responsible for establishing and chartering other improvement projects and initiatives and for creating the culture change necessary to ensure a high-performing organization. Other teams will be created as necessary for effective implementation of comprehensive asset lifecycle management. In addition, Appendix 301 describes the City’s team-based approach and governance structure for asset lifecycle management development. This team-based approach is proposed to continue indefinitely to support AM implementation.

2.4 Business Context and Alignment

Gaining and maintaining an informed understanding of internal and external business operating environments is critical to maintaining an appropriate and effective AM system. The City currently has a detailed understanding of AM Maturity through the 2010 AM Readiness Assessment and ongoing periodic CAMRA assessments as well as an understanding of the broader business context within which the City operates and the corporate priorities and objectives that the AM System links to.
A primary corporate objective is to strengthen linkages between the Strategic Vision and the City budget through the City’s AM decision making processes and criteria:

“Making progress in the future will require making choices – we need to track our progress and tie budget decisions to the Vision”.

The corporate objectives that the AM Objectives shall align with are as follows:
3. Asset Management Framework

The City’s asset management framework describes how the AM Policy and the associated Vision, Mission, Philosophy and Values described above have been implemented and will be sustained. Figure 3-1 provides an overview of the key elements of the framework that will help the City achieve its vision for asset management. The framework combines key concepts from the International Infrastructure Management Manual, PAS 55 British Standard for Asset Management as well as developments in the asset management field in North America.

This framework, as further explained below, is the context within which asset management activities and initiatives will occur. It will be updated annually to reflect the current status of asset management within the City. All references listed in the chart below are examples of documents, it is not intended to be an exhaustive list and it should be noted is subject to change.
3.1 Visioning

The Visioning process will identify the City’s overall mission, vision, values, goals, strategies, actions, and performance requirements. This process will serve to evaluate current and emerging business drivers that would affect the City’s ability to provide cost-effective services. Visioning will help City identify government (legal/regulatory), customer, employee, supplier, and community requirements and expectations. Outputs from this process will govern how the various City departments conduct business and generate the following types of plans: Strategic Plan, Long-Range Financial Plan, Climate Change Plans, Human Resources Plan, Green Plan, Business Continuity Plan, and IT Master Plan.

3.2 Strategic Elements

The Strategic elements as approved by the Mayor and Council will set the asset management policy/strategy goals and supporting metrics and targets, as well as related goals for political and other appropriate stakeholders. At the start of each strategic planning cycle, the Mayor and Council will establish investment priorities and budget parameters.
Organizational requirements for effectively managing assets and sustaining the program will be defined. Asset Management forward planning will take place where an optimal mix of assets (new, rehabilitated, and replaced) will be defined to meet expected levels of service. Funding strategies (such as for rates, property taxes and debt financing) will be developed to meet expected expenditure projections.

The outputs from this element will be a State of the Asset Report, Level of Service framework with metrics and targets, a rate structure or property tax structure to meet capital expenditure (CAPEX) and operating expenditure (OPEX) funding requirements, and long-range master plans by major asset classes.

3.2.1 Service Levels

Service levels will be defined as statements of desired performance outcomes that have a high priority to our customers, or are required by regulators; are within the control of the City; and have performance level data that can be collected and audited accurately and consistently.

Figure 3-2
Alignment of Asset Management Goals

Vision

Definition of service levels will consider what is sustainable and equitable for the community across our customer base and over the long term between generations of Windsor residents. Customer surveys, focus groups, and willingness-to-pay studies will be conducted to help set service levels; and customers, Council and staff will clearly understand the rate and property tax impacts of achieving these levels. Information on achievement of service levels will be accurately collected and reported to customers, elected officials, and regulators on a regular basis. Service levels will be set such that they can be monitored and are within our organizational control.

3.2.2 Corporate Asset Master Plans

Long-range asset master plans will be developed for all major asset classes (e.g., roads, bridges, water, wastewater, storm water, buildings, vehicles, etc.). These master plans will have, at a minimum, a 20-year outward focus and will be updated on a 5-year basis. These plans will consider existing and emerging business drivers, demand and supply projections, conservation, rehabilitation and replacement of existing assets, and consider new technologies. Some of that information will be taken from the more detailed and asset-specific Asset Management Plans (AMPs) described in the Tactical Elements section below.
AMPs will become the main input for the CAPEX budget and Capital Improvement/Investment Program (CIP).

**Vision**

Long-range plans for all major asset classes will be updated on a 5-year basis to effectively address current and emerging business drivers.

### 3.2.3 Funding Studies

The City will develop 20 year sustainable funding models for asset classes which define the expected level of service and risk of the asset class based on various funding levels, which will allow for Council to define service levels. The City may choose to conduct regular rate, property tax studies and willingness-to-pay surveys to inform customers and determine possible funding options to achieve the defined service levels. These studies should be closely coordinated with funding requirement recommended in the Master Plans developed for the various major asset classes. Such studies will ensure that stakeholders are aware of what is required to manage the assets effectively and also will help City set realistic service levels based on customers’ willingness to pay. The studies would also set the stage for exploring other funding sources (grants, debentures, etc.)

**Vision**

Service levels and associated funding to effectively manage assets will be set based on funding ability through various funding strategies which may include but are not limited to rate and property tax studies, grants, debt, fee for service and customer willingness-to-pay surveys.

### 3.2.4 Climate Change

An important element of asset management is understanding and managing risks. Climate Change poses a significant risk to many of the critical services delivered by local governments as well as threatens the financial, social and environmental well-being of all communities. The effects of a changing climate have already been felt locally and the City has taken actions to adapt to the unavoidable effects, such as extreme summer heat or an increase in intense rain events, which are expected to continue and intensify A well-adapted city is able to manage the effects of climate change through the advancement of sustainable policies, infrastructure investment and public education. It also provides an opportunity for innovation and integration of municipal design, planning and operations.

To minimize the extent of future climate change impacts, the City must fully understand the forecast impact of climate change on its infrastructure and all operations (i.e. the degree to which the community and City’s infrastructure systems are susceptible to or unable to cope with the adverse effects of climate change, including climate variability and extremes). With this understanding, mitigation and resilience actions can be prioritized and implemented, including reducing greenhouse gas emissions. Fighting climate change also presents economic opportunities and minimizes social disruption.
The City of Windsor has two fundamental response strategies to address climate change; Mitigation and Adaptation:

**Mitigation**
- Sustainable transportation
- Energy conservation
- Building code changes to improve energy efficiency
- Renewable energy
- Improve vehicle fuel efficiency
- Capture and use landfill & digester gas

**Adaptation**
- Infrastructure upgrades: sewers & culverts
- Residential programs: sewer backflow & downspout disconnection
- Health programs: West Nile, Lyme disease, Shade Policy; cooling centres, smog alerts; Air Quality Health Index
- Emergency & business continuity planning
- Help for vulnerable people

Actions that reduce the emissions that contribute to climate change.

Actions that minimize or prevent the negative impacts of climate change.

The City’s active work on climate change adaptation and mitigation will assist in preparing for the negative impacts of climate change while identifying opportunities to reduce GHG emissions for the benefit the global community. The City is also increasingly engaging community members so they will be empowered to make their own decisions on climate change adaptation, mitigation and resilience:

**Vision**
Asset management provides a substantial opportunity to address a changing climate over the long-term. Using the best available science and proven innovation along with provincial and federal guidance documents, the City will identify climate risks and determine how these risks may impact a community asset over its intended life. Climate change and

Taken from [http://renewcanada.net/2009/adaptation/](http://renewcanada.net/2009/adaptation/)

If you want to include something like this let me know.

WE
climate change activities or actions must be considered while managing both physical and natural assets, as well as ensuring (or improving) the level of service being delivered. It will be important to determine how a changing climate may affect the Triple Bottom Line or Life Cycle Costing of a community asset. Measures for mitigating climate change will also be considered. Staff will have a general understanding of how climate change impacts community assets.

What does municipal resilience mean for asset management?
- It reduces vulnerability to climate change impacts by identifying what & where are they? What is the risk? And finally, determining adaptation strategies to limit costs and strengthen resiliency of infrastructure.
- It covers the whole AM process from decision making, design, operation, maintenance and replacement.
- Investment choices can be rethought or reconsidered to implement resilience. This will also best position a municipality to capture the benefits, including funding, of low carbon, climate resilient development.
- Adaptation is a dynamic, context-specific and often long-term process that requires sustained efforts from a variety of actors. Integration can be systematic.
- Asset management provides a mechanism for mainstreaming climate change mitigation and adaptation into infrastructure decisions and development policies.

### 3.3 Tactical Elements

The Tactical elements will focus on managing the various asset classes and asset types by developing individual asset management plans to meet policy and strategy goals. These plans will define key tactics (with supporting metrics and targets) in each phase of the asset lifecycle (plan, design, create, operate/maintain, rehabilitate/replace, and dispose). The plans will document the answers to the nine questions of infrastructure management (shown opposite). In this section, the City will describe how it will achieve the desired organizational capacity and identify the various tools that would be leveraged to sustain desired asset management practices.

#### 3.3.2 Asset Management Plans

The Asset Management framework and plan being developed will apply to the City as a whole, and will also contain strategic, tactical and operational guidance for asset classes (e.g.
wastewater, vehicles and roads) and types (e.g. pump stations, roads) of assets. Where the
asset class master plans are primarily strategic, these Asset Management Plans will assess
the current status of types of assets by:

• Describing asset inventory and attributes such as size, material, age, and condition

• Listing relative service levels and regulations

• Describing current operations, maintenance, and rehabilitation/replacement strategies
  and models, and assessing the long term impacts of significant trends such as growth,
  and climate change on the sustainability these strategies and cost of service.

• Characterizing the criticality of assets and the environmental footprint associated with
  City’s operation and ownership of the assets

• Characterizing significant and critical risks and risk tolerance for the asset category, and
  defining the program for mitigating risks associated with ownership and operation of
  assets

• Define how projects and maintenance activities are selected and prioritized for the
  various asset classes

• Outline how various asset classes are managed for service level sustainability including
  efforts which are operational and or rehabilitation in nature

• Documenting major CAPEX and OPEX initiatives aimed at asset rehabilitation,
  replacement, enhancement, and improvement to the operations

These plans will become guiding documents as described in the vision statement below that
feed into the strategies for data management, condition assessment, operations,
maintenance, renewal and replacement, and CIP planning. As the plans become part of the
normal business operations, the subsequent versions will provide an avenue to report on
actual performance parameters, such as actual vs. target service levels; actual CIP delivered
versus planned delivery and improvements to deficient assets.

Vision
The City will have complete and updated Asset Management Plans for all of our categories
of assets. These plans will provide a good sense of how the condition of the infrastructure
will change in the future and help the City to understand potential risks and the appropriate
risk mitigation strategies for each asset category. These plans will become guiding
documents that feed into the data management strategies, the condition assessment
strategies, the operations strategies, the maintenance plans and strategies, the renewal and
replacement strategies, and the CIP planning processes.

3.3.3 Organizational Capacity
The City will work to clarify roles and responsibilities throughout the organization. The
City will ensure that the right skills and competencies are available in the organization for
effective asset management. The City will also work to ensure departments have the tools
and resources necessary to capture, manage and communicate information. Decision-
making roles and responsibilities will be evaluated and optimized to ensure timely responses.

**Vision**

All employees will clearly understand their roles and responsibilities in the organization, as well as the role of their workgroups. Employees will understand the outcomes for which they and their workgroup are accountable, and how these outcomes relate to the overall City goals.

Information regarding the roles of the various workgroups in the organization will be readily available. Relationships between one workgroup and another will be clear, and each will be confident that all workgroups will do the work for which they are responsible, and that they will be held accountable for that work and the results. It will be clear who is responsible for managing assets and for making decisions about what services are to be performed and how to perform them.

In addition, the City will understand the desired competencies that the staff needs to have to be effective at asset management practices. In this regard the City will develop, implement, and manage a training program that seeks to ensure the necessary skills and competencies are always available to manage the assets.

### 3.3.4 Risk Management

The City will intend to have a good understanding of its corporate, asset, and operational risks in order to be confident that it is appropriately investing in any risk mitigation activities needed to manage service levels. In addition, the City will need to assess and quantify risk and consider the probability and consequence of failure when making CIP, O&M, and other resource allocation decisions.

**Vision**

The City will implement a defined corporate risk management strategy that incorporates a thorough assessment of both consequence and probability for events and/or activities that could adversely impact the City and its ratepayers. This corporate risk management program and its principles will be understood throughout the organization. Corporate risk management scores for particular events and/or activities will be integral to every strategic decision undertaken by the City.

With regard to asset risk management, all assets and asset classes will be categorized by the risk exposure they present to customers and ratepayers. All assets that present an unacceptable level of risk will have specific risk costs calculated and associated with them such that appropriate risk management alternatives can be developed. For example, different risk management strategies will be applied depending on the risk signature of the asset, as shown in Figure 3-2, Risk Management Strategies vs. Asset “Risk Signatures”. So a low-risk asset may justify run-to-failure management strategy and a high-risk asset may require condition-based monitoring such as vibration and oil analysis. Risk costs will be used to develop condition-based strategies, model-based strategies, reactive-based strategies, failure history-based strategies, and contingency/mitigation plans for all asset classes.
3.3.5 Triple Bottom Line (TBL) Approach

One of the fundamental and most important aspects of the City’s Asset Life Cycle Management work will be to assess projects and initiatives based on a TBL and Life Cycle Cost (LCC) approach, wherein the City will consider financial, social, and environmental costs and benefits. These results will be considered in concert with their relationship to deliver the defined levels of service at an acceptable level of risk. The process of quantifying TBL costs and benefits in a comprehensive, accurate, and consistent manner and effectively communicating the results to decision makers, will be difficult and require much time, effort, and training. Once the City has developed and quantified these values, it will include them in the cost analyses when evaluating new projects or changes in O&M practices.
Vision
Financial, social, and environmental benefits and costs will explicitly be considered in all capital investment, operations, and program decisions. Acceptable methods of quantifying and incorporating social and environmental benefits and costs into Business Case Evaluations (BCEs) and other decision processes on a scale commensurate with financial considerations will be developed and applied. Decision making based on the triple bottom line (financial, social and environmental) will be streamlined, efficient, routine, and second nature. The triple bottom line will be universally understood to reflect the asset management goal of providing agreed service levels to customers and the community at the lowest Life Cycle Cost.

3.3.6 Business Case Evaluation based on Triple Bottom Line
In order to ensure that funds will be used wisely, the City will conduct business case evaluations for all investments exceeding a defined threshold, using the standard BCE methodology. All projects will be evaluated using standard financial indicators to ensure that the City goes forward with the most cost-effective option. The overall goal is to look at overall life-cycle costs when evaluating asset-related projects, as well as TBL costs, qualitative costs, benefits, and risks. By looking at the overall cost of ownership, the initial investment decision can be significantly different than if initial costs alone are considered.

Beyond the financial consideration involved in proving a business case, the BCE process will stress the importance of comprehensive problem definition so that all project alternatives will be focused and tangential costs will be avoided.

Vision
All projects exceeding an established cost threshold will be clearly defined, documented, and will have alternatives identified and evaluated using the standard City BCE framework. This project will be tracked after approval to validate that proposed TBL benefits will be actually realized.

3.3.7 Asset Data and Business Support Systems
Asset data and supporting data systems, such as computerized work management systems (CWMS) and geographic information systems (GIS), will be critical to an asset management program. Most organizations are working hard to obtain more, better, and more consistently available information about their assets, ranging from the most basic data such as asset age, material, size, and location, to asset history. The City will strive to have, at their fingertips, the failure history of the asset as well as the up-to-date maintenance history where appropriate. The City also will strive to know the asset condition and define the consequence if it were to fail. As The City collects this information, it will be evaluating the asset data systems utilizing data analysis tools to drive decisions making. The various systems will need to be able to “talk” to each other efficiently and share information; this involves financial systems, customer systems, work management systems, and geographic information systems. Data governance will include: single source of truth; understanding of data needs, accuracy, value, application as well as data quality control which match the functional requirements of the AM process. The City will also work on developing more-accurate and automatic ways to fully understand the cost of owning assets, or asset costing.
With a good asset costing system, the City will readily understand not only the value of the asset but also the cost to perform maintenance and operate the asset.

**Vision**

Asset data will be accurate and available in accordance with our defined requirements. The City will have a comprehensive inventory of the capital assets and know the value of them. An asset register will be complete and accessible, at a high level of accuracy. The City will have reliable information about the cost of owning assets. The City will, however, only invest in asset data collection, data accuracy, and data systems where it makes good business sense. City staff will leverage technology systems and integration capabilities to capture, manage, and use asset knowledge to create value through informed decision making. In addition to the City’s goal will be to be both a data-rich and a knowledge-rich organization, the City will expect knowledge-rich abilities of staff to drive needs and be used.

### 3.4 Operational Element

The Operational elements of asset management will ensure that the various aspects of the asset management plans are implemented for each area of an asset’s life-cycle. The organization’s design and staff roles will be set up to ensure that there is effective coordination during the asset life-cycle. There will be efficient execution of work processes and active management of asset knowledge leveraged by technology tools and also aid in asset management objectives. All personnel involved in asset management processes will be provided with the right tools and skills/competencies to be effective in their jobs.

#### 3.4.1 Decision Making Processes

As noted throughout this section, there will be new practices being adopted at the City that will require documentation of new procedures and decision making roles. City will work to update and clarify decision making across the organization—for example, how and when the BCE process is executed and who at the City should be making which type of decisions along the way, and how people and various workgroups will be held accountable for their work. In addition, these BCEs will provide input on recommendations for higher level decision making. The use of guidance documents will ensures process repeatability as well as output quality. This, along with the presence of clear decision making paths, will lead to a healthy and productive organization. The City will formalize the reporting structure so that the Asset Planning Division will take responsibility for the timely adoption and sustainability of these new practices.

**Vision**

The City’s employees will understand how, where, and when various decisions are made in the organization. Staff will each receive training on new procedures and understand their own level of decision making authority. Staff will make well-informed, transparent decisions, based on objective presentation of total TBL LCC costs, benefits, and risks. Management will always support employees in their decision making roles.
3.4.2 Efficiency
In developing this framework, the City will focus on maximizing efficiency and effectiveness throughout the organization, and there will be initiatives planned to make sure that customers also are receiving the best value for their dollar. For example, staff will have documented policies and procedures for key activities, and will be provided training to ensure efficient and effective work execution. In addition to the current benchmarking project, such activities will continue at scheduled intervals providing a continuous improvement mechanism. Other efficiency initiatives will include the use of a new BCE process to improve project delivery and the use of a CWMS and performance measures to track and improve O&M activities.

Vision
Staff will be efficient in their work. Staff will understand how efficient they are as an organization in meeting customer expectations, and how their level of efficiency compares to that of similar organizations. They will have reliable information about what it costs to perform their work. Initiatives will be undertaken to assure that their work plans and methods are streamlined efficiently.

3.4.3 Life Cycle Management
The City’s investment decisions (CAPEX and OPEX), whether large or small, are based on an understanding of the total life-cycle costs and benefits. This may include initial capital investment; life-cycle O&M costs; other asset ownership costs such as energy, future renewal and rehabilitation costs; and disposal costs. The City will incorporate practices by our planners, engineers, project managers, and others to assure that life-cycle costs and benefits of projects and programs are considered when making investments. For example, it is expected that personnel from finance will establish discount rates and engineers and cost estimators will track construction cost inflation.

Vision
Consideration of life-cycle costs for specific assets as well as systems as a whole will be second nature when making resource allocation decisions. Staff will ensure accuracy in their projections of life-cycle costs, and effective systems and processes for CAPEX and OPEX forecasting. They will have good understanding of the accuracy of their estimates of total capital as well as total life cycle cost of projects and programs. They will have developed and apply the rules for cost estimating consistently. The necessary data for tracking life-cycle costs of assets and activities will be provided very efficiently, and will be routinely analyzed, reported, and well understood. The life-cycle cost implications of increasing (or decreasing) service levels to customers will be accurately assessed. Staff will adopt leading practices in each phase of the asset life cycle (plan, design, create, operate, maintain, rehab/replace and dispose) to ensure that overall cost of ownership of the asset is minimized for both short and long term decision making.

3.4.4 Work and Maintenance Management
As noted under the Risk Management section, staff will employ risk-based maintenance management strategies to maintain reliability of critical assets. Staff will seek to achieve the
right balance of reactive and proactive work using the following concepts: advanced work order planning and scheduling, effective materials management, predictive maintenance, reliability-centered maintenance (RCM), and root cause failure analysis (RCFA) investigations. Automating the process through the use of a CMMS will improve efficiencies and allows timely collection of asset and work management performance information. Together, these best practices will help the City move from a reactive to proactive organization. In support of this goal, staff will be performing the right work on the right asset at the right time.

**Vision**

Staff will understand how best maintenance practices can improve maintenance efficiencies and adopt a reliability-focused culture at the City. Staff will utilize outside resources, as appropriate, and train the staff to establish the right balance of reactive and proactive (preventive or predictive) work to minimize maintenance costs, maximize asset reliability, and meet desired performance standards.

### 3.4.5 Operations Management

The City will seek to capture an optimal level of performance from the assets by practicing effective operations management. This will include treatment plant process optimization reviews, sampling management, traffic modeling, energy management, building management, and appropriate use of technology such as supervisory control and data acquisition (SCADA) and other automation systems. In addition, operations staff will team with the maintenance staff on reliability efforts such as Reliability Centered Maintenance (RCM) and Root Cause Failure Analysis (RCFA). Programs such as RCM will help identify optimal equipment operating procedures and tools such as SCADA and other automation software can help monitor performance and manage asset health. O&M teamwork will be enhanced ensuring that maintenance interventions are performed on a timely basis to keep assets functioning at the levels operators need.

**Vision**

The City will get the most from the assets by practicing effective operations management and ensuring that all processes are cost-effective. The operations staff will partner with the maintenance staff and other groups to track and manage asset health, reliability, and performance.

### 3.5 Performance, Quality Management, and Benchmarking

To assure that the City’s performance and quality will meet established targets and protocols, consistent and effective monitoring and reporting will be needed on a regular basis. Results will be used to update the AMP and other related plans as appropriate, with the documentation of actual performance providing input to adjust operational and tactical work approaches around the life cycle of assets. The AMP will include a report card which will outline performance, cost, and risk trends of various asset classes in comparison to prior AMP reporting. In addition, these report cards could suggest adjustments in the overall Asset Management philosophy and strategy, as well as provide input to overall planning and other processes. It is also important to ensure that all departments are progressing well
towards the goal of sustainable asset management as well as achieving leading practices, which will be done by reviewing our position to defined service levels and risk. The inter-relationship of these items is shown in Figure 3-3, Relationships of Data to Service Levels.

FIGURE 3-3
Relationships of Data to Service Levels

1) Establish Levels of Service (LOS)
2) Select KPIs to monitor Performance against LOS
3) Identify Data needed for KPIs
4) Ensure Appropriate Systems of Data Collection and Management

3.5.1 Performance and Quality Management

Performance and quality management will be achieved by establishing a manageable number of performance measures and indicators, which will inform work groups on how well they are meeting service levels. Performance measures shall be Specific, Measurable, Achievable, Relevant and Time-bound as well as Evaluated on a regular basis and Recognized/Rewarded when achieved or Revisited when not (S.M.A.R.T.E.R). Performance indicators will be quantifiable measures of efficiency, quality, reliability, and/or effectiveness that determine the actual level of performance. They will help describe the level at which a work group or division is performing in a particular activity or business process. Performance must be within the control of the City and generate performance-level data that can be collected and audited accurately and consistently.

As the City’s AM system matures, AM objectives will be reviewed and refined. To monitor the effectiveness of the AM objectives, levels of service and performance measures, community consultation will be undertaken through specifically designed customer surveys and workshops. In addition, the community will be able to interact with Council about the level of infrastructure service provision through various media types, including mail, e-mail and Facebook.

Internally, a workshop will be held at least once every four years with key stakeholders to review the current AM objectives and service standards.

FIGURE 3-4
Performance Management Framework
Vision

The City will have a structured system that measures and reports on the key performance indicators (KPIs). This system will contain cascading performance measures – that is, measures will flow from high-level corporate service level measures into measures for divisions and sections. Indicators will incorporate the principles of a “balanced scorecard” approach and be stated as appropriate in service agreements and individual performance agreements, and it will be clear who in the organization is accountable for each item being measured, including data collection and reporting. Further, the measures will have specific targets that will be linked to managed work processes and the annual budget. Performance monitoring information will be available in a timely manner and accessible to anyone interested. A quality control and quality assurance framework will be in place and quality will be validated through regular reviews.

3.5.2 Benchmarking

In order to measure the efficiency and quality of services to customers, the City participates in various benchmarking activities such as OMBI. The current requirements for the Ontario Infrastructure for Jobs and Prosperity will also be setting forth specific technical level of service requirements from all municipalities.

In addition to these external benchmarks asset management looks to provide monitoring on how progress is being made against defined level of service expectations. These key performance indicators help to understand if the municipality is making progress towards what they envision for their City based on defined levels of service at acceptable levels of risk and within their financial constraints. The City will use the information to create improvement strategies and report on progress.

Vision

The City will have well-defined corporate benchmarking policies that establish what to benchmark, benchmarking standards, frequency of benchmarking activities, and processes for follow-up actions. The patterns of the benchmarking results will demonstrate the
progress in becoming one of the best-performing municipalities in overall municipal management, efficiency, and customer services.
4. Asset Management Development

The development and implementation of a corporate-wide asset management program at the City began in 2010 (with the initiation of the AM Governance Project) and will be developed and undertaken in phases until it has become established and sustainable across the organization. Various departments/divisions (e.g. Public Works, Facilities, Fleet) had previously started implementing components of asset management and are making progress towards their vision for excellence. An overview graphic Figure 4-1 illustrates the phases and key components for the development and implementation of the corporate asset management program, with the major items described in this section. The various aspects of Culture and Continuous Improvements were described in the previous sections.

**FIGURE 4-1**
Asset Management Development

4.1 Initiation:

In 2010 the City initiated formal corporate asset management development activities with the development of a project charter, selection and chartering of an AM Steering Committee to undertake the AM Governance Project. Although various departments had already started implementing asset management components, a corporate approach with general guidelines, goals, objectives and standards did not exist. A scope for a Phase 1 effort was prepared and used as the basis for selecting and contracting with an expert public utilities’ and city operation AM consultant team to assist in assessing, developing and implementing asset management practices. A focus of the AM planning and capabilities building effort was to have City personnel participate and understand AM while the consultant team began the strategic phase of AM development, with the plan to increase the City’s participation and responsibility over time. The overall objective being that City personnel would take on all AM responsibilities after subsequent phases.
4.2 Phase 1:

The consultant team partnered with the departments identified above to:

1. Conduct an AM readiness and maturity assessment
2. Develop an AM Philosophy & Framework to guide the implementation of AM practices
3. Develop a supporting AM Roadmap with implementation strategies
4. A kick-off to the Phase 1 effort was a done through a workshop with the AM Steering Team where the approach to AM and the implementation methodology were discussed
5. Conduct an assessment of the City’s existing AM practices was then performed. The CH2MHILL CAMRA assessment tool was used to compare existing City practices against leading AM practices and standards.
6. Develop a Current Situation Analysis (Gap Analysis) report based on benchmarking workshops with City staff that identified leading practices and improvement opportunities at the City
7. Develop an AM Roadmap with supporting Implementation Strategies/Improvement Initiatives. Improvement initiatives have been identified and will form the basis for subsequent AM development and implementation.
8. Development of an AM Governance model to support implementation of initiatives and sustain AM practices and concepts at the City.
9. Development of the AMP framework and guidelines

During Phase 1, City staff was provided with overviews of leading asset management practices as part of the knowledge transfer from the consultants. This has set the stage for the City to take a lead role in subsequent AM activities.

4.3 Subsequent Phases:

The improvement initiatives identified in Phase 1 are expected to be implemented over a 3-to 5-year period. City staff will be expected to take the lead in managing and implementing some of these initiatives, with support from external experts as necessary. When they are implemented, the City will have closed the major gaps identified in Phase 1 and will have set the stage for continuous improvement and sustainability of asset management practices.

When AM is fully developed at the City, staff will have implemented key concepts and will be focused on leveraging data and enhanced asset knowledge and capabilities to sustain a high-performance organization. City staff will own and largely perform all asset management functions, with consultants playing only a secondary and occasional role.

4.4 Monitoring, Review & Continual Improvement
4.4.1 Continual Improvement

Continual improvement of the AM System is a key component of the AM Philosophy. It drives business efficiency and effectiveness and ensures that over time processes and practices are adjusted for changing circumstances. This ensures that the AM system consistently delivers required outcomes.

The continuous improvement methodology incorporates the Plan-Do-Check-Act model known as the Deming Cycle. This methodology is applied to all elements of the AM System, including documentation.

4.4.2 Management Reviews

The CFO is accountable for continual improvement of the AM system. The AM Steering Team is responsible for completing regular AM performance reviews to prove achievement of corporate and AM objectives, and ensure sustainability of continued achievement of the AM objectives. The AM Steering Team uses the results of the reviews to identify improvements necessary to maintain the suitability, adequacy, and effectiveness of the AM system.

A formal management review of the AM system, including the CAMRA assessment will be completed at least once every four (4) years, but may be completed more frequently if necessary to address issues from annual management reviews and performance reports. The management review will be documented and include consideration of the following:

- the status of actions from previous management reviews
- changes in external and internal operating environments that are relevant to AM
- AM objectives and achievement of the AM objectives
- AM system performance including trends, benchmarking results, and progress on achieving the AM Development Roadmap and improvement priorities
- opportunities for continual improvement
- changes in the profile of risks and opportunities
- competency, skills, resources and support
- service delivery performance

The outputs from the reviews will include decisions and actions relating to improvements in the AM system, including: variations to the scope, policy and objectives; criteria for AM decision making; updates to performance requirements; resources including financial, human and physical resources; changes to controls and how their effectiveness is measured including roles, responsibilities and authorities.
The necessary changes and/or corrective actions identified from the management reviews are documented in an update to the AM Roadmap, and relevant information is communicated to relevant employees and stakeholders.

4.4.3 Internal Audits
The City does not have a regular internal audit program for management systems but from time to time, as deemed appropriate by the CAO, the City may engage external auditors to evaluate compliance with business processes.

4.4.4 Monitoring & Review of the AM Philosophy & Framework
The AM Steering Team is accountable for continual improvement of the AM Philosophy & Framework and the AM Objectives.
5. Asset Management Governance Model

AM Governance ensures that the City plans and implements an organization design to support AM practices at both a corporate and departmental levels. An asset management governance model is a key foundational element in any asset management program. It provides guidance in two key areas: (1) Program Delivery and (2) Program Sustainability. The key objectives for an AM Governance Model can best be described as follows:

1. Provide an organization design to ensure successful implementation of all phases of the City’s asset management governance program
2. Provide an organization design that operationalizes asset management throughout the City’s departments/divisions.
3. Ensures consistency in asset management concepts and practices at a corporate level but also provides departmental flexibility for implementation and management at the tactical and operations levels
4. Allows for strategic planning and understanding of future challenges and business drivers that may require changes to existing asset management concepts and practices to ensure effectiveness and sustainability

The City will implement the following Governance model to achieve the above objectives. Figure 5.1 shows the structure of the Asset Planning Division and functional relationships with other stakeholders in the AM governance structure:

Figure 5-1
AM Governance Model
The model consists of a centralized Corporate Asset Planning Division, and a formal decentralised Departmental Delivery Model (Asset Management Network). These are accountable to a cross-functional facilitation and approval group, the Asset Planning Steering Committee¹.

The Asset Planning division created in 2013 reports to the Chief Financial Officer/City Treasurer and Corporate Leader Finance and Technology and the division is responsible for Corporate Asset Management, Capital Budget and Corporate Energy.

To ensure asset management strategies meet Provincial guidelines and are corporately developed and approved, the Senior Manager of Asset Planning reports to an Asset Planning Steering Committee for any Asset Management related activities, and facilitates discussions regarding details and direction on asset management deliverables are handled through the Asset Manager Network. The Asset Co-ordinator in the division facilitates discussions and works with the Computerized Maintenance Management System (CMMS) Network to implement various practices and to create and enhance data collection and management. These three groups all have representatives from the various operational and finance areas to ensure corporate development and support of any changes in asset management practices at the City.

5.1.1 Asset Planning Steering Committee

The Asset Planning Steering Committee consists of Executive Directors (department heads) and senior managers. The Committee will:

1. Provide oversight and guidance during planning and implementation of the overall roadmap.

2. Define the SMAP’s roles and responsibilities as it relates to AM, and delegate responsibility to the SMAP to act as a champion for AM within the organization.

3. Oversee development, implementation, and updating of the AM Policy, AM Philosophy and Framework and AM Roadmap or subsequent documents that set direction or require Council approval. The Committee may delegate responsibility for generation of these documents to the SMAP.

4. Review and endorse AM documents to the CAO, Mayor and Council with comments and recommendations.

5. Support and facilitate the implementation and continuous improvement of AM practices, processes, and tools throughout the organization to support the achievement of the City of Windsor’s organizational objectives.

6. Review, debate and endorse AM Plans, programs and budgets in collaboration with the Senior Manager Asset Planning.

¹ The full details of the model and the various options evaluated are provided in the AM Governance Model Report. The AM Operational Report will provide details of the organizational impacts related to AM governance at the departmental level. Appendix 301 provides an overview of the team based approach to asset management development.
7. Monitor significant and critical AM risks and the implementation of mitigation measures.

5.1.2 Senior Manager Asset Planning (SMAP)

The SMAP reports to the Asset Planning Steering Committee with regards to the development and implementation of the AM Roadmap and the Development of Asset Management Plans. The SMAP will:

1. Manage the Corporate Asset Planning Division and provide City-wide leadership in AM practices and concepts. The Asset Planning Division will be a division within the Finance and Technology Department with the Senior Manager Asset Planning reporting to the Chief Finance Officer.

2. Define, document, and implement the Terms of Reference for the AM Steering Committee subject to approval by the CAO.

3. Formally track and report to the Asset Planning Steering Committee on the benefits of the AM Program and progress with implementation of the AM Policy and improving AM practices. Includes coordinating internal and external benchmarking of AM practices, and development of an Infrastructure Report Card for reporting to Council at least every four years.

4. Work collaboratively with the AM Network Team to develop and implement the AM Roadmap, and direct the Asset Planning Coordinator in the implementation of AM initiatives where integration across business units or service areas is desired or where a standardized approach is required.

5. Manage the development and implementation of corporate-level AM initiatives to support evidence-based decision-making at Council level, senior management, tactical and operational levels within the organization.

6. Work collaboratively with the AM Network Team and others across the organization to develop the corporate and service area specific AM Plans.

7. Manage organizational capacity and competency in asset management, facilitate change management within departments. Includes coordinating (and delivering as necessary) skills training and development for employees in specific AM disciplines.

8. Facilitate asset management workshops to develop corporate asset management practices, processes and tools – e.g. Level of Service and Risk Management frameworks, Business Case Evaluations, etc.

5.1.3 Asset Management Network

The AM Network Team will consist of managers nominated by each department to represent their department on the AM Network Team. These AM Network Team designates will:

1. Report to the department heads of the various operating departments and facilitate implementation of AM within their departments. Department heads will be
responsible for ensuring that the new ways of doing business are adopted and becomes part of the City’s operating culture as implementation progresses.

2. Work collaboratively with the SMAP to maintain the AM Roadmap, develop AM processes and tools, and prepare AM Plans.

3. Track and report on AM benefits at the departmental level

4. Ensure data integrity and accuracy for the assets managed by the department

5. Participate in regular AM coordination and planning meetings of the AM Network

5.1.4 Organizational Structure

The AM Governance model operates within the organizational structure of the City. Note that the AM Network Team box in the Asset Planning Division is not a position. It is there to show how the AM Manager in each department will relate to the Asset Planning Division to ensure Asset Management practices are uniform throughout the City.

Executive Directors of City Departments are responsible for:

1. The on-going support of established asset management practices.

2. The reporting of AM practices and results through AM Plans.

3. Development of budgets (Capital and Operating) to support the goal of lowest overall cost of asset ownership.

4. Ensuring implementation of the AM Plans for major asset classes in the department

5. Provide strategic support and direction for asset management practices at the department.

Reference Documents

5.1.1 Asset Management Current Situation Report

5.1.2 Asset Management Policy
5.1.3 Asset Management Governance Model
5.1.4 Asset Management Roadmap
5.1.5 Asset Management Operational Plan Report
5.1.6 Asset Management Asset Management Plan Guideline
5.1.7 Asset Management Glossary of Terms
5.1.8 Official Plan
5.1.9 20 Year Strategic Vision
5.1.10 Neighborhood plans
5.1.11 City of Windsor Tangible Capital Asset Policy
5.1.12 ISO 55000 series Standards for Asset Management
5.1.13 International Infrastructure Management Manual
6. SCHEDULE A

Key Asset Management Terms and Definitions

**Advanced Asset Management** - Asset management which employs predictive modeling, risk management and optimized decision-making techniques to establish asset lifecycle treatment options and related long-term cash flow predictions. (See also Basic Asset Management).

**Asset** - a physical part of a facility that has value, enables services to be provided, and has an economic life of greater than 12 months. Dynamic assets have some moving parts, while passive assets have none.

**Asset Management (AM)**: Co-ordinated activity of an organization to realize value from its assets. AM involves the balancing of costs, opportunities and risks against the desired performance of assets, to achieve organizational objectives (balancing may need to be considered over multiple timeframes). AM enables an organization to examine the need for, and performance of, assets and asset systems at different levels and in conjunction with non-asset solutions. Additionally, it enables the application of analytical approaches towards managing assets over the different stages of their lifecycle.

**Asset Management Objectives (AM Objectives)**: Specific outcome or achievement required of the AM System in order to achieve the AM Strategy.

**Asset Management Policy (AM Policy)**: The AM Policy describes the organization’s intentions and directions for AM, as formally expressed by its senior management. It describes the principles and framework adopted in applying AM to achieve the organization’s strategic objectives.

**Asset Management System (AM System)**: The complete set of interrelated or interacting elements used to effect the AM Policy and objectives and the processes to achieve those objectives. These elements that make up the AM System can include documents, procedures, tools, data, and the assets.

**Asset Management Strategy (AM Strategy)**: Documented information that specifies: how organizational objectives are converted into AM Objectives; the scope and role of the asset management system in supporting achievement of the AM Objectives; and the approach for developing AM Plans. (Framework)

**Asset Management Plan (AMP)**: A plan developed for the management of infrastructure assets that combines multi-disciplinary management strategies (including technical and financial) over the lifecycle of the asset in the most cost-effective manner to deliver a specified level of service. It specifies the activities, resources and timescales required for individual assets (or asset groups) to achieve the organization’s AM Objectives. A significant component of the AMP is therefore a long-term program of works and cash flow projection for the activities. Examples of AMPs include Pavement Management Plans, Bridge Management Plans, and Fleet Management Plans. Each plan will vary in complexity depending on the asset group it pertains to.

**Asset Register** - A record of the asset inventory, including the historical, financial, condition, construction, technical, and financial information about each asset

**Community assets** – Assets managed or stewarded by the city on behalf of the community to deliver, or support delivery of, essential services. Includes traditional assets (roads and utilities),
cultural assets (museums, monuments), and natural resources that are used in or impacted by the delivery of services (trees, parks, land, water).

**Business Case Evaluation (BCE)** - A formal process undertaken to evaluate the best alternative for a project or initiative. The evaluation involves documenting the activity’s Benefits/Cost ratio using life-cycle analysis.

**Capital Expenditure (CAPEX)** - Expenditure used to create new assets or to increase the capacity of existing assets beyond their original design capacity or service potential. CAPEX increases the value of the asset stock.

**Consequence of Failure** - The potential impact to the corporation if the risk occurred. (per CoW risk policy)

**Corrective Maintenance** - The remedial actions performed as a result of failure, to restore an item to a specified condition. Corrective maintenance may or may not be planned.

**Critical Assets** - Assets for which the financial, business or service level consequences of failure are sufficiently severe to justify proactive inspection and rehabilitation.

**Deferred Maintenance** - The shortfall in rehabilitation work required to maintain service potential.

**Deterioration Rate** - The rate at which an asset approaches failure.

**Economic Life** - The period from the acquisition of the asset to the time when the asset, while physically able to provide a service, ceases to be the lowest-cost alternative to satisfy a particular level of service.

**Expected Useful Life** - The period over which an asset is designed to deliver the agreed upon level of service (LOS)

**Failure** - The condition in which an asset fails to perform its function. Failures can be total (e.g., a pump fails to pump any water) or partial.

**Key Performance Indicator (KPI)** - A qualitative or quantitative measure of a service or activity used to compare actual performance against a standard or other target.

**Level of Service (LOS)** - the parameters or combination of parameters that reflect the social, political, economic, and environmental outcomes that the organization delivers. Levels of service statements describe the outputs or objectives an organization or activity intends to deliver to customers

**Lifecycle Costs** - Lifecycle costs refer to the total cost of ownership over the life of an asset. This may include but is not limited to capital costs, operating costs, maintenance costs, renewal costs, replacement costs, environmental costs, and user delay.

**Lifecycle Cost Analysis (LCCA)** - Any technique that allows for the assessment of alternative solutions (including continuation of the status quo), based on all relevant economic consequences and benefits over the service life of the asset.

**Probability of Failure** - The likelihood that a risk will occur (ref: CoW risk policy).
**Rehabilitation** - Work 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.

**Renewal** - Work to upgrade, refurbish, or replace existing assets or facilities with assets or facilities of equivalent capacity or performance capability.

**Risk Management** - The application of a formal process to assess organizational risks in order to determine the resultant ranges of outcomes, their probability of occurrence, and what actions may be taken to reduce the organization’s overall risk exposure.

**Triple Bottom Line**: Expands on the traditional view of an organization’s financial bottom line by also measuring the organization’s commitment to economic, socio-cultural and environmental factors.
Policy Proposal Notice:

Title:
Proposed municipal asset management planning regulation

Please note: This proposal notice is for the Ministry of Infrastructure.

The Environmental Registry is currently being updated to include the Ministry of Infrastructure in place of the former Ministry of Economic Development, Employment and Infrastructure.

Keyword(s): Legislation

The comment period for this proposal is now over.

Description of Policy:

Overview:

Asset management planning is essential for the future resilience of Ontario communities. Municipalities need effective plans to take care of their infrastructure over the long term. In addition, it is important to better understand infrastructure needs throughout Ontario, so that the province, municipalities, and the federal government can work together to address challenges posed by ageing infrastructure and increasing renewal pressures. Improved municipal asset management planning is a vital step in Ontario's Municipal Infrastructure Strategy and will provide the foundation to improving the long-term sustainability of infrastructure throughout the province.

The *Infrastructure for Jobs and Prosperity Act, 2015* was proclaimed on May 1, 2016 and includes an authority for the province to regulate municipal asset management planning.

The purpose of the proposed regulation is to implement best practices throughout the municipal sector and provide a degree of consistency to support collaboration between municipalities, and among municipalities and the province. The regulation would balance valuable consistency with appropriate flexibility, and would include phased implementation. The regulation would provide certainty around future provincial asset management planning requirements, and would be supported by the collection of selected data to capture the key aspects of municipal asset management: resilience and sustainability.

This regulation would aim to help municipalities more clearly identify what their infrastructure needs are, and therefore help them work towards a more sustainable position regarding the funding of their infrastructure.

Building on the province’s 2012 *Building Together: Guide for Municipal Asset Management Plans*, the regulation would set out requirements to improve asset management planning. This would include the content for municipal asset management plans and the phases of preparation. Municipalities would be required to adopt strategic asset management policies that would promote best practices and link asset management planning with budgeting, operations, maintenance and associated other municipal planning activities. Municipalities would also be required to report on implementation annually.

Definitions:

For the purpose of this posting, the following terms are defined:

"Infrastructure Assets" are tangible capital assets directly owned by a municipality or consolidated on the financial statements of a municipality and may include green ...
infrastructure as part of these assets, but does not include these assets where they are managed by a joint municipal water board.

"Core Infrastructure Assets" are the following Infrastructure Assets: roads; bridges; culverts; any assets, used in the collection, conveyance/distribution, treatment or disposal of wastewater/water; and stormwater management systems.

Application:

This Environmental Registry posting proposes that municipalities would be prescribed as a broader public sector body which must prepare asset management plans meeting the requirements of the proposed regulation.

Regulation Proposal:

**Strategic Asset Management Policy**

All municipalities would be required to develop and adopt a strategic asset management policy by January 1, 2019. At least every five years from that date the municipality would be required to review the policy and if necessary update it.

The policy would include:

- Which municipal goals, plans (e.g., official plan, strategic plan, master plans) or policies the municipality’s asset management plan would support
- A process for how the asset management plan would affect the development of the municipal budget and any applicable long-term financial plans
- The municipality’s approach to continuous improvement and adoption of best practices regarding asset management planning
- The principles that would guide asset management planning in the municipality, which would be required to include the principles in section 3 of the *Infrastructure for Jobs and Prosperity Act, 2015*
- A commitment to consider in asset management planning:
  - the actions that may be required to address the risks and vulnerabilities that may be caused by climate change to the municipality’s infrastructure assets, including to: operations requirements (e.g., increased maintenance schedules); levels of service (e.g. raising or lowering levels of service); and lifecycle management; and the anticipated costs that could arise from these impacts, and adaptation opportunities that may be undertaken to manage these potential risks
  - mitigation approaches to climate change, such as greenhouse gas (GHG) reduction goals and targets
  - disaster planning and any required contingency funding.
- A process to ensure that asset management planning would be aligned with Ontario’s land-use planning framework, including any relevant policy statements issued under section 3(1) of the Planning Act; provincial plans as defined in the Planning Act; and, municipal official plans
- A discussion of capitalization thresholds used to determine which assets are to be included in the asset management plan and how this compares to the municipality’s Tangible Capital Asset policy, if one is in place
- A commitment to coordinate planning between interrelated infrastructure assets with separate ownership structures by pursuing collaborative opportunities with neighbouring municipalities and jointly-owned municipal bodies
- Identification of who would be responsible for asset management planning, including an executive lead and how council will be involved; and
- A commitment to provide opportunities for municipal residents and other interested parties to provide input into asset management planning.

**Municipal Asset Management Plans**

Municipalities would be required to prepare an asset management plan in three phases:

1. Phase I would address core infrastructure assets, and would be required to be completed by January 1, 2020.
2. Phase II would expand on Phase I by including all infrastructure assets in the plan by January 1, 2021.
3. Phase III would require further details to be provided for all infrastructure assets by January 1, 2022.

*Proposed requirements to be included in Phase I (by January 1, 2020) and Phase II (by January 1, 2021):*
A plain language explanation of the current levels of service being provided by each category of infrastructure asset would be required. For core infrastructure assets, municipalities would measure current levels of service according to the information defined in the following two columns found in the Proposed Levels of Service tables (see Additional Information):

- the community levels of service column; and
- the technical levels of service column.

Municipalities would also be required to monitor performance measures relevant to their municipality that address service delivery and asset operation, such as energy usage and cost.

Inventory Analysis

Municipal infrastructure assets would be summarized by asset class, including type and quantity, total replacement value, and average age. The inventory analysis would also discuss the municipality's approach to assessing asset condition using industry-accepted engineering practices, and summarize the information available on the condition of the assets.

Estimated Cost to Sustain Current Levels of Service

An estimate of the capital expenditures (i.e., total cost of maintenance, renewal, rehabilitation, replacement, disposal, upgrades, new construction) needed each year, as well as any significant operating costs, including energy costs, for the ten years following the year that the current levels of service are established, to maintain the current levels of service over the long term.

The approach to developing the estimate would be documented and based on the lifecycle management activities expected. Assumptions regarding anticipated future changes in population and economic activity would be included.

Municipalities with populations over 25,000: Estimated Costs to Service Growth

Municipalities with a 2016 Statistics Canada census population of 25,000 or greater would be required to identify which estimated capital expenditures and significant operating costs, including energy costs, would be related to new construction and upgraded capacity of existing assets, including the extension of services to previously unserved areas and expansion of services to meet growth demands. In the Greater Golden Horseshoe, growth demands must conform to forecasted growth for the municipality as set out in the Growth Plan for the Greater Golden Horseshoe and reflected in municipal plans.

This requirement is necessary to ensure that large municipalities analyze the links between providing levels of service, costs and the impacts of growth. It has not been included as a requirement for small municipalities as the province understands that these municipalities lack the capacity to undertake the level of analysis required to support this work. Though this section would apply to municipalities with populations of 25,000 or greater, the province would encourage all municipalities to consider the costs related to growth as outlined in this section.

Proposed requirements to be included in Phase III (by January 1, 2022):

Proposed Levels of Service

A plain language explanation of the proposed levels of service for each category of infrastructure asset would be required. For core infrastructure assets, this would be measured according to the information defined in the following two columns of the Proposed Levels of Service tables (see Additional Information):

- the community levels of service column; and
- the technical levels of service column.

The proposed levels of service would need to be outlined each year, for a ten year period that follows the most recent year where current levels of service have been measured.

The asset management plan would also discuss why the proposed levels of service are appropriate for the municipality, how they differ from the current levels of service set out in Phase I and II, when they would be achieved, and how they would take affordability and sustainability into account.

Similar to requirements in Phases I and II, municipalities would also be required to continue to track service delivery and asset operation through performance measures.
established by the municipality, such as energy usage and cost.

**Inventory Analysis**

The asset inventory provided in Phase I and II would be updated.

**Lifecycle management strategy**

Municipalities would be required to document a lifecycle management strategy that would outline the lifecycle management activities the municipality would undertake to maintain the proposed levels of service and manage risk (e.g. climate change impacts), with consideration to the full lifecycle costs of the assets, including energy costs. Lifecycle activities would be based on options examined by the municipality to reduce the overall lifecycle costs, including through green infrastructure and non-infrastructure solutions such as demand management and conservation measures.

The asset management plan would be required to contain a summary of the lifecycle activities that would be undertaken for all assets, for the ten year period aligned with the proposed levels of service section of the asset management plan. Assumptions regarding anticipated future changes in population and economic activity would be included.

**Financial strategy**

An asset management plan would include a financial strategy that contains the following items, each year for the ten year period aligned with the proposed levels of service section of the asset management plan:

- estimated capital expenditure forecasts (i.e., total cost of maintenance, renewal, rehabilitation, replacement, disposal, new construction and capacity upgrade activities), and significant operating costs, including energy costs, related to lifecycle activities
- revenue dedicated to capital financing
- estimated capital reserve contributions and withdrawals; and
- estimated debt service payments.

Municipalities would be required to outline key assumptions made to develop the financial strategy, and other alternative funding options that were considered (e.g. increasing debt, property taxes, user-fees, etc.).

**Addressing shortfalls**

Municipalities would also be required to outline any ongoing funding shortfall that exists between investments required to fund the activities in the lifecycle management strategy and the ability of the municipality to fund these activities, and how the municipality intends to address this shortfall.

Where municipalities cannot conduct all of the activities required to provide proposed levels of service, municipalities would discuss how they would manage the risks associated with not undertaking these activities.

**Municipalities with populations over 25,000: Financial Strategy to Service Growth**

Municipalities with a 2016 Statistics Canada census population of 25,000 or greater would be required to identify the estimated costs that are related to new construction and upgraded capacity, including the extension of services to previously unserved areas and expansion of services to meet growth demands. These municipalities would also identify the subset of forecasted revenue, by source, that is projected to come from increased population and economic activity. Though this section would apply to municipalities with populations of 25,000 or greater, the province would encourage all municipalities to examine the revenues and expenditures related to growth, as outlined in this section.

**Municipalities with populations over 25,000: Risk Analysis**

Municipalities with a 2016 Statistics Canada census population of 25,000 or greater would also include an overview of the risks associated with the asset management plan (i.e., ways the plan could fail to generate the proposed levels of service) and any actions that would be proposed in response. Though this section would apply to municipalities with populations of 25,000 or greater, the province would encourage all municipalities to analyze risks as outlined in this section.

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Municipalities would be required to update the asset management plan, aligned with the requirements identified in Phase III, at least every 5 years after January 1, 2022.

Approval

The asset management plan would be required to be approved in writing by a licensed engineering practitioner representing the municipality, and the executive lead of the municipality prior to it being presented to the municipal council for approval.

Annual Progress Update

Municipalities would be required to provide council with an annual update on asset management planning progress, starting in 2021, that would include:

- any factors affecting the ability of the municipality to meet its commitments set out in the asset management plan and strategic asset management policy
- a strategy to address these factors; and
- progress on ongoing efforts to implement the asset management plan.

Public Posting and Provision of Plans

Municipalities would be required to post their strategic asset management policy and asset management plan on the municipality’s website, if one exists, and make copies of these documents available to the public, if requested.

Data Collection

The province proposes to collect two sets of asset management planning data from municipalities – Actuals Reporting, which would be reported to the province every year, and Projections Reporting, which would be reported to the province as the municipality obtains the relevant data at least every 5 years as they update their asset management plan.

Table 1 (see Additional Information) outlines the Actuals data that the province would collect annually, starting by May 31, 2021 for core infrastructure assets, and by May 31, 2022 for all remaining infrastructure assets. Although this data would be collected annually, municipalities would not be required to update their asset management plan annually to reflect this data.

Table 2 (see Additional Information) outlines the data requirements that the province would collect from municipalities as they obtain the relevant data with each update of their asset management plan. Municipalities would be required to meet their first set of reporting requirements for this data by May 31, 2023 (for all assets).

Provincial Policy Alignment:

Safe Drinking Water Act, 2002

The province is aware of the linkages between requirements in the Safe Drinking Water Act, 2002 and the proposed regulation included in this Environmental Registry posting. The Ministry of Infrastructure is currently exploring options, in collaboration with the Ministry of the Environment and Climate Change, to create efficiencies for municipalities that would be required to meet both requirements.

Development Charges Act, 1997

The province recognizes the importance of development charges as a tool to help municipalities fund the capital-costs for infrastructure needed to service growth. Municipalities continue to be expected to comply with the asset management plan requirements within the Development Charges Act, 1997 and its regulations in order to be able to levy a development charge.

Asset Management Planning Guidance, Tools and Support:

The province understands the importance of ensuring that municipalities would have the capacity to meet the requirements of the proposed asset management planning regulation. In response to feedback received during consultations in summer 2016, and to support implementation, the province is considering proposing a number of potential supports, including:

- In-person training
- Provincial support team
- Licenced resources
- Staff training courses
- Sample documents.
Other Information:

Please refer to the following postings on related documents:

**Consultation – potential municipal asset management planning regulation**

- This document provides a summary report on the feedback the province received as a result of consultations held on the proposed regulation in summer 2016. It provides the basis for the proposed regulation set out in this Environmental Registry posting and incorporates input from over 330 individuals representing over 220 municipalities and other organizations.

**Discussion paper – potential municipal asset management planning regulation**

- This discussion paper outlines the proposed content for a possible regulation that was consulted on in summer 2016. It was used as the basis of discussions held online and throughout Ontario with municipalities and municipal sector stakeholders.

**Building Together: Guide for Municipal Asset Management Plans**

- This guide was developed in 2012 and has been used as the provincial standard for municipal asset management planning since that time. It served as the foundation for the discussion paper and consultation undertaken regarding the proposed regulation.

**Purpose of Policy:**

Since the launch of the Municipal Infrastructure Strategy in 2012, the province has required municipalities requesting infrastructure funding to demonstrate a progressively greater commitment to asset management.

While municipalities have made excellent progress in asset management planning, significant differences exist among municipalities in the completeness, level of detail, and methodology and assumptions used to develop the plans. The plans also vary widely in the degree to which they are being used to inform decision making.

Building on the progress municipalities have made to date, the purpose of this proposed regulation is to introduce new requirements in order to provide greater standardization and consistency to municipal asset management planning, while continuing to provide appropriate flexibility for municipalities to plan according to their own unique circumstances. Requirements would help to improve the comprehensiveness of plans that lack robust information, which could help strengthen the use of asset management plans as a tool to gain support from council and the public in addressing infrastructure challenges.

Municipal asset management planning is also beneficial for establishing important information that can be used by the province, municipalities, and the federal government to work together to address infrastructure challenges.

The Municipal Infrastructure Strategy is a long-term, collaborative initiative. While finalizing the proposed regulation is an important step, practices will continue to improve on an ongoing basis. For example, in the future, as provincial and municipal capacity increases, the GHG emissions impacts of lifecycle management options could be measured and incorporated. In addition, the province will review its infrastructure funding models with the goal of bringing more emphasis to supporting proactive practices in addition to urgent health and safety issues.

**Public Consultation:**

This proposal was posted for a 60 day public review and comment period starting May 25, 2017. Comments were to be received by July 24, 2017.

All comments received during the comment period are being considered as part of the decision-making process by the Ministry.

Please Note: All comments and submissions received have become part of the public record.

**Other Public Consultation Opportunities:**

The Ministry of Infrastructure is now seeking comments on this posting, including the possible tools and support that would be desired to assist municipal implementation.
To help guide the development of the proposed regulation, the province consulted the municipal sector throughout the summer of 2016. These consultations focused on what should be included in a regulation to best help advance progress in municipal asset management planning. The province also sought input on how good asset management practices could be promoted more generally, and what is needed to engage municipalities and promote a broader culture of asset management planning.

By the end of the consultations, over 330 individuals representing over 220 municipalities and other organization provided more than 1600 comments. A summary report detailing this feedback can be found under the additional information section of this Environment Registry proposal.

The feedback received during the summer 2016 consultations has informed changes to the proposed regulation, and will be used further in exploring potential tools and resources that may be helpful to municipalities to implement the regulation, if approved.

**Regulatory Impact Statement:**

The proposed municipal asset management planning regulation is intended to build upon the asset management work that municipalities are already undertaking. It is unlikely that most municipalities would incur significant financial impacts complying with the regulation, if approved.

Smaller municipalities may face some capacity challenges and may require some assistance to meet the requirements of the regulation, if approved. This posting discusses some of the proposed tools and supports that the province would consider as part of the implementation of the proposed regulation. Such tools could help to reduce the potential financial burden that small municipalities may face. Additionally, small, rural and northern municipalities may be supported in part by the Ontario Community Infrastructure Fund, which includes asset management planning activities as an eligible funding category.
MISSION STATEMENT
“Our City is built on relationships – between citizens and their government, businesses and public institutions, city and region – all interconnected, mutually supportive, and focused on the brightest future we can create together”

REPORT #: S 172/2017
Report Date: 9/11/2017
Author’s Contact:
Scott Bisson
Project Manager, Workforce Management Project
519-255-6100 x 6522
sbisson@citywindsor.ca

Date to Council: 9/25/2017
Clerk’s File #: SI/12297

To: Mayor and Members of City Council

Subject: Workforce Management Project Request for Additional Implementation Services - City Wide

RECOMMENDATION:
THAT City Administration BE AUTHORIZED to secure implementation services from WorkForce Software to proceed with additional phases of the Workforce Management Project, to an upset limit of $875,000 plus applicable taxes, under the existing service agreement with WorkForce Software and THAT funding for these services BE DRAWN from the existing Council approved project budget (Project #7112007);

THAT the Chief Administrative Officer and City Clerk BE AUTHORIZED to sign the necessary agreement(s) with WorkForce Software for implementation services, satisfactory in form to the City Solicitor, in financial content to the City Treasurer, and in technical content to the Executive Director of Information Technology.

EXECUTIVE SUMMARY:
N/A

BACKGROUND:
The purpose of this report is to obtain City Council approval to secure implementation services for the Workforce Management System (WFM) project for additional phases of work.
On August 24, 2015, City Council approved the implementation of a corporate wide workforce management system through CR159/2015.

I. That City Council APPROVE the award of the Workforce Management Solution RFP 69-14 to the successful proponent, WorkForce Software; and

II. That APPROVAL BE GIVEN for the Chief Administrative Officer and the City Clerk to sign the necessary agreements with Workforce Software at an upset limit of $1,105,000 plus HST in accordance to RFP 69-14 for the purchase of an on-premise Workforce Management Solution inclusive of the software license and an initial 3 year contract term for annual maintenance and support fees, and additionally, with 2 subsequent 2 year renewable terms at the City of Windsor’s option under the original agreements terms & conditions for annual maintenance and support fees and related charges for an upset limit of $120,000 per year plus HST; and

III. That City Council AUTHORIZE Administration to investigate the possible advantages of WorkForce Software’s Software as a Service (“SaaS”) offering and further THAT provided the contract value does not exceed the on-premise upset limit, noted in Recommendation II plus the internal costs identified in this report, and presents a viable and secure solution, APPROVAL BE GIVEN for the Chief Administrative Officer and City Clerk to sign all necessary agreements with Workforce Software for the provision of a SaaS solution; and

IV. That the City Solicitor BE AUTHORIZED to prepare the necessary contracts with Workforce Software, satisfactory in form to the City Solicitor, in financial content to the City Treasurer, and in technical content to the CIO/Executive Director of Information Technology; and

V. That One-time and on-going funding for the WFM system BE DRAWN from the project budget (Project #7112007) for operating budget year’s 2015-2017 and THAT City Council ENDORSE IN PRINCIPLE a baseline annual operating budget for 2018 for the new WFM estimated at $120,000 to be approved through the 2018 Operating Budget; and

The Council Resolution also included further recommendations regarding other components of the HR/Payroll Business Process Review project (Employee Self Service Centre, Online Recruitment, PeopleSoft HCM Module and HR Knowledge Base).

Following the execution of those agreements, the WFM project team, in collaboration with WorkForce Software resources and departmental resources initiated Phase 1 of the WFM project with the initial two starter departments, Huron Lodge and Windsor Police Services. To date, the WFM project team along with Workforce Software resources has completed business requirements gathering and system configuration, and is currently testing the solution for Phase 1. Following the successful conclusion of
the testing phase, WFM project resources will initiate end user training, and then deploy the system for Huron Lodge and Windsor Police Services employees.

**DISCUSSION:**

The initial upset limit that was set in August 2015 for the WFM project included professional services for the implementation of the software. Given the varying nature of the business requirements from corporate departments that operate in several different lines of business within the City of Windsor with multiple collective agreements a phased approach has been taken to implementing the software.

Project resources have been working with the vendor on Phase 1 of the WFM project to implement the software for Huron Lodge and the Windsor Police Service. Currently, the Phase 1 implementation is in the testing stage of the implementation plan with an anticipated go-live by the end of 2017.

In preparation for Phase 2 of the WFM project, resources from the internal project team have been working with the vendor to gather business requirements for Local 82, Transit Windsor and the Fire & Rescue Services. The 3rd phase of WFM project will be to implement the software for the Windsor Public Library and Roseland Golf & Curling Club.

The Phase 2 business requirements have been gathered in collaboration with the vendor which identify all required pay entitlement rules based on our collective bargaining agreements. The next step in the project is to configure the software based on our business needs.

To proceed with the next stage of the project of configuring the software professional services are required from the vendor, WorkForce Software, to build our business rules within the application to pay employees based on our collective bargaining agreements and legislated requirements.

The purpose of this report is to obtain approval from City Council to authorize Administration to enter into the necessary agreements with WorkForce Software for professional services to complete the configuration of the software for the additional phases of work.

**RISK ANALYSIS:**

The approval of City Council to authorize administration to secure additional implementation services and to sign the necessary agreements to proceed is significant to the overall success of the HR/Payroll Business Process Review project.
The business requirements gathering process has revealed substantial complexity in the business rules required, which in turn necessitates the need for strong configuration resources to develop the solution. Although, WFM project resources have completed initial configuration training from WorkForce Software, and have showed a strong knowledge and understanding of how to effectively configure the system, their level of understanding would not currently permit internal project resources to complete system configuration for the additional phases of work in the same timeline as experienced configuration resources from the vendor. Additionally, assigning resources from the WFM project team to focus on configuration for future phases would be at the expense of Phase 1.

As previously stated in the report, our Phase 1 implementation is currently in the third of four implementation stages, and is focused on an important component of the project, testing. Reassigning resources from testing, and eventually deployment activities from Phase 1 to configure the additional phases of implementation would significantly impact the successful deployment of Phase 1, without providing an equal or greater benefit to the additional phases of the implementation. Securing implementation services from WorkForce Software will help mitigate the risk of timeline delays for both Phase 1 and the additional planned implementation phases, and can be funded within the current Council approved project budget.

FINANCIAL MATTERS:

The total cost of professional services provided by WorkForce Software to date is $719,825 plus HST; summarized as follows:

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount (Exclusive of HST)</th>
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<tbody>
<tr>
<td>Phase 1 – Implementation Services</td>
<td>$459,825</td>
</tr>
<tr>
<td>Phase 1 – Project Change Order (PCO)</td>
<td>$149,500</td>
</tr>
<tr>
<td>Phase 2 – Requirements Confirmation</td>
<td>$35,000</td>
</tr>
<tr>
<td>Phase 2 – Solution Design</td>
<td>$75,500</td>
</tr>
<tr>
<td>Total Professional Services Costs to Date</td>
<td>$719,825</td>
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The estimated cost of securing the required implementation services of WorkForce Software to complete the additional phases of work as detailed in this report is estimated to not exceed the upset limit of $875,000 plus applicable taxes. The total cost of both work to date, and the estimated costs to complete the additional requested
configuration would total $1,594,825. This total remains within the existing project budget (Project #7112007) previously approved by City Council through CR159/2015 however City Council approval is required to enter into the necessary agreements with WorkForce Software.

CONSULTATIONS:

Program Manager, Payroll Process Review

Project Sponsors

Purchasing Manager

Workforce Software

CONCLUSION:

The Project Manager for the Workforce Management Project and the Program Manager of the Payroll Process Review are recommending that City Council authorize administration to move forward with securing implementation services from WorkForce Software for additional phases of work for the Workforce Management Project to an upset limit of $875,000, plus applicable taxes, to be funded from the existing Capital Project #7112007.

PLANNING ACT MATTERS: N/A

APPROVALS:

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>Scott Bisson</td>
<td>Project Manager, WFM Project</td>
</tr>
<tr>
<td>Josh Higgins</td>
<td>Program Manager, Corporate Project</td>
</tr>
<tr>
<td>Earl Larking for Harry Turnbull</td>
<td>CIO/Executive Director of Information Technology</td>
</tr>
<tr>
<td>Shelby Askin-Hager</td>
<td>City Solicitor and Corporate Leader Economic Development and Public Safety</td>
</tr>
<tr>
<td>Valerie Critchley</td>
<td>City Clerk/Licence Commissioner and Corporate Leader for Public Engagement and Human Services</td>
</tr>
<tr>
<td>Joe Mancina</td>
<td>City Financial Officer/City Treasurer and Corporate Leader Finance and Technology</td>
</tr>
<tr>
<td>Jelena Payne acting for Onorio Colucci</td>
<td>Chief Administrative Officer</td>
</tr>
</tbody>
</table>

NOTIFICATIONS:

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<thead>
<tr>
<th>Name</th>
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<th>Email</th>
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APPENDICES: