

# Corporate Asset Management



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## Appendix A: 2021 State of the Local Infrastructure Report

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# Glossary of Terms

<b>AM</b>	Asset Management
<b>AMP</b>	Asset Management Plan
<b>BCA</b>	Building Condition Assessment
<b>BCI</b>	Bridge Condition Index
<b>BDC</b>	Building Design and Construction
<b>BTE</b>	Benefit to Existing
<b>CAM</b>	Corporate Asset Management
<b>CIP</b>	Capital Investment Program
<b>City</b>	The City of Brampton
<b>Corporate AMP</b>	Corporate Asset Management Plan
<b>Departmental Plan</b>	Departmental Asset Management Plan
<b>DC</b>	Development Charges
<b>EUL</b>	Estimated Useful Life
<b>FCI</b>	Facilities Condition Index
<b>FDC</b>	Foundation Drain Collector
<b>FOM</b>	Facilities Operation and Maintenance
<b>ICIP</b>	Investing in Canada Infrastructure Program
<b>IT</b>	Information Technology
<b>LOS</b>	Levels of Service
<b>Ministry Guide</b>	Ministry of Infrastructure's Guide for Municipal AMPs
<b>NBV</b>	Net Book Value
<b>PCI</b>	Pavement Condition Index
<b>PSAB</b>	Public Sector Accounting Board
<b>PTIF</b>	Public Transit Infrastructure Fund
<b>R&amp;R</b>	Repair & Replacement
<b>Replacement Value</b>	Valuation of the Asset Base
<b>RFID</b>	Radio Frequency Identification
<b>RUL</b>	Remaining Useful Life
<b>SOLI</b>	State of Local Infrastructure
<b>SW</b>	Stormwater
<b>TCA</b>	Tangible Capital Asset
<b>UL</b>	Useful Life

# Introduction

As the fourth largest City in the province and one of the fastest growing communities in Ontario, the City of Brampton owns and operates a substantial portfolio of assets across different service areas. These assets are essential to the well-being of the community and form an integral part of the City's long-term financial and service delivery planning.

In June 2022, the City of Brampton adopted its second Corporate Asset Management Plan at the City-wide level that formed a comprehensive update to the City's first Corporate AMP completed in 2016. Importantly, this 2021 SOLI Report maintains most of the key assumptions and methodology derived through the recent Corporate AMP process.

The intention of this 2021 State of the Local Infrastructure Report is to act as a supporting document to the City's budgeting process and provides an overview of the following:

- 1) **Asset Management Maturity Assessment:** The overall maturity of the City's asset management data and program;
- 2) **State of the Local Infrastructure:** Estimated value and condition of the City's infrastructure to provide various services;
- 3) **Financing Strategy:** Assessment of the lifecycle costs required to maintain assets over their life. This section will also provide some context to the infrastructure funding gap identified and strategies to mitigate the gap; and
- 4) **Future Improvements:** An overview of future improvements and initiatives that will improve data quality and confidence while driving corporate change.

The City's total assets replacement cost is estimated at \$7.7 billion. This value is comprised of the major infrastructure service areas of Transportation, Stormwater, Transit, Parks, Recreation, Cultural Services, Facilities, Information Technology, Fire Services, Library, Animal Services and City Support Fleet. Transportation services represent the largest share at 43%, or \$3.3 billion, of the total \$7.7 billion replacement value. The total asset replacement value identified in this report represents an increase in value of \$557.0 million, or 8%, over the \$7.1 billion (inflated to \$2022 from \$7.0 billion in \$2021) City-wide asset replacement value reported in the 2020 SOLI analysis<sup>1</sup>. This increase is due to refined costing information and inflation, revised inventories and the inclusion of new assets not captured previously. A comprehensive description, and comparative analysis regarding the change in valuation from the previous year for each service category, is in the service area report cards in Appendix I of this report.

The majority of the \$7.7 billion in assets currently owned and operated by the City are in Good condition. The overall "Good" condition rating is attributed to the City's infrastructure being relatively new in age combined with the sound asset management practices the City has employed to date. It is important to note that the current City-wide data confidence presented in this report is assessed as "Low-Medium" (Age and Condition Based). It is an overall goal to improve the reliability and accuracy of all information moving forward.

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<sup>1</sup> The 2020 SOLI Report was prepared as part of the 2021 Corporate Asset Management Plan. As a result, the specific SOLI Analysis can be found in both the 2021 Summary Report (November 2022) used for budget deliberations and the Final Corporate Asset Management Plan, June 2022. These documents replaced the traditional annual State of the Local Infrastructure Reports.

# 1 Asset Management Maturity Assessment

This report presents the City of Brampton's current asset management data, frameworks and progress to ensure consistent documentation and measurement of progress going forward. The results of this assessment are to further inform the Asset Management Roadmap and guide the City towards best practices in asset management. The assessment considers a few key components:

- 1) The City's current position relative to the requirements of the legislation;
- 2) Existing data confidence and reliability; and
- 3) Overall asset management data and programs.

Please note, as the City recently adopted the Corporate AMP in June 2022, this maturity level is still relevant for the purposes of this 2021 SOLI Report.

## 1.1.1 Overview of Ontario Regulation 588/17: Asset Management Planning for Municipal Infrastructure

Asset management planning is an essential framework to develop in each municipality to ensure proper infrastructure management in the most sustainable way over the long term. The proclamation of *The Infrastructure for Jobs and Prosperity Act, 2015* on May 1, 2016 and includes an authority for the province to regulate municipal asset management planning. Municipal asset management planning regulation *O. Reg. 588/17* under the *Infrastructure for Jobs and Prosperity Act, 2015* came into effect on January 01, 2018. Building on Ontario's 2012 Building Together: Guide for Municipal Asset Management Plans, the regulation sets out new requirements for undertaking asset management planning.

The goal of the regulation is to promote continuous improvement in infrastructure asset management planning by requiring Ontario municipalities to develop a Strategic Asset Management Policy aligned with their strategic goals, official plan, master plans, financial planning framework, and the levels of service they intend to provide to their residents.

Municipalities are also required to develop a comprehensive Asset Management Plan in multiple phases (2022-2025) that includes inventory of all assets they own, incorporates the current and proposed levels of service, identifies investment activities and costs to maintain current service levels, and a supporting financial strategy. The following table presents the requirements along with the timelines prescribed in the regulation:

Table 1 – Asset Management regulatory timelines for compliance

Phased Requirements	Strategic Asset Management Policy	Asset Management Plan	Progress Review
Timeline	July 1, 2019	<p>July 1, 2022: Core infrastructure assets with costs to maintain current levels of service</p> <p>July 1, 2024: All infrastructure assets with costs to maintain current levels of service</p> <p>July 1, 2025: All infrastructure assets with proposed levels of service and a financial strategy</p>	July 1, 2025
Reporting Cycle	Every five years	Every five years	Every Year

### 1.1.2 Data Confidence

To aid interpretation of the information presented, there is an assignment of a data confidence rating to the condition summaries by service area in the report cards of this plan (Appendix I). The data confidence rating scales outlined in Table 2 define the various measures used to qualify the accuracy and reliability of the information used to develop this report, specifically as it relates to condition charts which then relates to the projection of investment needs for asset repair and replacement. It is an overall goal to improve the reliability and accuracy of all information through future reporting. While the City should move to a risk-based approach over time, age-based assessments may still be appropriate for some assets. The current City-wide Data Confidence is assessed as **Low-Medium (Age and Condition Based)**.

For this SOLI report, the following condition assessments methodologies were implemented:

- **Facilities** – Facility Condition Index
- **Roads** – Pavement Condition Index
- **Bridges** – Bridge Condition Index
- **Software and Some Other IT Assets** – Adequate Functionality to Provide Service
- **All other assets** – Age and Condition Based Assessment



Table 2 – Data Confidence Rating Scales

Measure	Description	High (Risk Based)	Moderate (Condition)	Low (Age)
<b>Approach</b>	Approach undertaken to qualify the current state of the assets as it relates to industry benchmarks and best practices	Based on full understanding of Risks, and a balanced correlation of the asset's (technical) levels of service	A standard industry benchmark that is used to objectively assess the current and projected condition of the asset. (i.e. FCI- Facilities condition index, PCI- Pavement Condition Index, BCI- Bridge Condition Index)	The age-based condition was evaluated by comparing the age of the asset to its expected useful life
<b>Reliability</b>	Can be trusted to be accurate or to provide a correct result	Based upon sound records, procedures, or analyses that have been acceptably documented, and are recognized as the best method of assessment	Based upon known reasonable procedures, or analyses that have been acceptably documented or expert opinion about condition based on inspection and usage	Based upon expert verbal opinion or manufacturer recommendations on useful life
<b>Accuracy</b>	Probable difference between a recorded parameter and its true value	+/- 1%	+/- 10%	+/- 50%

Source: 2016 Corporate AMP developed based on best practices and asset management frameworks

Based on a weighted replacement value of all services and their condition assessments, about 78% of assets have a data confidence rating based on condition. This represents an increase of 2% from the 2020 SOLI Report in which 76% of the assets ratings were based on condition. The scale below provides a visual representation of the City's reliability and accuracy for condition data based on the criteria listed in Table 2. As the City further moves towards a condition and risk based approach, the reliability and accuracy of data will continue to increase. For certain asset classes, inspection programs with full condition assessments is not feasible, therefore the City will not be targeting a 100% data confidence rating based on condition assessments. When considering assets that will continue to use an age-based approach, the City is targeting a maturity rating based on condition assessments of approximately 91%. Table 3 below provides a detailed outline of the assessment of each service category's assets. Please note the basis of the assets classified on condition are in many instances subject to the input received from individual service area experts.

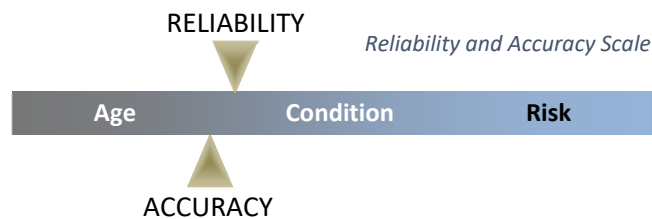




Table 3 – Condition Assessment Approach

Service Area <sup>(1)</sup>	% of Asset Portfolio <sup>(2)</sup>	Age	Condition	Risk
<b>Transportation</b>	<b>42.93%</b>	✓	✓	
<i>Roads (Includes Islands)</i>	22.92%		✓	
<i>Roadway Bridges &amp; Pedestrian Bridges</i>	5.13%		✓	
<i>Roadway Culverts</i>	5.39%		✓	
<i>Gateway Features</i>	0.19%		✓	
<i>Noise Walls</i>	0.37%		✓	
<i>Retaining Walls on Walkways</i>	0.25%		✓	
<i>Fences</i>	0.05%		✓	
<i>Guiderails</i>	0.07%		✓	
<i>Handrails</i>	0.01%		✓	
<i>Steps</i>	0.01%		✓	
<i>Sidewalks</i>	3.40%		✓	
<i>Walkways</i>	0.07%		✓	
<i>Multi-Use Paths</i>	0.18%		✓	
<i>Street Lighting</i>	3.52%	✓	✓	
<i>Traffic Signals</i>	1.36%	✓		
<i>Traffic Signs</i>	0.02%		✓	
<b>Stormwater</b>	<b>18.17%</b>	✓	✓	
<i>Stormwater Management Ponds</i>	1.29%		✓	
<i>FDC-WTC</i>	0.96%	✓		
<i>Storm Sewers</i>	11.64%	✓		
<i>Catchbasins</i>	1.69%	✓		
<i>Manholes</i>	2.20%	✓		
<i>FDC-WTC Manholes</i>	0.29%	✓		
<i>Water Quality Units</i>	0.10%	✓		
<b>Facilities</b>	<b>19.68%</b>		✓	
<i>Facilities</i>	19.68%		✓	
<b>Transit</b>	<b>7.21%</b>	✓	✓	
<i>Heavy Duty Vehicles (Buses)</i>	5.70%		✓	
<i>Fleet Support</i>	0.02%	✓		
<i>Shelters – Conventional</i>	0.10%		✓	
<i>Shelters – Zum</i>	0.42%		✓	
<i>Shelters – Bike</i>	0.004%		✓	
<i>Stops</i>	0.21%	✓		
<i>Sandalwood Transit Loop</i>	0.01%	✓		
<i>Video Walls</i>	0.001%	✓		
<i>Smart Bus Systems</i>	0.03%	✓		
<i>True Credential Identification Card Application Hardware</i>	0.0004%	✓		
<i>Conveyance Systems</i>	0.14%	✓		
<i>Communication Control</i>	0.20%	✓		
<i>Fare Systems</i>	0.12%	✓		
<i>Presto</i>	0.07%	✓		

Service Area <sup>(1)</sup>	% of Asset Portfolio <sup>(2)</sup>	Age	Condition	Risk
<i>Maintenance/Admin Small Equipment</i>	0.01%	✓		
<i>Signage</i>	0.04%		✓	
<i>Fueling</i>	0.02%	✓		
<i>Stock Room</i>	0.04%	✓		
<i>Electric Chargers</i>	0.09%	✓		
<b>Information Technology</b>	<b>1.64%</b>		✓	
<i>Computers</i>	0.08%	✓		
<i>Monitors</i>	0.01%	✓		
<i>Mobile Phones</i>	0.01%	✓		
<i>Audio Visual Equipment</i>	0.003%		✓	
<i>Servers</i>	0.03%		✓	
<i>Storage And Back-Up</i>	0.05%		✓	
<i>Wireless</i>	0.03%		✓	
<i>Cable Plants</i>	0.40%		✓	
<i>Network Infrastructure</i>	0.08%		✓	
<i>Communication System</i>	0.05%		✓	
<i>Software</i>	0.91%		✓	
<b>City Support Fleet</b>	<b>0.07%</b>	✓	✓	
<i>Licensed Fleet</i>	0.43%	✓	✓	
<i>Off-Road Vehicles</i>	0.21%	✓		
<i>Fleet Equipment</i>	0.01%	✓		
<b>Fire</b>	<b>0.48%</b>		✓	
<i>Front Line Licensed Vehicles &amp; Apparatus</i>	0.26%		✓	
<i>Support Vehicles &amp; Equipment</i>	0.09%		✓	
<i>Spare Vehicles</i>	0.09%		✓	
<i>Personal Fire Equipment</i>	0.04%		✓	
<i>Specialty Equipment</i>	0.01%		✓	
<b>Parks</b>	<b>8.12%</b>	✓	✓	
<i>Parking Lots</i>	0.57%	✓		
<i>Small Engine Equipment</i>	0.04%	✓	✓	
<i>Parks</i>	1.50%	✓		
<i>Natural Heritage Lands</i>	0.00%	✓		
<i>Park Furnishing</i>	0.05%		✓	
<i>Playgrounds</i>	1.32%		✓	
<i>Shade Structures</i>	0.45%		✓	
<i>Splash Pads &amp; Outdoor Pools</i>	0.04%	✓		
<i>Fitness Equipment</i>	0.01%		✓	
<i>Skate Parks</i>	0.02%		✓	
<i>Sports Facilities</i>	1.66%	✓	✓	
<i>Pathways</i>	0.55%		✓	
<i>Trees</i>	1.86%		✓	
<i>Flower Beds</i>	0.05%	✓		
<b>Recreation</b>	<b>0.60%</b>	✓	✓	
<i>General Equipment</i>	0.17%		✓	
<i>Major Equipment</i>	0.07%	✓		

Service Area <sup>(1)</sup>	% of Asset Portfolio <sup>(2)</sup>	Age	Condition	Risk
<i>Splash Pads &amp; Pools</i>	0.06%	✓		
<i>Tennis Courts</i>	0.03%	✓		
<i>Fitness Equipment</i>	0.04%		✓	
<i>Outdoor Fitness Equipment</i>	0.002%		✓	
<i>Skateboard Parks</i>	0.04%		✓	
<i>Artificial Rinks &amp; Tracks</i>	0.03%		✓	
<i>Furniture</i>	0.15%		✓	
<b>Cultural Services</b>	<b>0.24%</b>	✓	✓	
<i>Outdoor Equipment</i>	0.11%		✓	
<i>Specialty Equipment</i>	0.08%		✓	
<i>Furniture</i>	0.003%		✓	
<i>Public Art</i>	0.06%		✓	
<b>Library</b>	<b>0.27%</b>		✓	
<i>Computer Equipment</i>	0.03%		✓	
<i>Furniture</i>	0.04%		✓	
<i>RFID</i>	0.01%		✓	
<i>Shelving</i>	0.01%		✓	
<i>Telecommunications Equipment</i>	0.002%		✓	
<i>Electronic Media</i>	0.03%		✓	
<i>Print Media</i>	0.13%		✓	
<i>Library Software</i>	0.004%		✓	
<b>Animal Services</b>	<b>0.004%</b>		✓	
<i>Equipment</i>	0.004%		✓	
<i>Note 1: Services are structured under the responsibility view (see section 2.2 for more details)</i>				
<i>Note 2: Numbers may not add precisely due to rounding</i>				

### 1.1.3 Assessment of Overall Asset Management Data and Programs

Figure 1 below provides a snapshot of the progress and overall maturity of the City’s asset management data and program relative to 2016 when the City first launched its Corporate AMP as well as the recent 2021 Corporate AMP adopted by Council. With the recent adoption of the Corporate AMP in June 2022, this maturity level is still relevant for the purposes of this 2021 SOLI Report. The ISO 55000 assessment framework, MFOA Maturity level framework, 2016 Corporate AMP, and a series of discussions with the CAMO team and various service areas inform the maturity evaluation to qualify the progress the City has made.

The major premise of comprehensive corporate asset management is that an organization will seldom have perfect processes and data with which to manage the asset portfolio. Instead, the underlying culture of continuous improvement and reliability is its key to success. These improvements will be part of the continuation of the Corporate Asset Management program and the implementation of the CAM Roadmap moving forward.

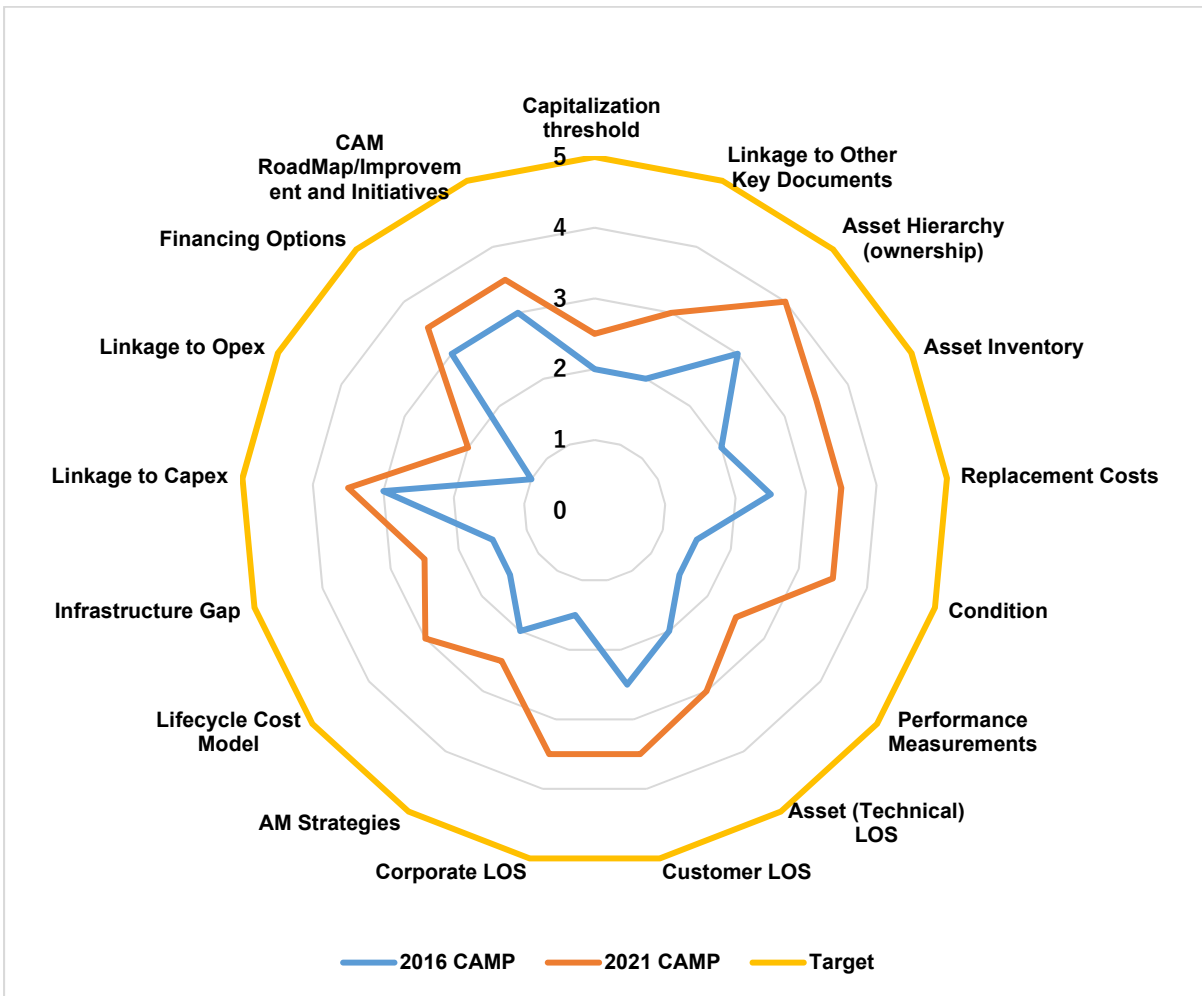
The City’s overall confidence level rating is approximately three (3), which correlates to a medium (“competent”) State of Asset Management maturity. The scores are reflective of the quality and type of data available, current processes and management strategies. The figure indicates two important points:

- 1) The City has made significant progress in further developing various components of their Asset Management program since the completion of the 2016 Corporate AMP. The level of advancement varies by different areas;
- 2) Despite the progress made, further work is currently underway and planned to be undertaken over the next few years that will move the City towards the targeted “level 5” assessment in all categories. Some of these activities include but are not limited to:
  - a. Completion of the Departmental Asset Management Plans for non-core assets;
  - b. Update to the City’s Long-term Financial Master Plan;
  - c. Updated Condition assessments and replacement valuations;
  - d. Level of Service tracking and consultation regarding proposed/target levels of service; and
  - e. Improved understanding of advanced asset management strategies including asset risk, full lifecycle activities, etc.
  - f. Integration of various AM strategies to inform investment needs

Importantly, the target identified in Figure 1 below is anticipated to occur sometime following full implementation of the regulatory requirements in July 2025. Section 4 of this report identifies a series of future improvements and initiatives that will improve data quality and confidence while driving corporate change. Aside from the regulatory requirement for municipalities to mature their asset management processes, the City can realize outcomes that are more tangible:

- 1) Evidence based decision making and prioritized investment needs to provide expected levels of service at the lowest cost;
- 2) Integration with Budgeting process, the Long-term Financial Master Plan and other key initiatives;
- 3) Increased coordination with departmental capital plans and corporate funding strategies; and
- 4) Better infrastructure coordination with region and within and other levels of governments and agencies.

Figure 1 – Asset Management Maturity Assessment 2016 vs. 2021



Note: Current maturity continues to be in line with the 2021 Corporate AMP.

## 2 State of Local Infrastructure (SOLI)

### 2.1 Purpose

This section of the report seeks to establish an understanding of the current state of Brampton's estimated \$7.7 billion (\$2022) in infrastructure assets. The estimated valuation is based on an inventory of capital assets as of year-end 2021. This baseline snapshot of Brampton's assets will help decision-makers prioritize investments in the future; improving their ability to efficiently manage assets and deliver services.

The State of Local Infrastructure (SOLI) is a key building block for Brampton's future management of its infrastructure assets. This section intends to provide the following information:

- Details of the Asset Inventory – What do we own?
- Valuation of the Asset Base (Replacement Value) – What is it worth?
- Condition of the Asset Base – What Condition is it in?

This State of the Local Infrastructure analysis will lay the foundation for ongoing assessment, reporting, benchmarking of the City's infrastructure assets while also publicly communicating the current state of assets. In this iteration of the report, the focus was on the "major service areas", described generally, as the infrastructure owned and directly managed by the City. However, this report does include assets managed by Brampton Library, which is a governing board with the authority to make policy and govern the Library's affairs under the authority of the *Public Libraries Act*. Future iterations of this report will look to include all assets directly and indirectly owned or managed by the City, including those owned or managed by municipal boards and agencies in addition to Brampton Library.

Despite the major service area categories being consistent with the 2021 Corporate AMP and 2020 SOLI Report, the City has made significant improvements to the datasets, key inputs, assumptions, and reporting views. The updated financing strategy is more reflective of a full lifecycle cost of service approach as required by the regulation and remains consistent with the approach used in the Corporate AMP. The condition of the majority of assets reported is based on actual condition assessments estimated at 78% as weighted by replacement value. Please note that further updates to the replacement values will continue in future years with more recent data that may better reflect the cost pressures that the City is currently experiencing.

## 2.2 City-wide Asset Representation: User View and Responsibility View

As part of the 2021 Corporate Asset Management Plan, the state of the City infrastructure was reported under two different asset representation perspectives: a “Responsibility View” and a “User View” representation. These two views are defined as follows:

**Responsibility View:** Shows the assets under the service area that is responsible for managing them.

**User View:** Shows the assets under the service area that is using them.

To remain consistent with the 2021 Corporate AMP state of the local infrastructure representation, the responsibility and user view is also illustrated in this 2021 SOLI Report. The responsibility view:

- provides a direct line of sight to those assets managed by the service area;
- will help prioritize lifecycle activities managed by the service area;
- aligns with industry best practices; and
- provides guidance to future asset management planning practice and departmental initiatives.

The most significant adjustment that can be observed under the responsibility view versus the user view pertains to Facilities, City Support Fleet and Software. The assets all form a fundamental component to how services are delivered and therefore “used” by each service area, although, the department that manages the infrastructure is different from those who use it.

The table below goes through each service area’s assets and their Current Replacement Value (CRV), detailing the differences in reporting based on these two views (differences in highlighted in grey). As illustrated in the total replacement value below, both views result in the same valuation of \$7.7 billion:

Table 4 – Replacement Value Comparison: Assets under User view and Responsibility View

Service Area	Assets Under Responsibility View		Assets Under User View	
	Asset Type	CRV (\$M)	Asset Type	CRV (\$M)
Transportation	Roads (Includes Islands)	\$1,758.4	Roads (Includes Islands)	\$1,758.4
	Structures (Bridges & Culverts)	\$807.0	Structures (Bridges & Culverts)	\$807.0
	Structures (Other)*	\$73.4	Structures (Other)	\$73.4
	Walkways & Paths	\$279.3	Walkways & Paths	\$279.3
	Traffic Services	\$375.3	Traffic Services	\$375.3
			Facilities	\$74.8
			Fleet	\$16.7
			Software	\$7.4
<b>Total Transportation</b>		<b>\$3,293.3</b>		<b>\$3,392.1</b>
*Note: Structures (Other) includes gateway features, noise walls, retaining walls, fences, guiderails, handrails and steps				
Stormwater	Stormwater Management Ponds	\$98.7	Stormwater Management Ponds	\$98.7
	Storm Sewer Systems	\$1,287.8	Storm Sewer Systems	\$1,287.8
	Water Quality Units	\$7.5	Water Quality Units	\$7.5



Service Area	Assets Under Responsibility View		Assets Under User View	
	Asset Type	CRV (\$M)	Asset Type	CRV (\$M)
<i>Total Stormwater</i>		<i>\$1,393.9</i>		<i>\$1,393.9</i>
Facilities	Corporate Facilities	\$310.4	Corporate Facilities	\$310.4
	Animal Services Facilities	\$9.4	Software	\$3.6
	Cultural Services Facilities	\$90.9	Fleet	\$1.7
	Recreation Facilities	\$626.9		
	Parks Facilities	\$20.7		
	Transit Facilities	\$170.1		
	Library Facilities	\$88.7		
	Fire Facilities	\$118.1		
	Work Operations Facilities	\$74.8		
<i>Total Facilities</i>		<i>\$1,510.1</i>		<i>\$315.8</i>
Transit	Licensed Vehicle Assets	\$438.9	Licensed Vehicle Assets	\$438.9
	Transit Facilities (On Road)	\$56.8	Transit Facilities (On Road)	\$56.8
	Transit IT Infrastructure	\$2.1	Transit IT Infrastructure	\$2.1
	Specialty Equipment	\$55.2	Specialty Equipment	\$55.2
			Facilities	\$170.1
			Software	\$1.2
<i>Total Transit</i>		<i>\$552.9</i>		<i>\$724.2</i>
Information Technology (IT)	End User IT	\$7.5	End User IT	\$7.5
	Infrastructure Assets	\$48.8	Infrastructure Assets	\$48.8
	Software (Shared Corporate Software)	\$53.1	Software (Shared Corporate Software)	\$53.1
	Software (Used by Other Service Areas)	\$16.7		
<i>Total IT</i>		<i>\$126.1</i>		<i>\$109.4</i>
City Support Fleet	Licensed Fleet (Corporate Services Fleet)	\$4.1	Licensed Fleet (Corporate Services Fleet)	\$4.1
	Off-Road Vehicles (Corporate Services Fleet)	\$0.9	Off-Road Vehicles (Corporate Services Fleet)	\$0.9
	Fleet Equipment (Corporate Services Fleet)	\$0.01	Fleet Equipment (Corporate Services Fleet)	\$0.01
	Licensed Fleet (Used by Other Service Areas)	\$28.8	Software	\$0.8
	Off-Road Vehicles (Used by Other Service Areas)	\$15.1		
	Fleet Equipment (Used by Other Service Areas)	\$0.4		
<i>Total City Support Fleet</i>		<i>\$49.3</i>		<i>\$5.8</i>
Fire	Front Line Licensed Vehicles & Apparatus	\$19.6	Front Line Licensed Vehicles & Apparatus	\$19.6

Service Area	Assets Under Responsibility View		Assets Under User View	
	Asset Type	CRV (\$M)	Asset Type	CRV (\$M)
	Support Vehicles & Equipment	\$6.6	Support Vehicles & Equipment	\$6.6
	Spare Vehicles	\$7.1	Spare Vehicles	\$7.1
	Personal Fire Equipment	\$3.0	Personal Fire Equipment	\$3.0
	Specialty Equipment	\$0.5	Specialty Equipment	\$0.5
			Facilities	\$118.1
			Software	\$3.2
<i>Total Fire</i>		<i>\$36.9</i>		<i>\$158.2</i>
Parks	Parking Lots	\$43.6	Parking Lots	\$43.6
	Small Engine Equipment	\$2.8	Small Engine Equipment	\$2.8
	Parks	\$115.4	Parks	\$115.4
	Natural Heritage Lands	\$0.0	Natural Heritage Lands	\$0.0
	Park Furnishing	\$3.6	Park Furnishing	\$3.6
	Playgrounds	\$101.3	Playgrounds	\$101.3
	Shade Structures	\$34.4	Shade Structures	\$34.4
	Splash Pads & Outdoor Pools	\$3.2	Splash Pads & Outdoor Pools	\$3.2
	Fitness Equipment	\$0.8	Fitness Equipment	\$0.8
	Skate Parks	\$1.7	Skate Parks	\$1.7
	Sports Facilities	\$127.4	Sports Facilities	\$127.4
	Pathways	\$42.3	Pathways	\$42.3
	Trees	\$142.9	Trees	\$142.9
	Flower Beds	\$3.9	Flower Beds	\$3.9
			Facilities	\$20.7
		Fleet	\$20.4	
		Software	\$0.0	
<i>Total Parks</i>		<i>\$623.2</i>		<i>\$664.3</i>
Recreation	Equipment	\$34.5	Equipment	\$34.5
	Furniture	\$11.8	Furniture	\$11.8
			Facilities	\$626.9
			Fleet	\$3.8
			Software	\$0.3
<i>Total Recreation</i>		<i>\$46.3</i>		<i>\$677.3</i>
Cultural Services	Outdoor Equipment	\$8.1	Outdoor Equipment	\$8.1
	Specialty Equipment	\$5.8	Specialty Equipment	\$5.8
	Furniture	\$0.2	Furniture	\$0.2
	Public Art	\$4.6	Public Art	\$4.6
			Facilities	\$90.9
			Fleet	\$0.5
		Software	\$0.0	
<i>Total Cultural Services</i>		<i>\$18.7</i>		<i>\$110.1</i>
Library	Furniture and Equipment	\$7.8	Furniture and Equipment	\$7.8
	Media Collections	\$12.4	Media Collections	\$12.4
	Library Software	\$0.3	Library Software	\$0.3
			Facilities	\$88.7
			Fleet	\$0.1
<i>Total Library</i>		<i>\$20.5</i>		<i>\$109.4</i>
Animal Services	Equipment	\$0.3	Equipment	\$0.3

Service Area	Assets Under Responsibility View		Assets Under User View	
	Asset Type	CRV (\$M)	Asset Type	CRV (\$M)
			Facilities	\$9.4
			Fleet	\$1.0
			Software	\$0.2
<i>Total Animal Services</i>		\$0.3		\$11.0
<b>Total CRV (\$M)</b>		<b>\$7,671.6</b>		<b>\$7,671.6</b>

*Note: Numbers in the table above may not add exactly due to rounding*

### 2.3 Asset Inventory and Valuation

As specified in the Ministry Guide, the value of the City's assets is in two different formats: 'Net Book Value' and 'Replacement Value'.

Net Book Value is consistent with the financial accounting practices defined by the Public Sector Accounting Board and is reported on the City's financial statements. The City of Brampton's reported Net Book Value covers the full scope of the City's Tangible Capital Assets, including land. This differs from the scope of assets considered under the Corporate Asset Management program and the State of the Local Infrastructure.

The Net Book Value is the original acquisition cost less accumulated depreciation, depletion or amortization. It is reported annually in accordance with reporting standards established by the Public Sector Accounting Board (PSAB) of the Canadian Institute of Chartered Accountants. As shown on Table 5 below, the City's 2020 Consolidated Financial Statement reported the Net Book Value of the City's Tangible Capital Assets as of December 31, 2021 at \$3.9 billion, inclusive of land. Under the financial accounting approach many assets may be fully depreciated yet remain in use across the City. Therefore, Net Book Value is not the appropriate methodology to be employed for infrastructure renewal planning.

Table 5 – City of Brampton Net Book Value (\$000)

FIR Functional Classification	Net Book Value Jan 1, 2021	Net Additions/ Disposals	Net Amortization Expense	Net Book Value Dec 31, 2021
General Government	\$359,187	\$6,530	\$11,246	\$354,470
Protection	\$66,029	\$1,339	\$5,057	\$62,311
Transportation	\$1,932,179	\$71,497	(\$11,357)	\$2,015,033
Environmental	\$546,906	\$53,830	\$18,075	\$582,660
Health	\$751	\$36	\$95	\$692
Social and Family	\$3,760	\$0	\$239	\$3,522
Recreation and Cultural Services	\$899,377	\$26,708	\$14,184	\$911,901
Planning and Development	\$7,637	\$288	\$256	\$7,669
<b>TOTAL</b>	<b>\$3,815,826</b>	<b>\$160,228</b>	<b>\$37,796</b>	<b>\$3,938,258</b>

Note: Categories/information derived from the 2021 Financial Information Return. The net amortization figure tends to vary from year-to-year pending on in-year asset disposals.

**Replacement Values** are used as the basis to estimate the cost of replacing an asset when it reaches the end of its engineered design life. The total replacement cost of all assets covered within this Report is estimated at \$7.7 billion.

### 2.3.1 Replacement Cost Valuation

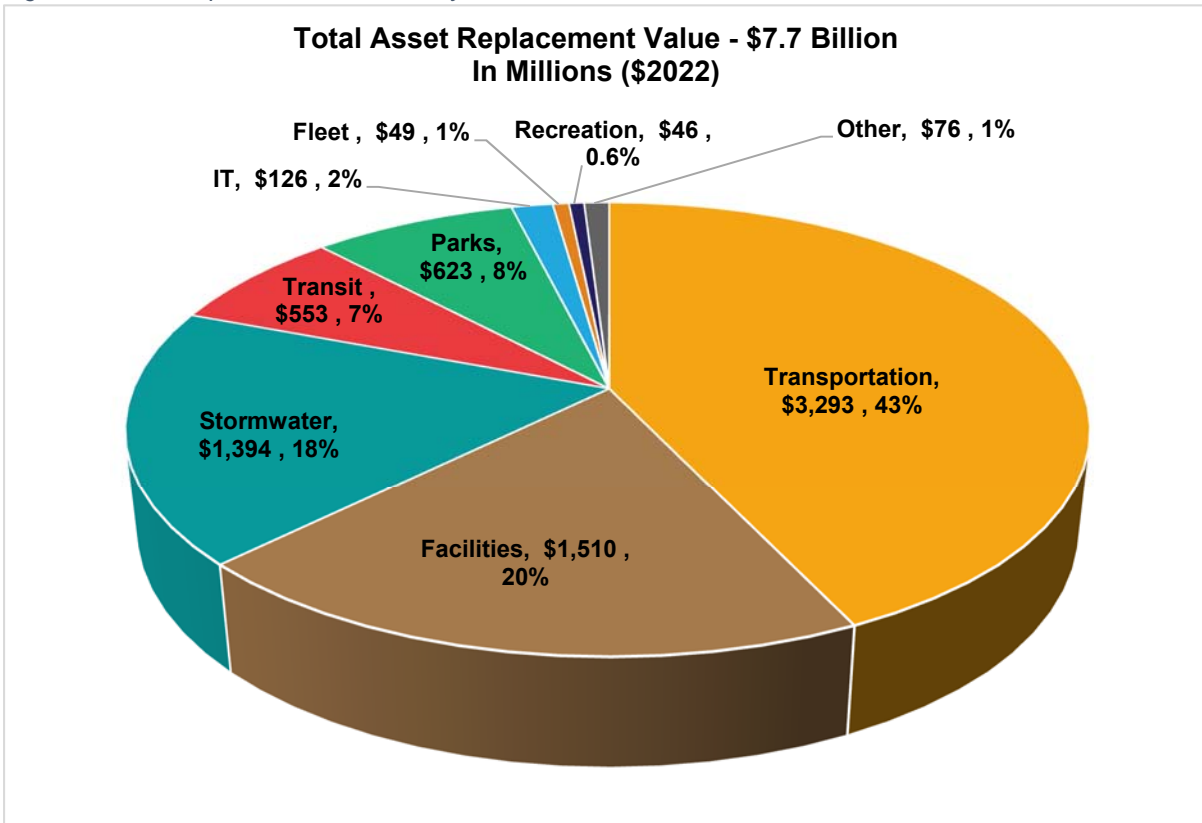
The City uses three basic methods to estimate replacement costs needed for infrastructure renewal planning:

1. **Local price indices:** This is the most accurate method. The City has collected recent acquisition data demonstrating similar replacement activities.
2. **Published price indices:** Where local indices are not available, the City uses published indices, which, although appropriate and standardized, may not be as relevant to City assets as local indices.
3. **Purchasing estimates:** When assets cannot be estimated against either index, the City uses historic cost, asset age and inflationary effects to determine the current replacement value.

The total replacement value of all assets covered under this report is illustrated by service in Figure 2 below. Transportation services represents the largest share at 43%, or \$3.29 billion,

of the total \$7.7 billion replacement value. The replacement value reported in the below figure is represented under the “Responsibility view” framework.


Figure 2 – Total Replacement Value of City Infrastructure = \$7.7 Billion



Note: Other category includes Fire, Library, Culture and Animal Services

Although Figure 2 provides a general overview of the replacement value by service area, Tables 6 to 17 below provide a more detailed overview of the service area valuations at the sub-asset level and the inventories of assets (as of year-end 2021) that attribute to the total valuation identified. The tables have been adjusted to represent the valuation under both the user view and responsibility framework.

Table 6 – Detailed Asset Inventory Replacement Value – Transportation Services

Service	Asset		Inventory	Unit	Total Replacement Value (\$000)	
<b>Transportation</b>  	<b>1. Assets Managed by Transportation</b>					
	Roadway Network	Roads (Includes Islands)	3,765	Lane KM	\$1,758,353	
	Structures	Bridges	3,931	Metres	\$393,588	
		Culverts	1,180	Metres	\$413,366	
		Gateway Features	2,799	Metres	\$14,580	
		Noise Walls	12,333	Metres	\$28,478	
		Retaining Walls	8,268	Metres	\$19,321	
		Fences	35,383	Metres	\$4,218	
		Guiderails	31,909	Metres	\$5,187	
		Handrails	3,277	Metres	\$553	
		Steps	80	Metres	\$1,067	
	Walkways & Path	Sidewalks	1,939	KM	\$260,601	
		Walkways	14	KM	\$5,000	
		Multi-Use Paths	126	KM	\$13,688	
	Traffic Services	Street Lighting	43,843	Each	\$269,877	
		Traffic Signals	817	Each	\$104,029	
		Traffic Signs	50,912	Each	\$1,349	
	<b>Subtotal Assets Managed by Transportation - Responsibility View</b>					<b>\$3,293,254</b>
	<b>2. Assets Managed by Other Service Areas</b>					
	Operations Facilities			9	Each	\$74,769
	Fleet	Licensed Fleet		97	Each	\$11,718
		Off-Road Equipment		66	Each	\$4,968
Fleet Equipment		4	Each	\$20		
Software			20	Each	\$7,351	
<b>Subtotal Assets Managed by Other Service Areas</b>					<b>\$98,825</b>	
<b>TOTAL - USER VIEW (1+2)</b>					<b>\$3,392,079</b>	

Note: There are 73 roadway bridges, 115 pedestrian bridges.  
 There are 156 culverts.  
 There are 293 gateway features.  
 There are 45 noise walls and 145 retaining walls.  
 There are 574 guiderails and 92 handrails.

Table 7 – Detailed Replacement Values – Stormwater Services



Service	Asset		Inventory	Unit	Total Replacement Value (\$000)
	Stormwater Management Ponds		186	Each	\$98,692
	Storm Sewer System	FDC-WTC	252,916	Metres	\$73,609
		Storm Sewers	1,649,208	Metres	\$893,198
		Catchbasins	38,657	Each	\$129,872
		Manholes	22,389	Each	\$168,548
		FDC-WTC Manholes	4,013	Each	\$22,557
	Oil & Grit Separators		128	Units	\$7,472
<b>TOTAL - USER &amp; RESPONSIBILITY VIEW</b>					<b>\$1,393,948</b>

Table 8 – Detailed Replacement Values – Facilities

Service	Asset		Inventory	Unit	Total Replacement Value (\$000)
	<b>1. Assets Used by the Corporation and Managed by Facilities</b>				
	Corporate Facilities		26	Each	\$310,435
	<b>Subtotal Assets Used by the Corporation and Managed by Facilities</b>				<b>\$310,435</b>
	<b>2. Assets Used by Facilities and Managed by Other Service Areas</b>				
	Software		1	Each	\$1,719
	Fleet		66	Each	\$3,638
	<b>Subtotal Assets Used by Facilities and Managed by Other Service Areas</b>				<b>\$5,357</b>
	<b>Subtotal – User View (1+2)</b>				<b>\$315,792</b>
	<b>3. Assets Managed by Facilities and Used by Other Service Areas</b>				
	Animal Services		2	Each	\$9,445
	Cultural Services		1	Each	\$90,903
	Recreation		68	Each	\$626,924
	Parks		18	Each	\$20,723
	Transit		8	Each	\$170,065
	Library		6	Each	\$88,728
	Fire		16	Each	\$118,124
	Work Operations		9	Each	\$74,769
<b>Subtotal Assets Managed by Facilities and Used by Other Service Areas</b>				<b>\$1,199,681</b>	
<b>TOTAL - RESPONSIBILITY VIEW<sup>1</sup> (1+3)</b>					<b>\$1,510,115</b>

Note 1: Does not include software and fleet



Table 9 – Detailed Replacement Values – Transit Services


Service	Asset	Inventory	Unit	Total Replacement Value (\$000)	
<b>Transit</b>  	<b>1. Assets Managed by Transit</b>				
	Licensed Vehicle Assets	Heavy Duty Vehicles	473	Each	\$437,435
		Light Duty Vehicles	28	Each	\$1,485
	Transit Facilities (On Road)	Shelters – Conventional	869	Each	\$7,425
		Shelters – Züm	130	Each	\$32,113
		Shelters – Bike Stops	23	Each	\$269
			2,328	Each	\$15,927
			1	Each	\$1,040
	Transit IT Infrastructure	Video Walls	1	Each	\$66
		Smart Bus Systems	1	Each	\$1,977
		True Credential ID Card Application Hardware	41	Each	\$31
	Specialty Equipment	Conveyance Systems	34	Each	\$10,455
		Comm. Control	4	Each	\$15,158
		Fare Systems	498	Each	\$9,089
		PRESTO	1,082	Each	\$5,241
		Maintenance/Admin Small Equipment	7	Each	\$479
		Signage	3,093	Each	\$3,102
		Fueling	5	Each	\$1,404
		Stock Room	2	Each	\$2,978
		Electric Charger	5	Each	\$7,260
	<b>Subtotal Assets Managed by Transit - Responsibility View</b>				<b>\$552,934</b>
	<b>2. Assets Managed by Other Service Areas</b>				
	Facilities	All Transit Facilities	8	Each	\$170,065
	Transit IT Infrastructure	Software	2	Each	\$1,222
	<b>Subtotal Assets Managed by Other Service Areas</b>				<b>\$171,287</b>
	<b>TOTAL - USER VIEW (1+2)</b>				<b>\$724,221</b>

Table 10 – Detailed Replacement Values – IT Services



Service	Asset		Inventory	Unit	Total Replacement Value (\$000)
<b>Information Technology</b> 	<b>1. Assets Used by Information Technology (IT)</b>				
	End User IT	Computers	3,700	Each	\$6,112
		Monitors	2,843	Each	\$725
		Mobile Phones	1,249	Each	\$456
		Audio Visual Equipment	144	Each	\$229
	Infrastructure Assets	Servers	83	Each	\$2,407
		Storage and Back-Up	22	Each	\$4,093
		Wireless	806	Each	\$1,939
		Cable Plants	284,723	Metres	\$30,416
		Network Infrastructure	671	Each	\$6,111
		Communication System	4,127	Each	\$3,865
	Software		63	Each	\$53,078
	<b>Subtotal Assets Used by IT - User View</b>				<b>\$109,433</b>
<b>2. Assets Used by Other Service Areas and Managed by IT</b>					
	Software		39	Each	\$16,689
<b>Subtotal Assets Used by Other Service Areas</b>				<b>\$16,689</b>	
<b>TOTAL - RESPONSIBILITY VIEW (1+2)</b>				<b>\$126,121</b>	

Table 11 – Detailed Replacement Values – City Support Fleet

Service	Asset		Inventory	Unit	Total Replacement Value (\$000)	
<b>City Support Fleet</b> 	<b>1. Assets Managed by Other Service Areas and Used by City Support Fleet</b>					
		Software		2	Each	\$791
	<b>Subtotal Assets Managed by Other Service Areas and Used by City Support Fleet</b>				<b>\$791</b>	
	<b>2. Assets Managed and Used by City Support Fleet</b>					
		Licensed Vehicles		111	Each	\$4,133
		Off-Road Equipment		24	Each	\$880
		Fleet Equipment		4	Each	\$9
	<b>Subtotal Assets Managed and Used by the Corporation</b>				<b>\$5,022</b>	
	<b>Subtotal Replacement Value - User View (1+2)</b>				<b>\$5,813</b>	
	<b>3. Assets Managed by Fleet and Used by Other Service Areas</b>					
		Licensed Vehicles		389	Each	\$28,796
		Off-Road Equipment		271	Each	\$15,112
		Fleet Equipment		84	Each	\$362
<b>Subtotal Assets Managed by Fleet and Used by Other Service Areas</b>				<b>\$44,271</b>		
<b>TOTAL - RESPONSIBILITY VIEW<sup>1</sup> (2+3)</b>				<b>\$49,293</b>		

Note 1: Does not include software

Table 12 – Detailed Replacement Values – Fire Services



Service	Asset	Inventory	Unit	Total Replacement Value (\$000)	
	<b>1. Assets Managed by Fire Services</b>				
	Front Line Licensed Vehicles & Apparatus	21	Each	\$19,649	
	Support Vehicles & Equipment	65	Each	\$6,641	
	Spare Vehicles	31	Each	\$7,056	
	Personal Fire Equipment	1,078	Each	\$3,019	
	Specialty Equipment	6	Each	\$502	
	<b>Subtotal Assets Managed by Fire Services - Responsibility View</b>				<b>\$36,867</b>
	<b>2. Assets Managed by Other Service Areas</b>				
	Facilities	16	Each	\$118,124	
	Software	5	Each	\$3,165	
	<b>Subtotal Assets Managed by Other Service Areas</b>				<b>\$121,288</b>
<b>TOTAL - USER VIEW (1+2)</b>				<b>\$158,155</b>	

Table 13 – Detailed Replacement Values – Parks Services

Service	Asset	Inventory	Unit	Total Replacement Value (\$000)	
	<b>1. Assets Managed by Parks Services</b>				
	Park Assets	Parks*	1,119	Ha.	\$115,371
		Natural Heritage Lands	1,645	Ha.	\$0
		Park Furnishing	4,898	Each	\$3,558
		Playgrounds	340	Each	\$101,288
		Shade Structures	290	Each	\$34,382
		Splash Pads/ Pools	8	Each	\$3,237
		Fitness Equipment	18	Each	\$796
		Skate Parks	4	Each	\$1,698
		Sports Facilities	1,181	Each	\$127,426
		Pathways	278,379	Metres	\$42,271
		Other Assets	Parking Lots	333	Each
	Trees		249,749	Each	\$142,911
	Flower Beds		1,200	Each	\$3,870
	Small Equipment		892	Each	\$2,762
	<b>Subtotal Assets Managed by Park Services - Responsibility View</b>				<b>\$623,217</b>
	<b>2. Assets Managed by Other Service Areas</b>				
	Facilities	18	Each	\$20,723	
	Fleet	357	Each	\$20,350	
Software	1	Each	\$0		
<b>Subtotal Assets Managed by Other Service Areas</b>				<b>\$41,074</b>	
<b>TOTAL - USER VIEW (1+2)</b>				<b>\$664,291</b>	

\*Note: Parks sub-asset category excludes pathways, sports fields, playgrounds and other sub-asset classes reported separately as stated in the table

Table 14 – Detailed Replacement Values – Recreation Services


Service	Asset		Inventory	Unit	Total Replacement Value (\$000)
	<b>1. Assets Managed by Recreation Services</b>				
	Recreation Equipment	General Equipment	2,198	Each	\$13,000
		Major Equipment	195	Each	\$5,091
		Splash Pads & Pools	9	Each	\$4,902
		Tennis Courts	13	Each	\$2,069
		Fitness Equipment	572	Each	\$3,310
		Outdoor Fitness Equipment	10	Each	\$159
		Skateboard Parks	7	Each	\$3,396
		Artificial Rinks & Tracks	8	Each	\$2,621
	Furniture	303	Each	\$11,760	
	<b>Subtotal Assets Managed by Recreation Services - Responsibility View</b>				<b>\$46,308</b>
	<b>2. Assets Managed by Other Service Areas</b>				
	Facilities		68	Each	\$626,924
	Fleet		129	Each	\$3,753
Software		3	Each	\$310	
<b>Subtotal Assets Managed by Other Service Areas</b>				<b>\$630,987</b>	
<b>TOTAL - USER VIEW (1+2)</b>				<b>\$677,295</b>	

Table 15 – Detailed Replacement Values – Cultural Services


Service	Asset		Inventory	Unit	Total Replacement Value (\$000)
	<b>1. Assets Managed and Used by Cultural Services</b>				
	Outdoor Equipment		Pooled	N/A	\$8,107
	Specialty Equipment		5,283	Each	\$5,803
	Furniture		614	Each	\$219
	Public Art		28	Each	\$4,571
	<b>Subtotal Assets Managed by Cultural Services - Responsibility View</b>				<b>\$18,701</b>
	<b>2. Assets Managed by Other Service Areas</b>				
	Facilities		1	Each	\$90,903
	Fleet		7	Each	\$542
	Software		1	Each	\$0
<b>Subtotal Assets Managed by Other Service Areas</b>				<b>\$91,445</b>	
<b>TOTAL - USER VIEW (1+2)</b>				<b>\$110,145</b>	

Table 16 – Detailed Replacement Values – Library Services



Service	Asset		Inventory	Unit	Total Replacement Value (\$000)
<b>Library</b> 	<b>1. Assets Managed by Library Services</b>				
	Furniture and Equipment	Computer Equipment	1,614	Each	\$2,250
		Furniture	3,936	Each	\$3,385
		RFID	92	Each	\$1,066
		Shelving	1,196	Each	\$956
		Telecommunications Equipment	4	Each	\$138
	Media Collections	Electronic Media	Pooled	N/A	\$2,661
		Print Media	Pooled	N/A	\$9,746
	Library Software		18	Each	\$305
	<b>Subtotal Assets Managed by Library Services - Responsibility View</b>				<b>\$20,507</b>
<b>2. Assets Managed by Other Service Areas</b>					
	Facilities (Moved to Facilities)		6	Each	\$88,728
	Fleet (Moved to City Support Fleet)		4	Each	\$138
<b>Subtotal Assets Managed by Other Service Areas</b>				<b>\$88,867</b>	
<b>TOTAL - USER VIEW (1+2)</b>				<b>\$109,373</b>	

Table 17 – Detailed Replacement Values – Animal Services

Service	Asset		Inventory	Unit	Total Replacement Value (\$000)	
<b>Animal Services</b> 	<b>1. Assets Managed by Animal Services</b>					
		Equipment	143	Each	\$300	
	<b>Subtotal Assets Managed and Used by Animal Services - Responsibility View</b>				<b>\$300</b>	
	<b>2. Assets Managed by Other Service Areas</b>					
		Facilities		2	Each	\$9,445
		Fleet		13	Each	\$1,018
	Software		1	Each	\$213	
<b>Subtotal Managed by Other Service Areas</b>				<b>\$10,676</b>		
<b>TOTAL - USER VIEW (1+2)</b>				<b>\$10,977</b>		

### 2.3.2 Asset Condition

Consistent with the Canadian National Infrastructure Report Card as well as other major organizations and institutions reporting formats, a five-point rating scale, as shown in Table 18, was used to assign a condition to all assets. The City aims to continuously improve its assets condition assessment protocols to bring them in line with industry best practices to better reflect reliability and adequacy of the assets to provide service.

Table 18 – Five Point Infrastructure Rating Scale

Rank	Condition	Definition
1	Very Good	The infrastructure in the system is in generally good condition, typically new or recently rehabilitated. A few elements show signs of deterioration that require attention.
2	Good	The infrastructure in the system is in good condition; some elements show signs of deterioration that require attention. A few elements show sign of significant deficiencies
3	Fair	The infrastructure in the system or network is in fair condition; it shows general signs of deterioration and requires attention. Some elements exhibit significant deficiencies.
4	Poor	The infrastructure in the system or network is in poor condition and mostly below standard, with many elements approaching the end of their service life. A large portion of the system exhibits significant deterioration.
5	Very Poor	The infrastructure in the system or network is in unacceptable condition with widespread signs of advanced deterioration. Many components in the system exhibit signs of imminent failure, which is affecting service.

The 2021 SOLI uses the following approaches assess the asset condition to the State of the Local Infrastructure:

- Existing Rating System: Facility Condition Index (FCI) - The FCI is a standard facility management benchmark that objectively assesses the current condition of a building asset. This 2021 SOLI continued the use of the Facility Condition Index (FCI) calculation as the primary method to determine the overall condition of each facility. The facilities Condition grade (very good to very poor ratings) goes hand-in-hand with FCI, and is an industry standard way of evaluating asset condition in a way that is understandable to the public and Council. Building Condition Assessment (BCA) data determined the overall condition of facility assets. Table 19 below indicates the Facilities Condition Grading System used in this SOLI Report.

Table 19 Facilities General Condition Grading System

Grade	Description	Condition (Criteria)
VG	Very Good	Only normal maintenance required (0-2%)
G	Good	Minor Defects only - Minor maintenance required (2%-5%)
F	Fair	Maintenance required to return to accepted Level of Service - Significant maintenance required (5% - 10%)
P	Poor	Requires Renewal - Significant renewal/upgrade required (10-30%)
VP	Very Poor	Over 30% of asset requires replacement

- Existing Rating System: Pavement Condition Index (PCI) – The PCI is an industry standard benchmark used to indicate the general condition of pavement. The method to calculate the PCI is based on a technical inspection of the number and types of distresses in a pavement. Pavement distress includes low ride quality, cracking, bleeding, bumps and sags, depressions, potholes, etc. The result of the analysis is a

numerical value between 0 and 10, with 10 representing the best possible condition and 0 representing the worst possible condition.

- *Existing Rating System: Bridge Condition Index (BCI)* – The BCI is a commonly used benchmark that rates the condition of a bridge by evaluating and rating its sub-components, such as foundations, piers, deck structure, sidewalks/curbs/median, abutments or sidewalls, railings, etc. Each element of the bridge is rated from 1 (the element is on the verge of failure) to 100 (condition as new). An overall measure for the bridge is based on the rating of its elements. All bridges with a span greater than 3 Metres are inspected every two years as per the Provincial mandate.
- 4. *Estimated Rating: Age and Expected Useful Life* – When no formal condition assessment was available, the Age of the asset and its Expected Useful Life (EUL) were used to estimate the current condition. The EUL is the average amount of time in years that an asset is estimated to function when installed new and assuming routine maintenance is practiced.

For most assets, the general deterioration curve presented in Table 20 has been applied to derive the condition from the remaining assets useful life and vice versa. However, for some other asset types, such as storm sewers and fleet, a more refined deterioration curve was applied which better represented the lifecycle needs of those assets. The estimated engineered useful life of an asset is the period of time the asset is expected to provide service. The use of an asset ultimately influences the life of the infrastructure and its ability to provide service.

Table 20 – Overall City's Condition Grading Standard Framework

Grade	Condition	% of RUL
Grade 1	Very Good	80-100
Grade 2	Good	60-80
Grade 3	Fair	40-60
Grade 4	Poor	20-40
Grade 5	Very Poor	0-20

- *Projected Rating: Expert Opinion* – Where formal condition assessment, reliable age data, or the results of the Age & EUL analysis failed to represent actual condition observed by Staff, expert opinion of the City of Brampton service area experts were used to estimate asset condition. For example, all software incorporated into this report is considered to be in very good condition despite the age of the asset. The data would say some software is in poor or very poor condition, relative to the year it may have been acquired, while the expert knows the asset is overall in good condition. The opinion of the expert would override age and useful life in this circumstance. The expert opinion condition was evaluated by comparing Staff experience to the definition as noted above.

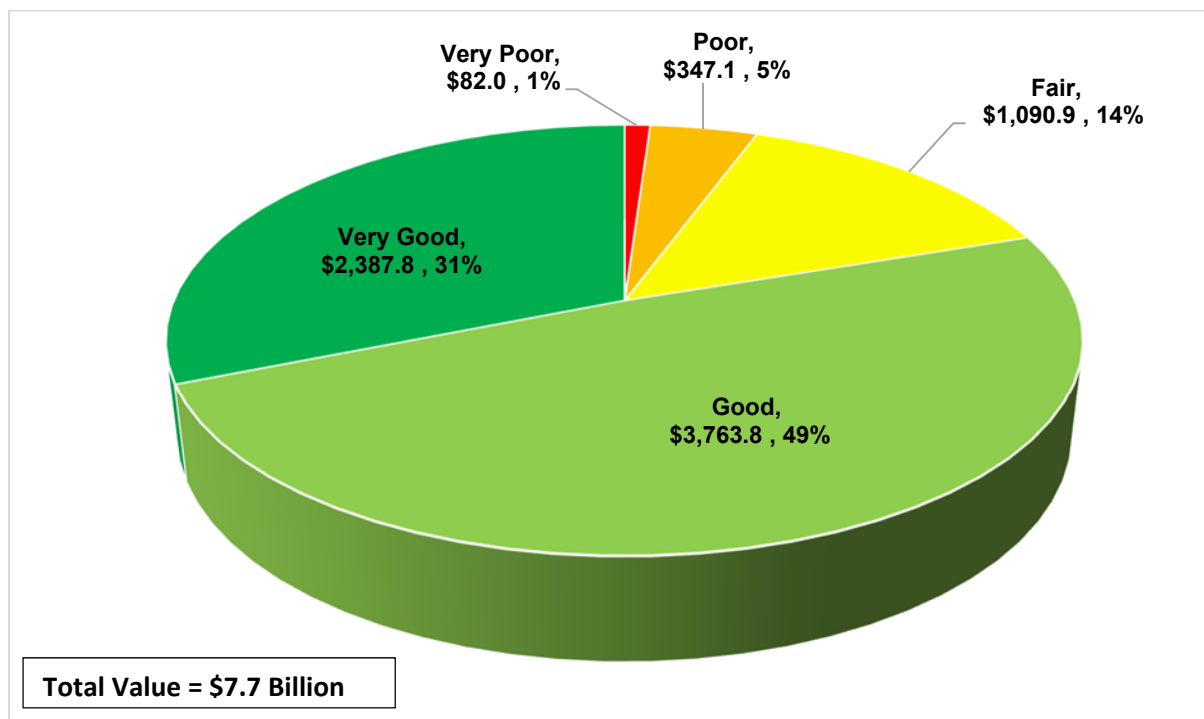
Based on the inputs described above, Figure 3 below provides a snapshot of the overall condition of municipal infrastructure in the City of Brampton. In general, the assets considered



in this report are assessed in “Good” condition with roughly 6% of the asset base measuring “Very Poor” to “Poor” indicating some assets in these categories may require more immediate renewal/replacement considerations. The overall “Good” condition rating can largely be attributed to the City’s infrastructure being relatively new in age combined with the sound asset management practices the City has employed to date.

The conditions illustrated in the figure below represent the cumulative value of assets categorized in the five condition areas. As Transportation and Facilities Infrastructure represent about 63% of the City’s total replacement value, the condition of these specific assets provide a greater influence to the overall condition rating identified. Another key consideration is the quantum of assets in Very Poor condition, and with the current data presented; this share represents only about 1% of the total.

Figure 3 – Summary of Brampton’s Asset by Condition (\$ Millions)



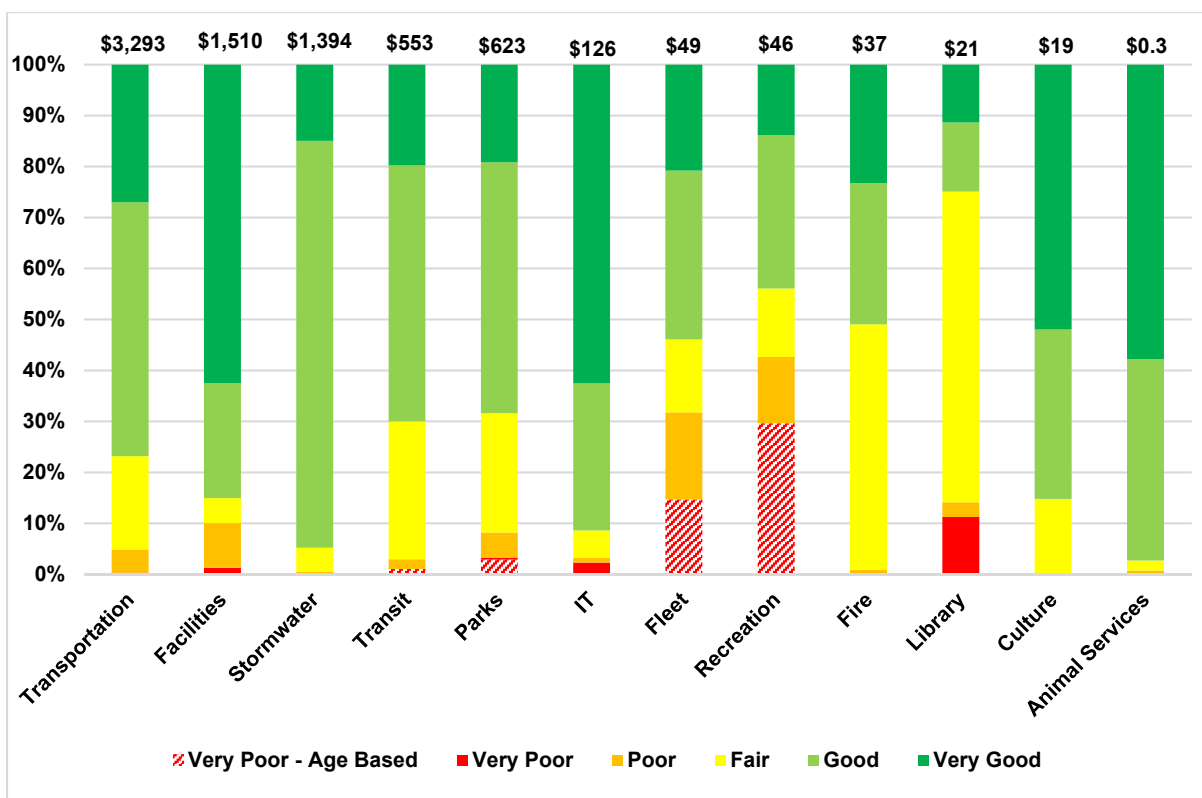
As indicated earlier, the available replacement value and condition assessment information specific to the service areas considered are presented in individual report cards. Each report card presents a comparison of the capital asset inventory and replacement values from the 2020 SOLI Report with the results of this analysis. All costs incorporated within the report cards are represented in constant \$2022. Figure 4 below provides a more detailed review of the condition assessment by service area. A few notes for consideration:

- The service areas identified below are under the responsibility view framework which means that all assets related to Facilities, Fleet and IT reside under the respective service area below (i.e. Recreation Service below would not include the recreation centres themselves – the centres would be reported under Facilities).
- The majority of assets in Very Poor condition are mostly attributed to the fact that the conditions were evaluated based on the “age” of the asset relative to the useful life and does not necessarily reflect actual asset condition. The assets continue to remain

in service and functional. In addition, those service areas represent a small share of the City’s overall asset valuation.

- Specifically, for Fleet, the evaluation of condition is considered “age based”; however, the service area experts do perform some condition-based protocols to evaluate the asset replacement needs. The Fleet vehicles and equipment in Very Poor condition are safe, operational and intended to be replaced in the near future.
- Other service areas where there are assets in Very Poor condition based on actual condition assessments, those assets are being reviewed and addressed through the City’s regular capital budget process.
- Please note, the service area report cards in Appendix I only illustrate the overall asset conditions and does not differentiate Very Poor assets between age and condition based.

Figure 4 – Summary of Asset Condition by Service Area (\$ Millions)



Note: Values identified at the top of each bar represents the replacement value of infrastructure under the “Responsibility View” for each service area (in Millions). The red-hashed sections reflect age based Very Poor assets and does not truly reflect the condition of the asset – as the City matures its practices, progress is expected in better reporting of these assets.

Table 21 below provides qualifications, by service area, of the assets within each service areas that are in Very Poor Condition.

Table 21 – Qualification of Very Poor Assets

Service Area	Description	Action Plan
Transportation (\$10.7M)	<ul style="list-style-type: none"> <li>• Only 11 lane KM of roadway, some fences, walkways and traffic services</li> <li>• Mostly condition based assessments</li> <li>• Very Poor assets represent a small portion of the total base</li> </ul>	<ul style="list-style-type: none"> <li>• Very poor assets are either being renewed or will be addressed through the upcoming budget</li> </ul>
Stormwater (\$0.1M)	<ul style="list-style-type: none"> <li>• Related to storm sewer network and represents only a very small share of total stormwater assets</li> <li>• Age based assessment</li> </ul>	<ul style="list-style-type: none"> <li>• Condition is evaluated based on “age” relative to the useful life of the asset and does not necessarily reflect the actual asset condition. CCTV condition assessment is currently underway to confirm and validate asset condition</li> <li>• No safety issue or effect on levels of service</li> </ul>
Facilities (\$19.0M)	<ul style="list-style-type: none"> <li>• 8 Recreation facilities, 2 Corporate facilities and 5 Park facilities in Very Poor condition</li> <li>• Conditions developed using an FCI based calculation</li> <li>• BDC/FOM identified facilities to be addressed in upcoming budgets</li> </ul>	<ul style="list-style-type: none"> <li>• None of the facilities represent a safety issue or preclude Facilities from delivering services</li> <li>• Future budgets to address the condition through individual repair or replacement</li> </ul>
Transit (\$5.7M)	<ul style="list-style-type: none"> <li>• Largely related to fleet support vehicles, and Specialty Equipment(includes Communication Control and Conveyance System), where conditions are based on age</li> </ul>	<ul style="list-style-type: none"> <li>• Condition is evaluated based on “age” relative to the useful life of the asset and does not necessarily reflect the actual asset condition</li> <li>• Most Very Poor assets are monitored by the Transit staff and addressed through the budget</li> </ul>
IT (\$2.9M)	<ul style="list-style-type: none"> <li>• Related to end-user information technology and infrastructure assets</li> <li>• Frequent replacements due to short asset UL and to keep pace with emerging technology</li> </ul>	<ul style="list-style-type: none"> <li>• Condition of majority of the IT assets is evaluated based on “age” relative to the useful life of the asset and does not necessarily reflect the actual asset condition</li> <li>• Very poor IT assets will be upgraded through the future budgets</li> <li>• Some assets (i.e. monitors) are replaced upon their failure</li> </ul>
City Support Fleet (\$7.2M)	<ul style="list-style-type: none"> <li>• Based on vehicle useful life, high mileage and engine hours</li> <li>• Maintained in good and safe working order with increased maintenance costs</li> </ul>	<ul style="list-style-type: none"> <li>• Due to budgetary pressures, some very poor assets will be replaced through the upcoming budget and the remaining will receive enhanced maintenance to provide delivery of services.</li> <li>• Very poor assets are replaced through the multi-year capital budgeting and in line with the recommendations of the Brampton Sustainable Fleet Strategy.</li> </ul>
Parks (\$20.3M)	<ul style="list-style-type: none"> <li>• Very Poor assets represent a small portion of the total base</li> <li>• None of the playgrounds, shade structures or fitness equipment are in VP condition</li> </ul>	<ul style="list-style-type: none"> <li>• Condition of the majority of the Park assets is evaluated based on “age” relative to the useful life of the asset and does not necessarily reflect the actual asset condition</li> </ul>

Service Area	Description	Action Plan
	<ul style="list-style-type: none"> <li>• Mostly age based assessments with limited data on actual asset upgrades. All assets are safe and working condition.</li> </ul>	<ul style="list-style-type: none"> <li>• Trees in very poor condition continue to be monitored by our Forestry staff and are either already removed or will be removed when required.</li> </ul>
Recreation (\$13.7M)	<ul style="list-style-type: none"> <li>• Related to furniture and general equipment (no fitness equipment is in the Very Poor condition)</li> <li>• Very Poor condition is based on estimated age and useful life of category, not necessarily reflective of the actual asset condition</li> <li>• No safety issues or effect on levels of service</li> </ul>	<ul style="list-style-type: none"> <li>• Condition reporting of Very Poor assets is based on best available information and needs to be matured for completeness and accuracy</li> <li>• Assets continue to be replaced through multi-year capital budgeting</li> </ul>
Library (\$2.3M)	<ul style="list-style-type: none"> <li>• Majority related to furniture/equipment and media collections</li> <li>• Frequent replacements due to short asset UL. All assets are in safe and working order.</li> </ul>	<ul style="list-style-type: none"> <li>• No safety issue or effect on levels of service</li> <li>• VP assets are either being replaced or will be addressed through the upcoming budget</li> </ul>

*Note: Numbers may not add exactly to the very poor total due to rounding. For consistency, the order of service area is listed in the same order as reporting tables. Above table shows the very poor assets under the service area responsible for managing them.*

## 3 Financing Strategy

Like many municipalities across Canada, the results of the 2021 State of the Local Infrastructure Report indicates that the current levels of financial contributions fall short of the optimal level of capital requirements identified over the next ten years. The concern over an infrastructure gap is not so much that it exists, but how this gap changes over the long-term and if the change affects levels of service, asset conditions and the delivery of services. In fact, maintaining a controlled “gap” is likely indicative of prudent financial management, however, there is no standard to evaluate what is an acceptable municipal infrastructure gap and would generally vary by jurisdiction.

This section describes the forecast asset management funding requirements over the 2022-2031 period while highlighting some key approaches to close the funding gap.

### 3.1 Overview of Fiscal Position: City of Brampton

The City of Brampton is uniquely positioned to continue to deliver high quality services with an infrastructure base that is in good condition. The City’s extensive public and private services and its prime location within the Greater Golden Horseshoe have made Brampton a desirable spot to reside or locate a business. This secure assessment base helps the City address the identified deficiencies. Council has also been proactive by increasing the annual tax supported contribution to the asset replacement reserve by 2 per cent of the tax levy each year<sup>2</sup>, implementing a dedicated 1 per cent levy to bolster transit service and introducing a dedicated stormwater user fee to provide a sustainable funding source for capital infrastructure that is typically underfunded. All of which has been done earlier on in the asset maturity stage than other municipalities that have previously experienced a fast growth phase.

#### **Overview of Reserves:**

Municipalities use reserves to set aside funds for future spending. This practice can help to stabilize any annual fluctuations in funding requirements, plan for any major long-term infrastructure investments, and prevent sudden spikes in property taxes, rates, and debt levels.

As of year-end 2021, about \$658 million in reserve and reserve funds were on hand, although, a portion of this includes obligatory funds (such as DCs) which the city is collecting for specific purposes. Reserve 4 represents the City’s most utilized asset replacement reserve, with net tax contributions of \$76 million in 2022.

#### **Corporate Debt Overview:**

Tax and rate supported external debt can be used to fund growth, replacement, and enhancement projects. For equity purposes, debt is best used for projects that provide benefits over a longer timeframe so that the burden of capital cost is distributed between the current taxpayer and future ratepayers.

The amount of debt a City can carry is set by provincial regulations to ensure municipalities continue to operate in a fiscally sound environment. The Ministry of Municipal Affairs

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<sup>2</sup> With the exception of 2021 and 2022 which the levies were reduced to manage the impacts of COVID-19.

mandates that a municipality's annual debt repayment must not exceed 25 per cent of annual own-source revenues. For 2022, the City's total debt charges are estimated at \$17.2 million; a very small number given the City's size. This equates to about 11 per cent (out of 100 per cent) of the total allowable annual repayment limit of \$158.2 million as identified by the Ministry. Importantly, the annual debt charges are also substantially lower than the City's self-imposed limitation at 15 per cent of annual own-source revenues.

The City's current practice of not using tax supported debt for replacement projects has been continued in the SOLI analysis. This would allow the City to use its debt capacity for strategic projects that increase service levels or growth-related projects that are ineligible for development charges funding. Strategic projects typically provide a return on investment such as reduction in operating costs. Capacity would also be available for unforeseen critical asset failures, should the need arise. The City's Long-Term Financial Plan will consider this and this policy can be revisited if the infrastructure gap persists after other measures have been taken.

### 3.2 Cost Analysis: Overview of the Full Life Cycle Model Approach

As part of the Corporate Asset Management Plan, the City, along with Hemson, have identified the total full life cycle costs of an asset that corresponds to the requirements of the regulation. This would entail a cost estimation throughout the assets' life including planning, design, construction, acquisition, operation, maintenance, renewal, replacement (and disposal). In addition, the analysis also takes into consideration the inclusion of expansion related infrastructure into the lifecycle management strategy. This approach ensures that the additional lifecycle costs associated with newly constructed/acquired assets are accounted for in the long-term forecast. The initial first round capital to acquire the asset is not considered in the asset management provision (see Table 22).

A "lifecycle management approach" in asset management planning not only includes estimating future lifecycle costs, but also embeds the process of monitoring how the asset performs over its life while providing affordable services.

These lifecycle activities can be segmented into six (6) categories: non-infrastructure solutions, operations/maintenance, renewal/rehabilitation, replacement, disposal, and expansion activities. It is important to recognize that as the maturity level increases, the costs associated with each lifecycle activity will strengthen and improve the expenditure outlook. The table below provides a description of each lifecycle category and the specific approach used to forecast expenditures in this 2021 SOLI Report, which the methodology remains consistent with the 2021 Corporate AMP. Please note that the outputs of both the 2021 Transportation and Stormwater Departmental Asset Management Plans were used to inform the full lifecycle cost model.

It is important to recognize that there are some limitations with the cost analysis:

- The contributions for asset replacement includes the replacement of assets of a similar function and style. For service areas such as Transit, Fleet or IT for example, the infrastructure that supports these services are very dynamic and the capital lifecycle requirements of these assets are continuing to evolve. Therefore, this report does not include for the consideration of electrification of the City's fleet (or supporting infrastructure) to upgrade existing technologies. It is expected that this level of detail will be contemplated through future departmental and corporate plans.

- The cost analysis is intended to be used for information purposes outlining a level of optimal investment to support the existing asset base and future lifecycle needs as the City matures.
- The investment requirements for asset renewal and replacement identified might exceed the City's existing internal capacity to deliver these infrastructure projects. However, as the City matures its practices and with the funding help of upper-levels of government, the City will be able to properly plan for service enhancements and replacements.



Table 22 – Overview of the Full Lifecycle Cost Activities and SOLI Approach

Category	Description	SOLI APPROACH
Non-infrastructure Solutions	<ul style="list-style-type: none"> <li>• Actions or policies that can lower costs or extend asset life (e.g., better integrated infrastructure planning, demand management, process optimization, etc.).</li> </ul>	<ul style="list-style-type: none"> <li>• Based on average 3-year (2018-2020) budget by service area and adjusted to current dollars</li> </ul>
Operations & Maintenance Activities (capital maintenance related)	<ul style="list-style-type: none"> <li>• Servicing assets on a regular basis in order to fully realize the original service potential.</li> <li>• Regular maintenance will not extend the life of an asset or add to its value. Not performing regular maintenance may reduce an asset’s useful life.</li> </ul>	<ul style="list-style-type: none"> <li>• Budgeted 2020 maintenance activities by service area considered (adjusted to current dollars)</li> <li>• Maintains relationship of average expenditures relative to replacement value of existing assets</li> <li>• In most instances, does not include general operating costs associated with the new asset acquisition (example: new staff to carry out programming in a new facility)</li> </ul>
Renewal/ Rehabilitation Activities	<ul style="list-style-type: none"> <li>• Mostly associated to significant repairs designed to extend the useful life of an asset.</li> <li>• These types of activities are typically undertaken at key points in the lifecycle of an asset to ensure the asset reaches its designed useful life.</li> </ul>	<ul style="list-style-type: none"> <li>• Renewal expenditures calculated based on discussions with individual service areas relative to the asset type considered</li> </ul>
Replacement Activities	<ul style="list-style-type: none"> <li>• Activities that are expected to occur once an asset has reached the end of its useful life and renewal/ rehabilitation is no longer an option.</li> </ul>	<ul style="list-style-type: none"> <li>• Incorporating the average annual investment required to replace assets when they reach the end of their useful life (age/condition replacement schedule)</li> <li>• Average need for all assets (except transportation) are based on a 25-Year cost model. Transportation was set relative to each sub-asset useful life.</li> </ul>
Disposal Activities	<ul style="list-style-type: none"> <li>• The activities associated with disposing of an asset once it has reached the end of its useful life, or is otherwise no longer needed. Typically,</li> </ul>	<ul style="list-style-type: none"> <li>• Analysis assumes any costs associated with “disposal” is included for in the replacement value and captured in the capital replacement requirements</li> </ul>

Category	Description	SOLI APPROACH
	disposal costs are accounted under replacement activities.	
Expansion Activities	<ul style="list-style-type: none"> <li>Planned activities required to extend or expand municipal services to accommodate the demands of growth.</li> </ul>	<ul style="list-style-type: none"> <li>New “first-round” capital expenditures are excluded from the calculation as the cost is funded through development charges or other sources.</li> <li>Only Asset Management requirements associated with expansion activities are considered</li> <li>DC study and 3-year budget average, as well as known federally or provincially funded projects, used to inform new acquisitions to base Asset Management requirements</li> <li>For new acquisitions, O&amp;M costs are maintained at the relationship of average expenditures relative to replacement value of assets.</li> </ul>

### 3.3 Summary of the Cumulative Full Life Cycle Costs

Over the next decade, the analysis indicates a spending need of about \$5.8 billion<sup>3</sup>. Figure 5 below summarizes the cumulative 10-year investment needs across the service areas based on a 25-year average lifecycle cost<sup>4</sup>. A few notes:

- Transportation services represents the most significant share of the total 10-year needs accounting for 36%, or \$2.1 billion, of the total \$5.8 billion need.
- Interestingly, the investment needs over the 10-year period for Transit is higher than the replacement value of existing Transit assets, which represents approximately 30% of the total \$5.8 billion need and is second to the cumulative needs for Transportation services despite Transit having a replacement value significantly lower than Transportation service assets (as identified in Figure 2). This is because Transit fleet is required to be replaced more frequently with higher turnover rates and requires frequent and significant mid-life refurbishments costs to ensure proper service delivery.
- A similar observation can be made with IT, as the cumulative investment needs over the 10-year period for services is higher than the entire replacement value of existing IT assets (valued at \$126.1 million as identified in Figure 2) as IT infrastructure is replaced more frequently with higher turnover rates than other assets with a longer

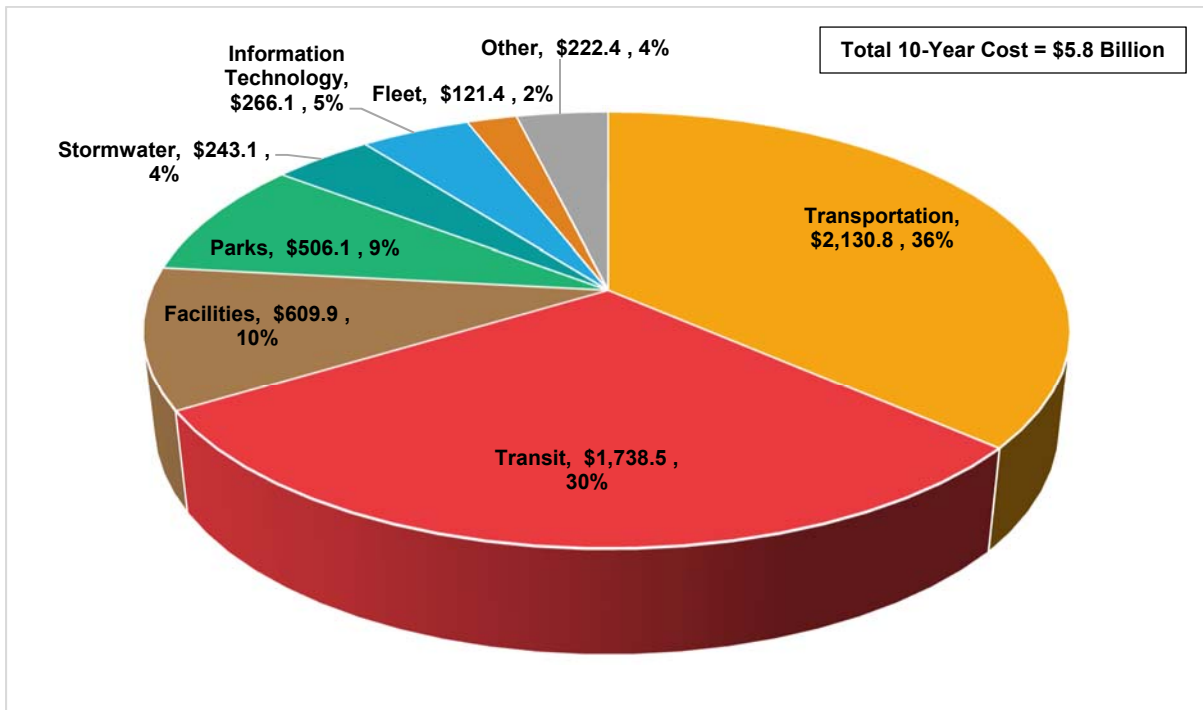
<sup>3</sup> The analysis does not consider expenditures required to provide proposed the levels of service or inflation.

<sup>4</sup> 25-year average cost approach was used for all service areas with the exception of transportation infrastructure which was based relative to the useful life of each asset to remain consistent with the assumptions used in the departmental Transportation AMP,

useful life. As a result, IT represents about 5% of the total \$5.8 billion 10-year investment needs required for all service categories while only representing 2% of the total \$7.7 billion city-wide asset valuation.

- Conversely, despite stormwater services representing nearly 20% of the total City asset replacement value, the full lifecycle costs represent a proportionately smaller share of the total as the linear storm sewer network have a design life of 100 years allowing for ample time to save for replacement. In addition, the City has undertaken a financing strategy study (e.g. Stormwater Rate Study) to quantify the operating, capital renewal and rehabilitation needs that yield a more accurate representation of the total asset requirements relative to the user fees generated each year.

Figure 5 – Total Life Cycle Cost Over the Next 10-Years



1. All cost estimates are in 2022 dollars; and
2. For the calculation of annual needs, earning rates assumed to equal inflation, consistent with a straight-line approach

### 3.3.1 Allocating the Lifecycle Costs between Existing Assets and Expansion Activities

The cumulative costs identified above can be further delineated between the different lifecycle activities, by service area, and how the activities relate to both existing and expansion related activities. As outlined in the Table 23, the asset management activities associated with the existing assets still represents the majority of the cumulative \$5.8 billion in costs. The lifecycle costs associated with the newly acquired assets (i.e. expansion activities) include annual savings for asset replacement that will occur outside the planning period.

Table 23 – Summary of Total 10-Year Lifecycle Costs by Service Area

Service Area	Lifecycle Costs: Existing Assets	Lifecycle Costs: Expansion Assets	Total Lifecycle Costs
Transportation	\$1,817,283,000	\$313,530,000	<b>\$2,130,813,000</b>
Transit	\$1,105,583,000	\$632,922,000	<b>\$1,738,505,000</b>
Facilities	\$521,399,000	\$88,517,000	<b>\$609,916,000</b>
Parks	\$409,061,000	\$96,999,000	<b>\$506,060,000</b>
IT	\$241,634,000	\$24,430,000	<b>\$266,064,000</b>
Stormwater	\$234,306,000	\$8,802,000	<b>\$243,108,000</b>
Fleet	\$112,132,000	\$9,270,000	<b>\$121,402,000</b>
Fire	\$77,270,000	\$9,089,000	<b>\$86,359,000</b>
Library	\$41,473,000	\$19,932,000	<b>\$61,405,000</b>
Recreation	\$52,894,000	\$4,983,000	<b>\$57,877,000</b>
Cultural Services	\$12,852,000	\$3,603,000	<b>\$16,455,000</b>
Animal Services	\$281,000	\$-	<b>\$281,000</b>
<b>Total</b>	<b>\$4,626,168,000</b>	<b>\$1,212,077,000</b>	<b>\$5,838,245,000</b>

Note: All figures are rounded

The total lifecycle costs between existing assets and expansion activities can be further allocated between the different lifecycle activities. The table below summarizes the key lifecycle events between existing and expansion activities but also illustrating how much the capital related operation and maintenance costs represent of the total lifecycle costs. The table indicates that about \$1.7 billion of the \$5.8 billion cumulative 10-year costs are associated with capital-related maintenance costs to ensure assets continue to perform at the expected level. However, as the costs to maintain existing assets are built into the City’s regularly approved budget, the revenues are also included in the analysis and equates to a revenue neutral position in this analysis. A similar assumption is made for expansion related operation and maintenance expenditures.

Table 24 – Summary of Total 10-Year Lifecycle Costs by Activities and Actions (In \$Millions)

Service Category	Operations and Maintenance - Existing Assets	Replacement/ Renewal/Non-Inf. - Existing Assets	Operations and Maintenance - Expansion Related	Replacement & Renewal - Expansion Related	Total Lifecycle Costs
<b>TOTAL INVESTMENT</b>	\$ 1,714.5	\$ 2,911.7	\$ 606.8	\$ 605.3	\$ 5,838.2

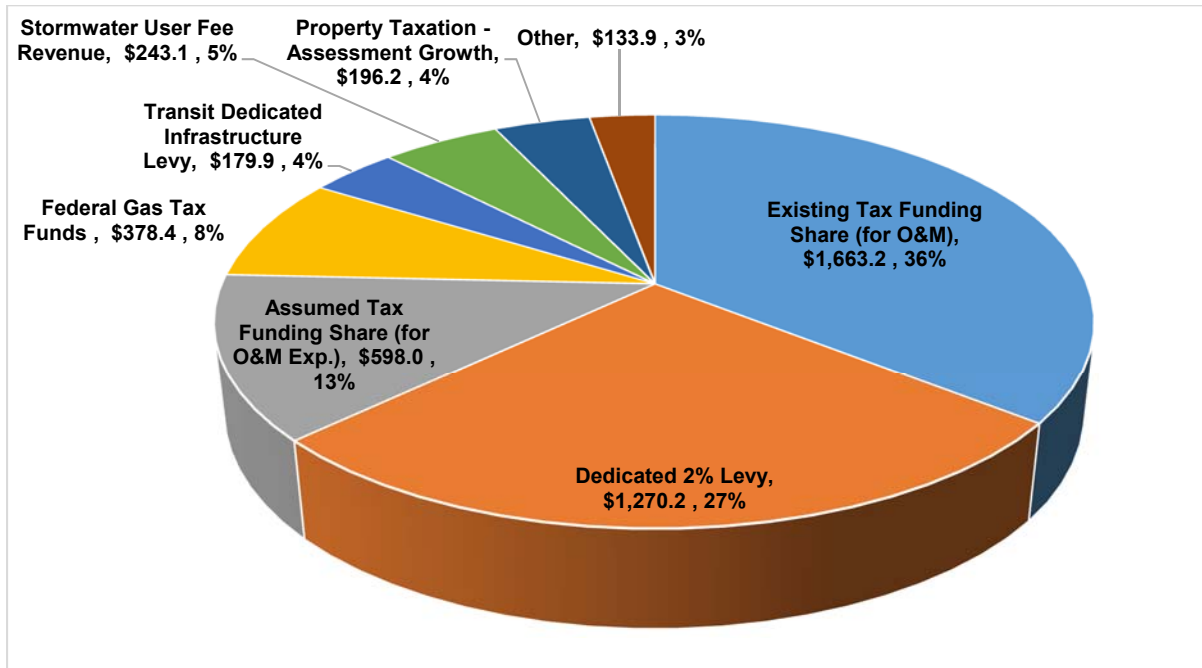
### 3.4 Revenue Analysis

The City uses a wide range of funding and financing tools to address the identified capital requirements. Generally, the type of capital project aligns to its funding source. In this regard, growth related projects receive most of their funding through development charges; the predominant funding for replacement projects are through tax-based contributions (primarily through Reserve 4 and Reserve 119). Once the new asset is acquired, although the first round capital may be DC funded, the ongoing maintenance (rehabilitation and replacement) of the infrastructure is not growth-related and therefore would not receive funding through

development charges. When assets require rehabilitation or are due for replacement, the source of funds are essentially limited to reserves or contributions from the operating budget.

Over the past number of years, the City's tax based capital contributions continually represent the largest share of capital funding sources for asset repair and replacement activities. The figure below summarizes the breakdown of assumed revenues over the planning period. A detailed overview of the key revenue assumptions used to support the analysis is in Appendix III.

Figure 6 – Summary of Funding Sources (Cumulative 10-Year)



Note: Other represents available reserves (for asset management) and estimated share of transit funding stream for replacement projects.

A few key observations:

- The dedicated levies are the most significant source of revenue generated and directed to capital asset repair and replacement activities. Both levies amount to \$1.5 billion and is comprised of:
  - \$1.3 billion is associated with the dedicated 2% infrastructure levy which is assumed to be continued from 2023 onward
  - \$180 million is derived from the dedicated 1% transit levy. Please note that the share included only represents the portion allocated to asset replacement activities while the remaining funds generated are used to help fund new Transit infrastructure;
- About \$1.7 billion relates to existing taxation and user fee support for capital related O&M costs at similar levels to recent years (status quo budget and set equal to costs for existing assets).
- Note that capital related O&M costs for new expansion related assets (set equal to costs). It is expected that this figure continues to be reviewed and updated with

detailed business plans, budget reviews and operational reviews, as new capital is acquired.

Other key considerations:

- Unspent funds in capital replacement work in progress accounts have not been considered.
- Federal gas tax funds are assumed to be allocated toward asset replacement projects;
- Provincial gas taxes have not been considered, as it is assumed that these funds will continue to be used for transit operating costs; and
- Other unconfirmed one-time Federal and Provincial grants have not been considered.

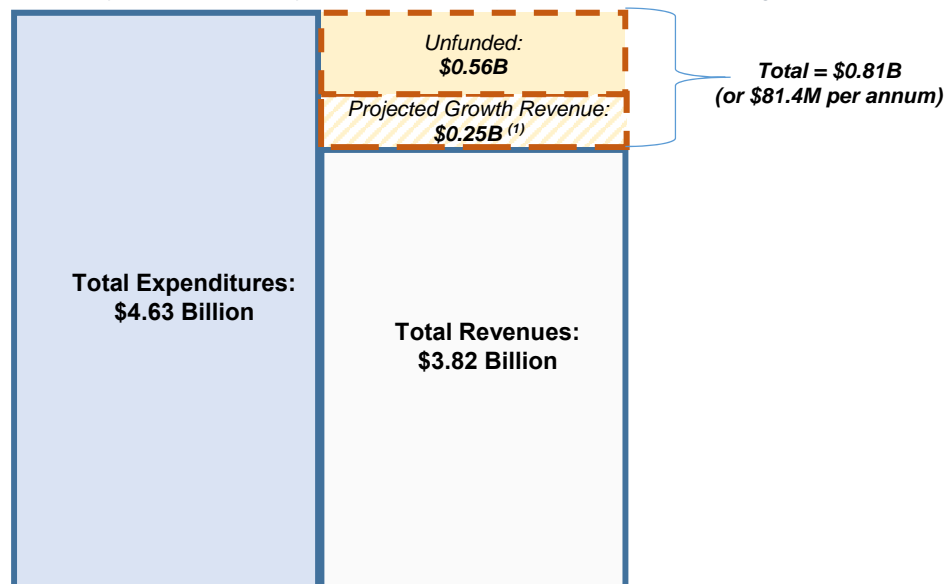
### 3.5 Estimated City-wide Infrastructure Gap

Based on the preceding analysis, the infrastructure gap has been calculated for both existing and expansion asset requirements independently. For the purposes of this analysis, the infrastructure gap is defined as the difference between the total full-life cycle costs and the projected revenues over the 10-year period.

#### Existing Assets:

Based on the preceding analysis, a notional infrastructure gap of \$809 million is identified (Figure 7) for existing assets. However, the gap is reduced to \$561 million (i.e. unfunded share) once the additional revenues that would be generated from new growth are considered in the calculation - those additional revenues are assumed to be prioritized to existing assets, although, the specific allocations will be further determined through future budgets as growth occurs.

Figure 7 – City-wide: Summary of 10-Year Lifecycle Costs and Projected Revenues: Existing Assets



Note 1: Additional revenue from assessment growth increases in Federal Gas Tax allocation with population change, increase in special purpose levies and stormwater fees. Excludes DC revenue to fund first round capital.

The chart above displays the following information:

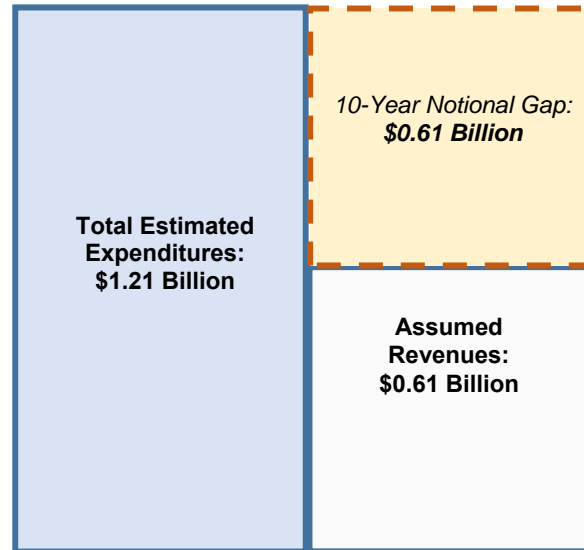
- **Full-Life Cycle Costs (Expenditures):** this bar represents the total full-lifecycle costs required to maintain the City's existing assets and accounts for the money required to repair and replace assets within the 10-year period while also saving for asset repair and replacements required beyond 2031. Importantly, as noted in the previous sections, the full life-cycle costs also include the costs maintain the assets over their life, which is a new element added to the cost analysis as part of the 2021 Corporate AMP and maintained in this 2021 SOLI Report.
- **Revenues:** The bar represents the total projected revenues based on existing funding commitments over the 10-year period while also including an estimation of revenues that can be derived from new growth coming online. This additional funding availability is assumed to be used towards existing assets, which in general is consistent with the City's existing budget practice.

### **Expansion Activities:**

A similar infrastructure gap analysis has been prepared for expansion related activities that have been quantified in this plan to comply with the requirements of the asset management regulation. Based on the total 10-year full lifecycle cost and revenue analysis, a notional infrastructure gap of \$605 million is identified. The infrastructure gap is defined for the purposes of this analysis as the difference between the total full-life cycle costs (associated with expansion activities) and the projected revenues over the 10-year period. A couple of notes:

- The total estimated costs represent the full lifecycle asset management requirements the City would need to consider with the acquisition of new assets over the forthcoming planning period. This \$1.2 billion does not represent the first round capital expenditure the City would incur to acquire new assets or emplace the infrastructure.
- The \$607 million in assumed revenue is estimated to support capital related O&M costs for new expansion related assets (set equal to costs and revenue neutral). It is expected that this figure continues to be reviewed and updated with detailed business plans, budget reviews and operational reviews, as new capital is required and these costs become known.
- Additional revenues generated from new growth are considered into the calculation, although for the purposes of this analysis, those additional revenues are assumed to be prioritized to existing assets. The specific allocations will be further determined though future budgets as growth occurs. Importantly, the gap will always continue to be reevaluated and self-adjusted with the new assets and revenues.

Figure 8 – City-wide: Summary of 10-Year Lifecycle Costs and Projected Revenues: Expansion Activity Assets



When considering the asset requirements for both the existing and expansion activities combined, a cumulative infrastructure gap exists. A few important considerations:

- 1) The asset management requirements associated with the expansion activities have been quantified to correspond to the requirements of the asset management regulation (Ontario Regulation 588/17). As depicted above, much of the overall gap (between existing and expansion assets) can be related to the inclusion of “expansion related activities” into the full-life cycle cost model even after considering the increased revenues that could be derived from growth. Importantly, these asset repair and replacement expenditures would in large part only be required outside of the planning period, the City has the benefit of planning for these activities as development proceeds, and as corresponding non-growth revenues materialize over time.
- 2) It is evident that the City requires additional funding and support from all levels of government to continue to manage both the existing asset base and new assets that will be acquired in the future to ensure services are adequately maintained.
- 3) The inclusion of capital related operation and maintenance costs is a new element added to the cost analysis as part of the 2021 Corporate AMP and maintained in this 2021 SOLI Report. However, as the costs to maintain existing assets are already built into the City’s regularly approved operating budget, the revenues are also included in the analysis and equate to a revenue neutral position. A similar approach has been taken for new maintenance costs associated with the expansion activities.
- 4) The introduction of both the dedicated Transit Levy and Stormwater Management User Fee Program has assisted the City to manage the investment requirements associated with this existing infrastructure while also ensuring a stable funding source to manage new asset expansion related acquisitions is available;
- 5) This information illustrated above does reinstate the need for the City to continue the utilization of these funding programs to maintain existing service levels over the long-term. However, as the City’s asset management program further advances, it can be



expected that the cost analysis be improved to better reflect asset risks, levels of service and a more fulsome understanding of the condition of the City's infrastructure.

### 3.6 Approaches to Close the Funding Gap

There are several ways the City can address the current funding gap. The table below outlines the various strategies that the City has available to them in order to close the gap. The strategies combine both qualitative data improvements and other financial solutions.

Table 25 – Summary of Total Lifecycle Costs by Service Area

Strategy	Approach
Maintain 2% Infrastructure Levy	To continue bridging the funding gap and improve financial sustainability, the City should maintain their existing infrastructure levy dedicated towards asset management and monitor the revenues derived.
Maintain 1% Transit Levy	The City of Brampton has placed great importance on creating a reliable and well-operated transit system, as it is vital to a thriving City. Having a strong transit infrastructure is important to reducing road congestion, attracting businesses and investments and helping to connect people and jobs. The City should continue to implement this levy, which will help strengthen new services, but it will also ensure existing transit assets are well maintained.
Improved Data Quality	As the City matures its asset management practices, additional assessment of asset condition can be achieved through better data. Further, some assets are currently assessed on an age-based approach that does not necessarily reflect the actual condition of the asset.
Levels of Service Measures	As part of the Corporate AMP, level of service measures by service area have been established. These assessments help to track asset performance, condition ratings, and identification of where funding needs could be recalibrated based on performance. This could result in reductions in current funding needs for the short term.
Develop Annual Capital Reinvestment Targets	Targets should be set for various assets to determine if the current reinvestment rates are reasonable and allow new targets to be developed in order to meet current or planned levels of service.
Implement a Standardized Risk Framework	A standardized risk framework for asset classes would help to establish the tolerance level of individual asset classes in order to help prioritize investment needs and levels of service, with the potential for reduced funding needs.
Seek Funding Support from Upper Levels of Government	The City of Brampton is demonstrating a significant commitment to asset management and developing a set of renewal practices to ensure that services are delivered in the most cost-efficient manner. Despite the efforts, an upper level of government support is required to supplement the City's practices to balance affordability.
Continued Project Co-ordination with Region of Peel and Utility Companies	In exploring opportunities with the Region and Utility service providers, overall cost efficiencies may be achieved during linear asset rehabilitation and replacement (e.g. storm sewers, roads, bridges, culverts) by better aligning capital ventures.

## 4 Future Improvements

Moving forward, the City's Corporate Asset Management Office aims to continue to improve upon a number of different areas in collaboration with the stakeholders, with initiatives that will improve data quality and confidence while driving corporate change:

- 1) **Data Confidence and Reliability:** The basis of the information contained within this report is a series of data inputs such as asset conditions, useful life, replacement valuations and asset in-service dates. Over the past number of years, the City has made significant progress in further refining the database of existing assets to annually prepare the SOLI Reports and help facilitate capital budget discussions. As part of the 2021 Corporate AMP, the City developed an Asset Information Strategy (AIMS) that aims to improve asset information used to support AM practices in the City. An AIMS implementation plan that identifies a detailed action plan to advance Asset Information Maturity for each service area is in development. The following describes data confidence improvement areas for the four main data input categories as it relates to SOLI reporting:
  - a. **Asset Conditions:** Based on a weighted replacement value of all services and their condition assessments, approximately 78% of assets have a data confidence rating based on condition while most of the remaining assets use an age-based approach. The City has increased the confidence in condition data by 2% from the 2020 report. The City intends to continue improving upon condition assessment methodologies to increase the share of assets based on condition over the coming years. This will include improvements to the condition grading standards and further development of specific asset deterioration curves as data becomes available from Operations, work orders and other information systems. Improved condition data will provide a foundation for the City to transition to a risk based approach to asset management over the long-term, specifically for the financing strategy. As previously stated, for certain asset classes, inspection programs with full condition assessments is not feasible, therefore the City will not be targeting a 100% data confidence rating based on condition assessments. When considering assets that will continue to use an age-based approach, the City is targeting a maturity rating based on condition of approximately 91%.
  - b. **Useful Life:** The basis of the useful life of the assets is benchmarking, manufacturer recommendations, and history of the City's owned assets and/or expert opinion. The City plans to improve useful life data reliability in the future by continuing to validate useful life assumptions against the City's specific data for similar assets.
  - c. **Replacement Valuations:** The following improvements are identified for refining the current replacement value of the City's assets:
    - i. Desegregation of the larger complex assets and increasing granularity of inventories and costing;

- ii. Inclusion of new asset categories into the City's overall asset replacement valuation process while continuously improving asset inventories and building upon existing data collection systems;
  - iii. Further benchmarking against local (City) price indices based on the improved Asset Information Systems and minimizing use of an asset's inflated purchase price and expert opinions;
  - iv. Inclusion of whole life cycle costs as opposed to straight forward replacement costs;
  - v. Improving methodologies for perpetual asset valuation; and
  - vi. Where applicable, introduce functionality criteria in order to meet desired levels of service into the replacement valuation as opposed to the replacement of assets like-for-like.
- d. **Asset In-Service Dates:** The in-service date of an asset is very important in estimating the timing of investment needs. While the in-service date for most of the newly acquired, installed or built assets is properly recorded, this information is lacking for some older asset categories. As the City's asset database is renewed, the share of assets missing an in-service date will naturally decline. Data collection processes should be improved to properly capture the acquisition, renewal, disposal and other dates related to life cycle interventions. This includes further improving the City's Asset Information Systems and processes to include unique asset identification for all assets.
- e. **Monitoring:** Continue to monitor and investigate the estimated infrastructure gap at the service area level, this tracking may help facilitate a more mature level of integrated infrastructure planning and financial sustainability.
- 2) **Knowledge Transfer:** Effective communication is an essential aspect of comprehensive asset management. The City implemented robust asset information processes and systems that will improve through the development of the Asset Information Management Strategy. However, asset data maturity varies between Service Areas. It will be important that the City continues to work on improving this area and engage key subject matter experts to facilitate data and key inputs transfer into a computerized database to better inform future iterations of this report. Completeness of centralized asset inventories residing in the overall Enterprise solution will enable access to accurate asset information. This includes continuous enhancement of communication and data transparency.
- 3) **Leading Change:** Comprehensive asset management across the City is about introducing new corporate practices and behaviours, coordination and consolidation of efforts, and standardization in order to aid informed decision making at the corporate level. It is therefore important that City staff within the Corporate Asset Management office lead this process of change.
- 4) **Continue to Develop Service Area Specific Asset Management Plans in Line with O.Reg 588/17:** The City of Brampton has prepared departmental AMPs for core infrastructure and is actively preparing departmental plans for the remaining service areas. Departmental plans review the full life cycle activities and policies, specific to that service area, in more detail than what is included in the Corporate AMP and, by

extension, the SOLI Reports. The departmental plans are extremely important as they are intended to be more “forward looking” to consider the service level changes and different service delivery models or each area. Furthermore, the departmental plans and future Corporate AMP iterations (and by extension SOLI Reports) will continue to explore the proper accounting of shared facilities between city boards (Library) and facilities as well as leasehold improvement expenditures undertaken that have not traditionally accounted for within previous SOLI Reports.

- 5) **Continue to Enhance Annual Reports:** Annual review of the data gaps can be undertaken as it relates to the four main data categories included in the SOLI report; namely asset inventory, replacement value, useful life and condition. This review will continue to address overall data gaps, asset-related lifecycle information and resulting financing strategy for an accurate estimation of the infrastructure deficit. Additional enhancement measures can be achieved through the analysis of any gaps in data and collection processes specific to each service area annually. This may include internal staff evaluation processes, benchmarking, audit results and assessments of current and best practices. These assessments can be carried out independently or integrated within this annual report.

## Appendix I – Report Cards



<b>Total Asset Replacement Value:</b>	\$3.3 Billion
<b>Total Asset Replacement Value Including Facilities, Fleet and Software:</b>	\$3.4 Billion
<b>Future Condition Trend (Next 10 Years):</b>	Declining - As assets age they may require attention in the future
<b>Data Confidence &amp; Reliability:</b>	Age and Condition Based

The 2021 SOLI analysis continues to report assets under two different asset representation perspectives: "**Responsibility View**" and "**User View**" representation

**Responsibility View:** Shows the assets under the service area that is responsible for managing them

**User View:** Shows the assets under the service area that is using them

While the User View shows the use of assets, the Responsibility View:

- ✓ provides a direct line of sight to those assets managed by the service area;
- ✓ will help prioritize lifecycle activities managed by the service area;
- ✓ aligns with industry best practices; and
- ✓ provides guidance to future asset management planning practice and departmental initiatives.

The table below illustrates the replacement value (in 2022\$) under the two different views.

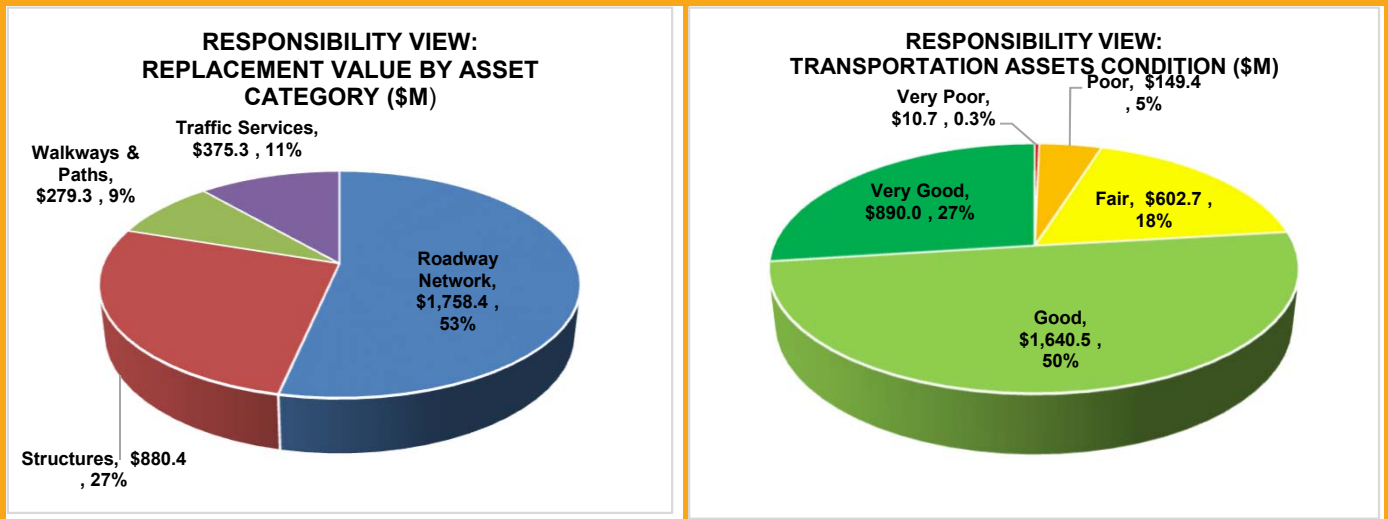
Asset Type	Replacement Value (\$Millions)	Asset Inventory
<b>Assets Managed by Transportation Services</b>		
Roadway Network (Includes Islands)	\$1,758.4	3,756 Lane KMs
Structures (Bridges & Culverts)	\$807.0	5* KM
Structures (Other)	\$73.4	94 KM
Walkways & Paths	\$279.3	2,079 KM
Traffic Services	\$375.3	95,578 Each
<i>Subtotal Assets Managed by Transportation Services (Responsibility View)</i>	\$3,293.3	-
<b>Assets Managed by Other Service Areas</b>		
Operations Facilities	\$74.8	9
Fleet	\$16.7	167
Software	\$7.4	20
<b>Total Replacement Value (User View)</b>	<b>\$3,392.1</b>	-

\*Other structures include: gateway features, noise walls, retaining walls on walkways, fences, guiderails, handrails and steps



**Major Types of Assets within Transportation Services - Responsibility View**

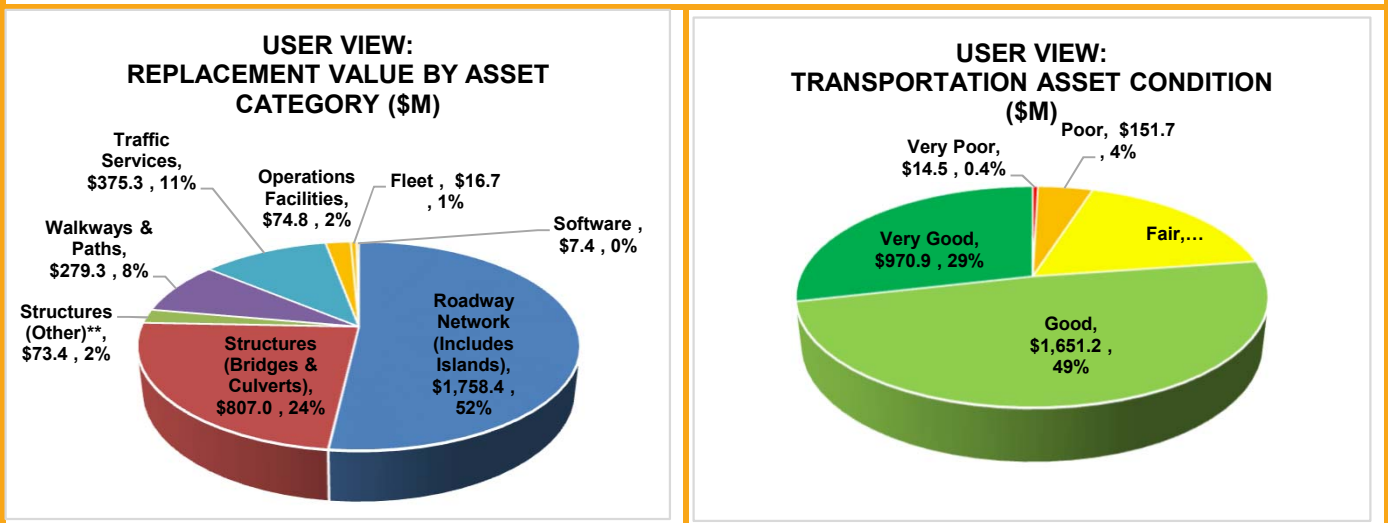
The figure below illustrates the replacement value and condition of Transportation Services assets under the responsibility view. Under this view, the total replacement value of assets is \$3.3 billion. Of this total, roughly 53% is related to the roadway network (including islands). About 77% of the assets are considered to be in Good to Very Good condition. Approximately 5% of assets are in Poor condition and less than 1% of assets are in Very Poor condition - of which a portion of the assets belongs to traffic services which the condition is assessed relative to the age and design life of the asset.



Data Source: Pavement and Bridge Management System, Departmental Inventories, dTIMS BA, GIS (Geographical Information System), PSAB, Parametric Estimating Guide of MTO 2016, City Works, Infor

**Major Types of Assets within Transportation Services - User View**

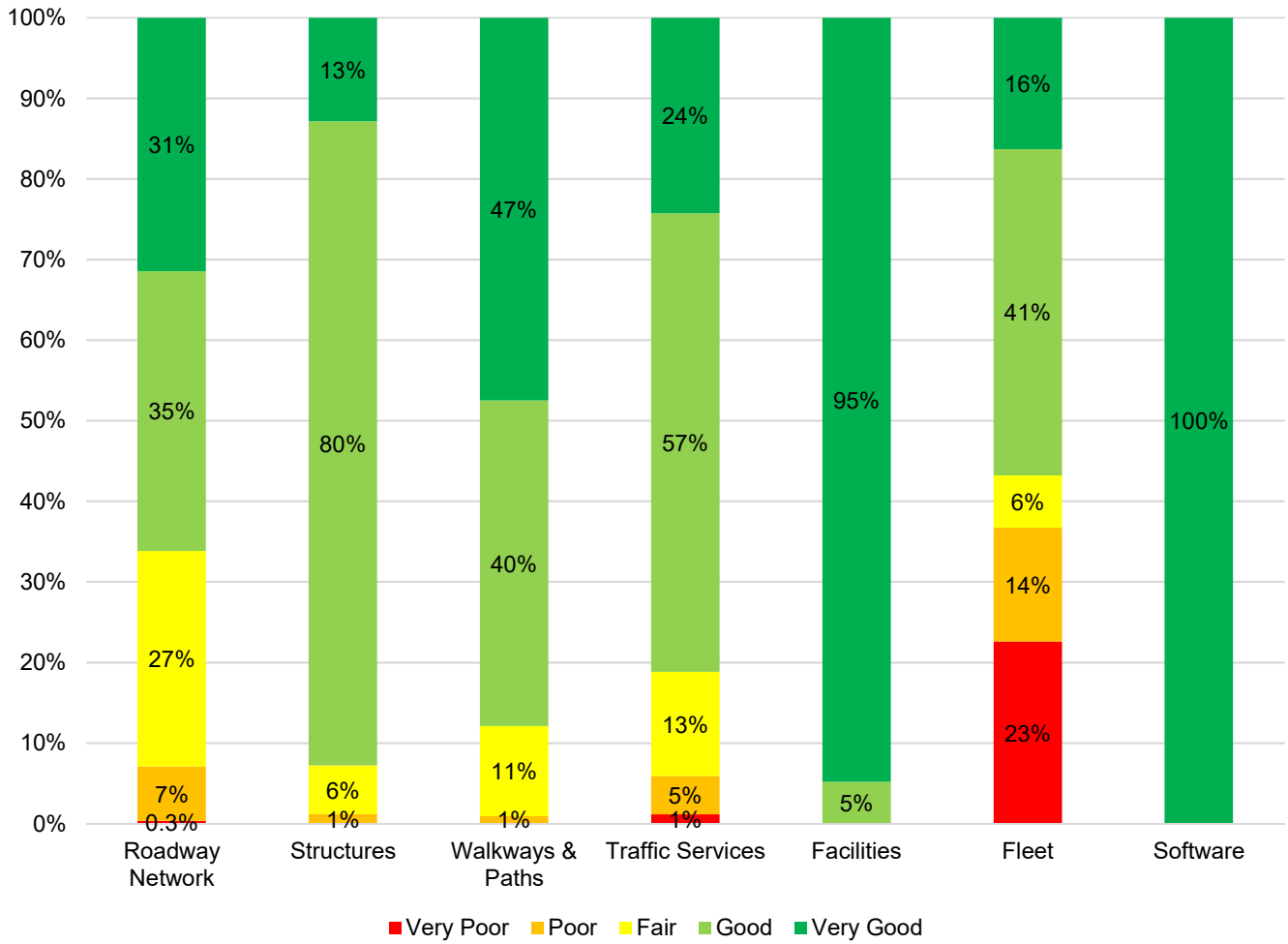
The figures below illustrate the replacement value and condition of Transportation Services assets under the user view. Under the user view illustration which also captures facilities, fleet and software, the replacement value is about \$3.4 billion. Approximately 78% of the assets are considered to be in Good to Very Good Condition.





## Transportation

The figure below illustrates the condition of the seven sub-component assets of Transportation Services. The majority of assets are in Good to Very Good condition, although, a small portion of assets pertaining to the Roadway Network, Structures, Walkways & Paths, Traffic Services and Fleet are in Poor and Very Poor condition.







**Comparison of 2021 vs. 2020 Inventory and Replacement Value (All Costs in 2022\$)**

The tables below outlines the difference in Transportation Services assets in the 2021 SOLI relative to the 2020 SOLI while considering reporting under the two different views. All values are expressed in 2022 dollars.

Under the responsibility view framework, the value of Transportation Services assets has increased by 12% from approximately \$2.9 billion to \$3.3 billion. This increase is attributed to the growth of asset base, and better asset and cost information. For both operations facilities and fleet, there has been a decrease in the overall asset base from 2020 to 2021 due to updated information. Software assets have decreased in count but have increased in overall value due to updated costing. As part of the 2021 SOLI, Islands are now captured under roads.

When considering the Transportation Services Facilities, Fleet and Software, the total asset value for Transportation Services has increased proportionately with the inclusion of these assets. Furthermore, the total value of Transportation Services assets represents an increase of 11% (or \$342.8 million) from the value reported in 2020 after inflationary adjustments.

Please note, the Facilities, City Support Fleet and IT report cards will include additional information on those assets used by Transportation Services but maintained and managed by a different City department.

Asset	2020 SOLI		2021 SOLI	
Roadway Network (Includes Islands)	3,650	Lane KM	3,756	Lane KM
Structures (Bridges & Culverts)	10	KM	5*	KM
Structures (Other)**	93	KM	94	KM
Walkways & Paths	2,004	KM	2,079	KM
Traffic Services	90,565	Each	95,578	Each
Operations Facilities	13	Each	9	Each
Fleet	223	Each	167	Each
Software	22	Each	20	Each

Asset	2020 SOLI (\$2022)	2021 SOLI (\$2022)	Difference	
<b>1. Assets Managed by Other Service Areas***</b>				
Operations Facilities	\$ 83,005,082	\$ 74,768,505	\$ (8,236,577)	-10%
Fleet	\$ 18,359,341	\$ 16,706,591	\$ (1,652,750)	-9%
Software	\$ 2,381,108	\$ 7,350,537	\$ 4,969,429	209%
<b>Subtotal Assets Managed by Other Service Areas</b>	<b>\$ 103,745,531</b>	<b>\$ 98,825,633</b>	<b>\$ (4,919,898)</b>	<b>-5%</b>
<b>2. Assets Managed by Transportation Services</b>				
Roadway Network (Includes Islands)	\$ 1,501,008,090	\$ 1,758,353,151	\$ 257,345,061	17%
Structures (Bridges & Culverts)	\$ 754,557,799	\$ 806,954,248	\$ 52,396,449	7%
Structures (Other)**	\$ 67,610,218	\$ 73,402,882	\$ 5,792,664	9%
Walkways & Paths	\$ 257,228,414	\$ 279,289,233	\$ 22,060,819	9%
Traffic Services	\$ 365,100,075	\$ 375,254,352	\$ 10,154,277	3%
<b>Subtotal Assets Managed by Transportation Services (Responsibility View)</b>	<b>\$ 2,945,504,596</b>	<b>\$ 3,293,253,865</b>	<b>\$ 347,749,269</b>	<b>12%</b>
<b>Total Replacement Value: User View (1+2)</b>	<b>\$ 3,049,250,127</b>	<b>\$ 3,392,079,498</b>	<b>\$ 342,829,372</b>	<b>11%</b>

\* Road culvert structures were updated from the previous SOLI where the length and width dimensions were swapped. This change does not affect cost because both length and width are used to calculate structural cost and only affects reporting

\*\* Other structures include: gateway features, noise walls, retaining walls on walkways, fences, guiderails, handrails and steps

\*\*\* Responsibility of managing the assets lies with another service area, but assets are used by Transportation



<b>Asset Replacement Value:</b>	\$1.4 Billion
<b>Future Condition Trend (Next 10 Years):</b>	Improving - City employs a dedicated User Fee to fund operational and asset renewal expenditures.
<b>Data Confidence &amp; Reliability:</b>	Age and Condition Based*

\* The City is undertaking a fulsome assessment of all stormwater assets which will be used to update the state of repair, valuations, and lifecycle costs over time

The 2021 SOLI analysis continues to report assets under two different asset representation perspectives: "Responsibility View" and "User View"

**Responsibility View:** Shows the assets under the service area that is responsible for managing them .

**User View:** Shows the assets under the service area that is using them .

While the User View shows the use of assets, the Responsibility View:

- ✓ provides a direct line of sight to those assets managed by the service area;
- ✓ will help prioritize lifecycle activities managed by the service area;
- ✓ aligns with industry best practices; and
- ✓ provides guidance to future asset management planning practice and departmental initiatives.

As the two different asset representations have no effect on the overall asset portfolio for Stormwater Services, the table below outlines the assets under both the User and Responsibility View:

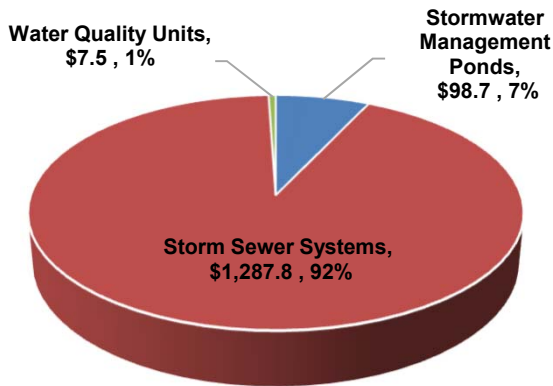
Asset Type	Replacement Value (\$Millions)	Asset Inventory
<b>Assets Managed by Stormwater</b>		
Stormwater Management Ponds	\$98.7	186
Storm Sewer Systems	\$1,287.8	Pooled
Water Quality Units	\$7.5	128
<b>Total Replacement Value (User or Responsibility View )</b>	<b>\$1,393.9</b>	<b>-</b>



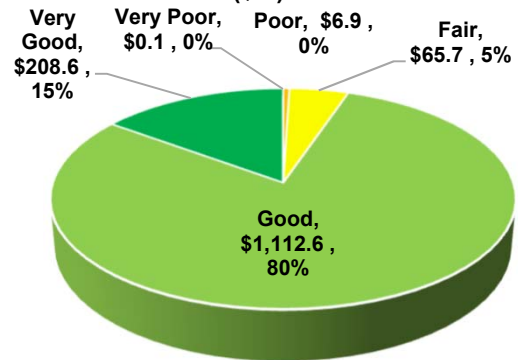
**Major Types of Assets within Stormwater Services - User & Responsibility View**

The figures below illustrate the replacement value and condition of Stormwater Service assets under the user and responsibility view. Under these views, the total replacement value of assets is \$1.4 billion. About 92% of this total is related to the City's storm sewer system with the remaining value largely associated with stormwater management ponds. About 95% of the City's stormwater assets are Good to Very Good condition with the remaining assets in Fair or Poor condition. The increased future condition trend is attributable to the recently introduced dedicated stormwater user fee, which transfers funding from property taxes to a user-fee program. Revenues derived from the user fees will be used exclusively towards Stormwater-related costs and investments, which will in turn help relieve some pressure on the capital budget, and allow funds to be re-allocated towards other service areas.

**REPLACEMENT VALUE BY ASSET CATEGORY (\$M)**



**STORMWATER ASSET CONDITION (\$M)\***

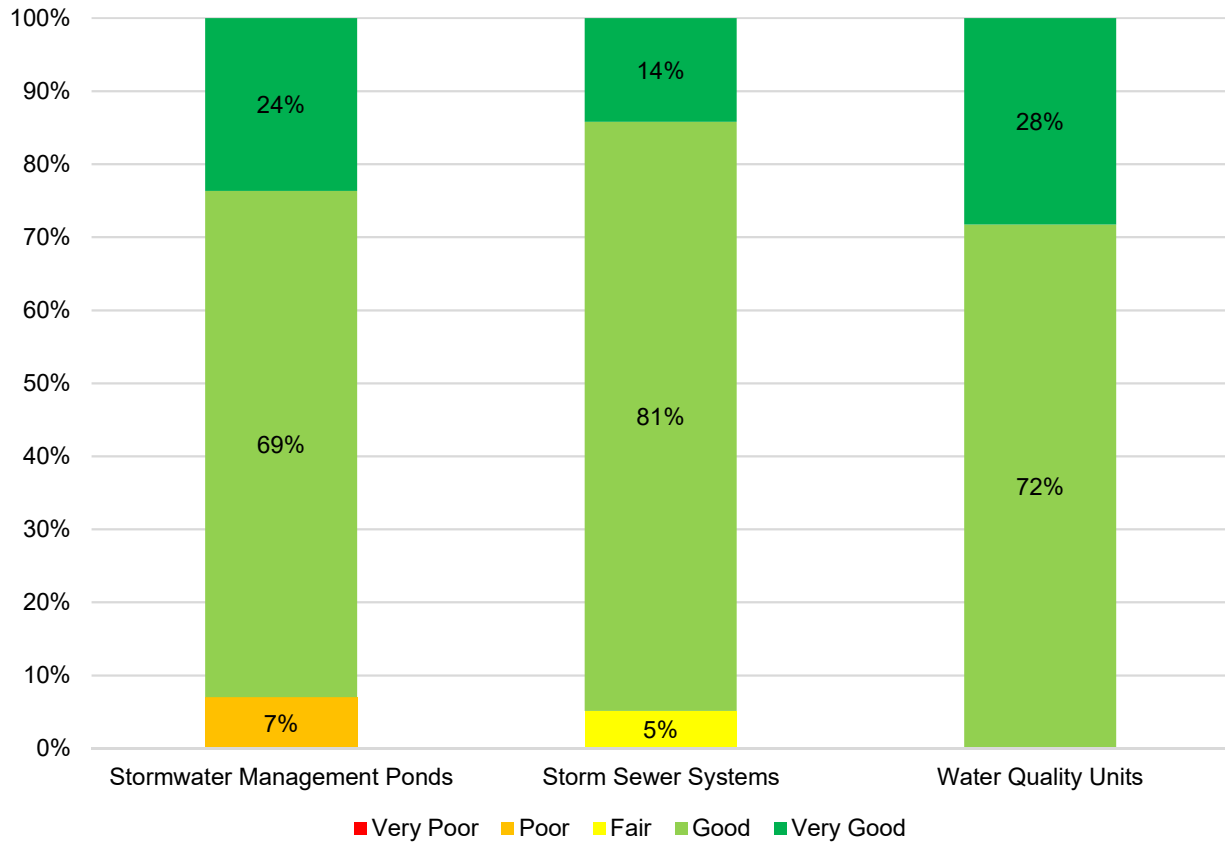


\*The City is undertaking a fulsome assessment of all stormwater assets which will be used to update the state of repair, valuations, and lifecycle costs over time

**Data Source: GIS database, Departmental Inventory for Water Quality Units (Excel based tracking), Manufacturer pipe price lists and City contracts (cost model)**



The figure below illustrates the condition of the three sub-component assets of Stormwater services. All sub-components are generally in Good to Very Good Condition, however, about 7% of Stormwater Management Ponds are in Poor condition.



\*The City is undertaking a fulsome assessment of all stormwater assets which will be used to update the state of repair, valuations, and lifecycle costs over time



**Comparison of 2021 vs. 2020 Inventory and Replacement Value (2022\$)**

The tables below outline the difference in Stormwater assets in the 2021 SOLI relative to the 2020 SOLI. Please note, all values are expressed in 2022 dollars.

Under the user and responsibility view framework, the total value of Stormwater assets has increased by 2%. This increase can generally be attributed to an increase in stormwater assets in this 2021 SOLI report.

Asset	2020 SOLI		2021 SOLI	
Stormwater Management Ponds	184	Each	186	Each
Storm Sewer Systems - Linear	1,846,411	Meters	1,902,124	Meters
Storm Sewer Systems - MH/CB	63,045	Each	65,059	Each
Water Quality Units	92	Each	128	Each

Asset	2020 SOLI (\$2022)	2021 SOLI (\$2022)	Difference	
Stormwater Management Ponds	\$ 96,569,928	\$ 98,692,344	\$ 2,122,416	2%
Storm Sewer Systems - Linear & MH/CB	\$ 1,265,778,955	\$ 1,287,783,826	\$ 22,004,871	2%
Water Quality Units	\$ 7,227,761	\$ 7,471,680	\$ 243,919	3%
<b>Subtotal Assets Considered in 2021 SOLI</b>	<b>\$ 1,369,576,644</b>	<b>\$ 1,393,947,850</b>	<b>\$ 24,371,206</b>	<b>2%</b>



<b>Total Asset Replacement Value (Corporate Facilities and Software):</b>	\$314.1 Million
<b>Total Asset Replacement Value (All Facilities):</b>	\$1.5 Billion
<b>Future Condition Trend (Next 10 Years):</b>	Stable - Assets are renewed as needed and therefore remain in stable condition
<b>Data Confidence &amp; Reliability:</b>	Condition Based

The 2021 SOLI analysis continues to report assets under two different asset representation perspectives: "**Responsibility View**" and a "**User View**"

**Responsibility View:** Shows the assets under the service area that is responsible for managing them

**User View:** Shows the assets under the service area that is using them

While the User View shows the use of assets, the Responsibility View:

- ✓ provides a direct line of sight to those assets managed by the service area;
- ✓ will help prioritize lifecycle activities managed by the service area;
- ✓ aligns with industry best practices; and
- ✓ provides guidance to future asset management planning practice and departmental initiatives.

The table below illustrates the replacement value (in 2022\$) under the two different views.

Asset Type	Replacement Value (\$Millions)	Asset Inventory
<b>1. Assets Used by Facilities and Managed by Other Service Areas</b>		
Software	\$3.6	1
Fleet	\$1.7	66
<b>2. Assets Used by the Corporation and Managed by Facilities</b>		
Corporate Facilities	\$310.4	26
<i>Subtotal Assets Used by the Corporation and Managed by Facilities (User View = 1+2)</i>	\$314.1	-
<b>3. Assets Used by Other Service Areas and Managed by Facilities</b>		
Animal Services Facilities	\$9.4	2
Cultural Services Facilities	\$90.9	1
Recreation Facilities	\$626.9	68
Parks Facilities	\$20.7	18
Transit Facilities	\$170.1	8
Library Facilities*	\$88.7	6
Fire Facilities	\$118.1	16
Work Operations Facilities*	\$74.8	9
<i>Subtotal Assets Used by Other Service Areas and Managed by Facilities</i>	\$1,199.7	128
<b>Total Replacement Value (Responsibility View = 2+3)</b>	<b>\$1,510.1</b>	<b>154</b>

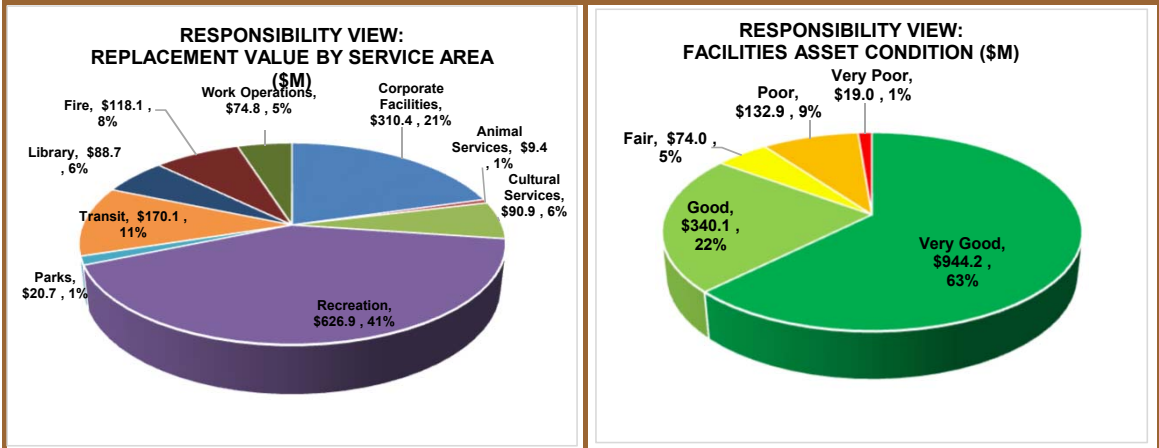
\* Work Operations include facilities associated with Fleet, Stormwater and Transportation

\* Four (4) library facilities are standalone buildings while two (2) of the Library facilities are shared facilities with Recreation



### Major Types of Assets within Facilities - Responsibility View

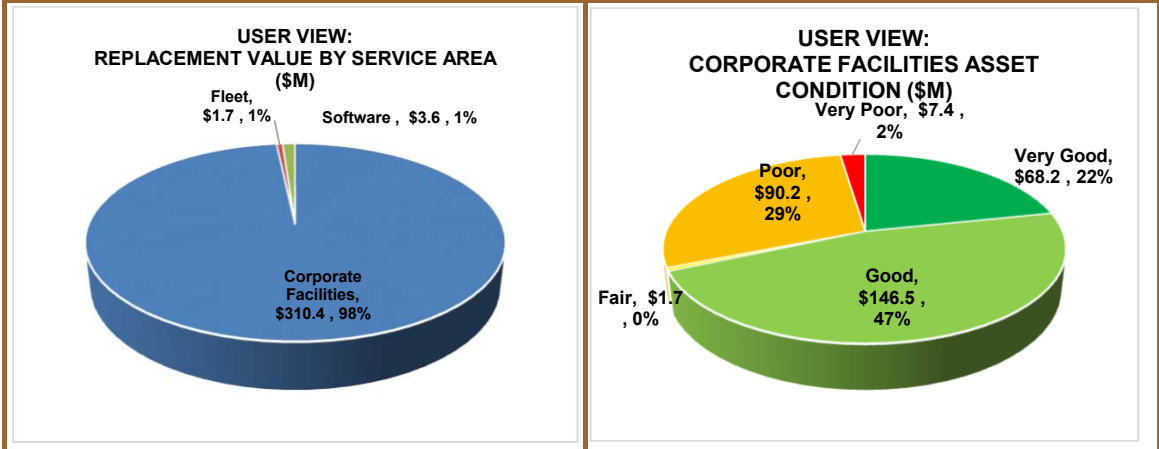
The figure below illustrates the replacement value and condition of Facilities assets under the responsibility view. Under this view, the total replacement value of assets is \$1.5 billion. This includes all facilities used across various service areas in addition to Corporate Facilities. As depicted in the figure below, Recreation Facilities are the largest portion representing 41% (or \$626.9 million) of the total facilities replacement value. Overall, the facilities are in Good condition, with 85% of assets classified to be in Good or Very Good condition. Approximately 10% of assets are in Poor or Very Poor condition, with only 1% of that representing Very Poor assets. The facilities condition reporting is set on an FCI calculation basis which considers the cost of immediate repair work required at each facility relative to the replacement value of the facility. Poor and Very Poor condition reporting does not represent a safety issue or preclude service areas from delivering services to meet the needs of residents.



Source: Building Condition Assessments, Suncorp Valuation Report

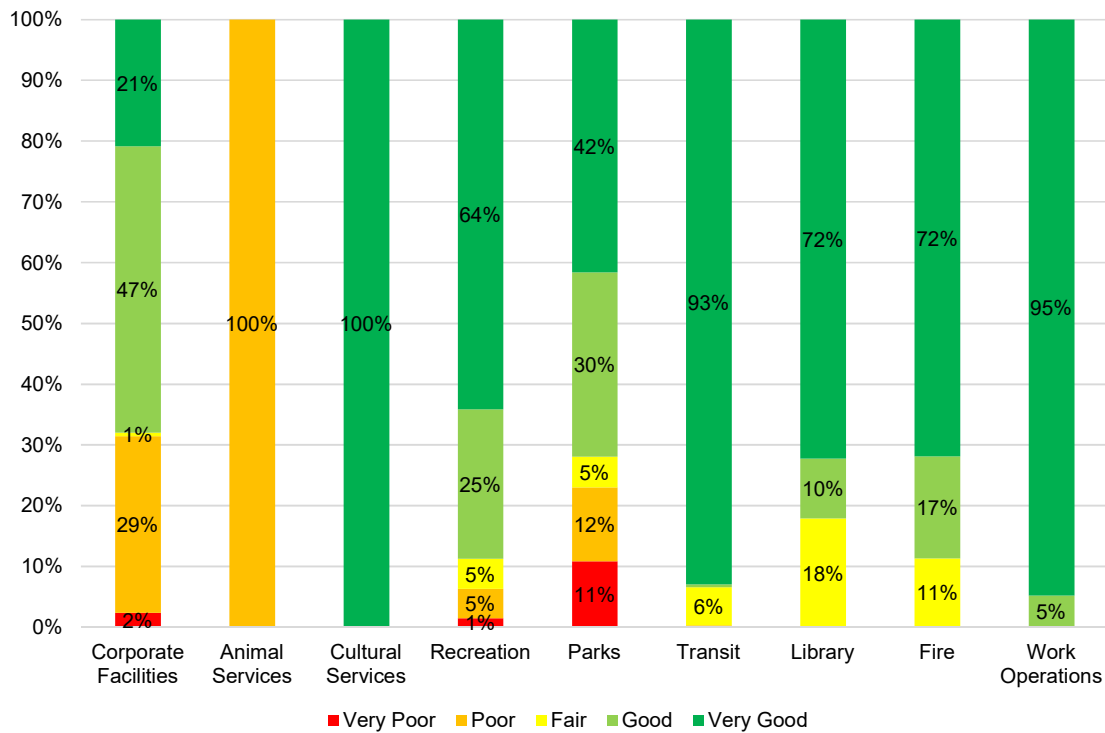
### Major Types of Assets within Facilities - User View

The figures below illustrate the replacement value and condition of Facilities assets under the user view. The user view for Facilities captures Corporate Facilities, Software and Fleet, with a total replacement value of \$310.6 million. Nearly 70% of Corporate Facilities assets are considered to be in Good to Very Good Condition with 2% of assets in Very Poor condition and a further 29% of assets in Poor condition. The poor condition assets mainly related to the Civic Centre as significant renewal costs are identified in the short-term. As mentioned in the section above, these facilities do not represent a safety issue or preclude the delivery of services to meet resident needs. Further to this, the City is actively addressing immediate needs through the regular capital budgeting process which will in turn improve asset condition.





The figure below illustrates the condition of all facilities assets by service area based on the responsibility view. While the assets are generally in Good to Very Good condition, the overall condition makeup varies by service area. Corporate Facilities, Animal Services, Recreation, Parks and Transit all have a portion of facilities in Poor or Very Poor condition. Again, the condition assessment are determined on an FCI calculation basis which considers the cost of immediate repair works required at a facility relative to the replacement value of the facility. Poor and Very Poor condition reporting does not represent a safety issue or preclude service areas from delivering services to meet the needs of residents.







**Comparison of 2021 vs. 2020 Inventory and Replacement Value (All Costs in 2022\$)**

The tables below outline the difference in Facilities assets in the 2021 SOLI relative to the 2020 SOLI while considering reporting under the two different views. Please note, all values are expressed in 2022 dollars.

Under the user view framework, which only considers Corporate Facilities, Software and Fleet, the total value of assets modestly decreases by \$3.1 million to \$312.4 million in this 2021 SOLI. The decrease can be attributed to both a general reduction in the number corporate facilities as well as the valuation of each asset using the new data.

When considering all Facilities under the responsibility view, the total asset value for Facilities has increased proportionately with the inclusion of these assets. In total, the value of Facilities assets increased by 3% (or \$38.6 million) from the value in 2020 after inflationary adjustments. This increase can be attributed to better information surrounding the City's facilities. The valuations used in this SOLI Report are largely based on the 2021 valuation report prepared by Suncorp<sup>1</sup>, with some adjustments to each facility value to better capture soft costs excluded from Suncorp reports. It is expected that a new study will be initiated in the near term to update the facility values used for this report. Note the reduction in "Work Operations" value is generally related to excluding the original Williams Parkway Facilities from the inventory.

Asset	2020 SOLI		2021 SOLI	
Corporate Facilities	29	Each	26	Each
Animal Services	2	Each	2	Each
Cultural Services	1	Each	1	Each
Recreation	73	Each	68	Each
Parks	16	Each	18	Each
Transit	8	Each	8	Each
Library	6	Each	6	Each
Fire	19	Each	16	Each
Work Operations	13	Each	9	Each
Software	4	Each	1	Each
Fleet	<i>Included Under Corporate In 2020</i>		66	Each

Asset	2020 SOLI (\$2022)	2021 SOLI (\$2022)	Difference	
<b>1. Assets Used by Facilities and Managed by Other Service Areas*</b>				
Software	\$ 498,350	\$ 3,637,626	\$ 3,139,276	630%
Fleet	\$ -	\$ 1,719,259	\$ 1,719,259	N/A
<b>Subtotal Assets Used by Facilities and Managed by Other Service Areas</b>	<b>\$ 498,350</b>	<b>\$ 5,356,885</b>	<b>\$ 4,858,536</b>	<b>975%</b>
<b>2. Assets Used by the Corporation and Managed by Facilities</b>				
Corporate Facilities	\$ 315,036,824	\$ 310,434,809	\$ (4,602,015)	-1%
<b>Subtotal Assets Used by the Corporation and Managed by Facilities</b>	<b>\$ 315,036,824</b>	<b>\$ 310,434,809</b>	<b>\$ (4,602,015)</b>	<b>-1%</b>
<b>Subtotal Assets Used by Facilities - User View (1+2)</b>	<b>\$ 315,535,174</b>	<b>\$ 315,791,695</b>	<b>\$ 256,521</b>	<b>0%</b>
<b>3. Assets Used by Other Service Areas and Managed by Facilities</b>				
Animal Services	\$ 9,428,661	\$ 9,444,949	\$ 16,289	0%
Cultural Services	\$ 90,274,280	\$ 90,902,704	\$ 628,424	1%
Recreation	\$ 584,875,990	\$ 626,924,411	\$ 42,048,421	7%
Parks	\$ 18,108,553	\$ 20,723,422	\$ 2,614,868	14%
Transit	\$ 168,917,319	\$ 170,064,733	\$ 1,147,413	1%
Library	\$ 83,528,891	\$ 88,728,313	\$ 5,199,421	6%
Fire	\$ 118,298,781	\$ 118,123,549	\$ (175,231)	0%
Work Operations	\$ 83,005,082	\$ 74,768,505	\$ (8,236,577)	-10%
<b>Subtotal Assets Managed by Facilities and Used by Other Service Areas</b>	<b>\$ 1,156,437,557</b>	<b>\$ 1,199,680,585</b>	<b>\$ 43,243,028</b>	<b>4%</b>
<b>Total Replacement Value of Facilities - Responsibility View (2+3)</b>	<b>\$ 1,471,474,382</b>	<b>\$ 1,510,115,394</b>	<b>\$ 38,641,013</b>	<b>3%</b>

Note 1: valuations for service areas of Animal and Fire are based on staff discussions which reflect costing from more recent tenders

\*Responsibility of managing the assets lies with another service area, but assets are used by Facilities



<b>Asset Replacement Value:</b>	\$552.9 Million
<b>Total Asset Replacement Value Including Facilities and Software:</b>	\$724.2 Million
<b>Future Condition Trend (Next 10 Years):</b>	Stable
<b>Data Confidence &amp; Reliability:</b>	Age and Condition Based

The 2021 SOLI analysis is being reported under two different asset representation perspectives: "**Responsibility View**" and "**User View**" representation

**Responsibility View:** Shows the assets under the service area that is responsible for managing them.

**User View:** Shows the assets under the service area that is using them.

While the User View shows the use of assets, the Responsibility View

- ✓ provides a direct line of sight to those assets managed by the service area;
- ✓ will help prioritize lifecycle activities managed by the service area;
- ✓ aligns with industry best practices; and
- ✓ provides guidance to future asset management planning practice and departmental initiatives.

The table below illustrates the replacement value (in 2022\$) under the two different views.

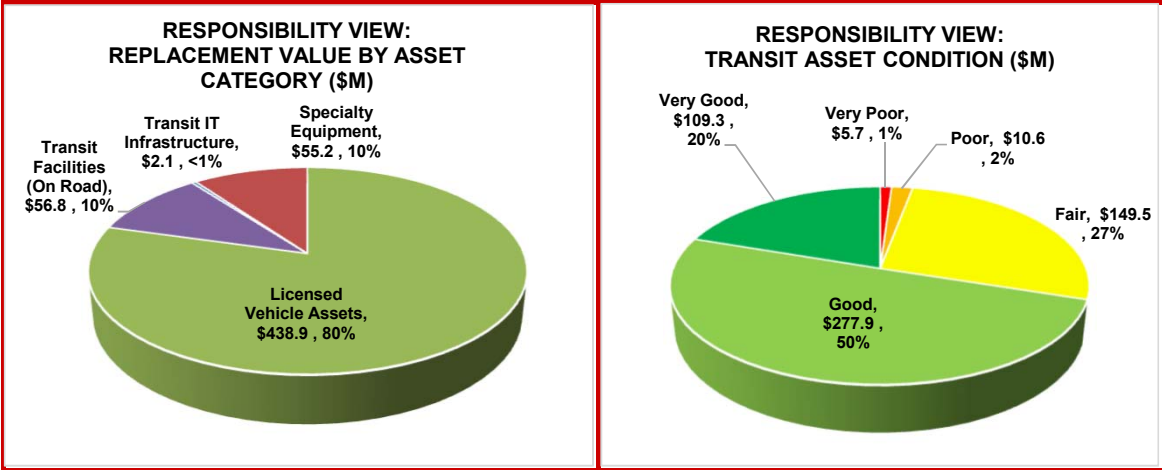
Asset Type	Replacement Value (\$Millions)	Asset Inventory
<b>Assets Managed by Transit Services</b>		
Licensed Vehicle Assets	\$438.9	501
Transit Facilities (On Road)*	\$56.8	3,351
Transit IT Infrastructure	\$2.1	43
Specialty Equipment	\$55.2	4,730
<b>Subtotal Assets Managed by Transit (Responsibility View)</b>	<b>\$552.9</b>	<b>-</b>
<b>Assets Managed by Other Service Areas</b>		
Transit Facilities	\$170.1	8
Software Used by Transit**	\$1.2	2
<b>Total Replacement Value (User View)</b>	<b>\$724.2</b>	<b>-</b>

\* Transit Facilities (On Road) include Conventional Shelters, Bike Shelters, Zum Shelters, Bus Stops (with Concrete Pads), and Sandalwood Loop



**Major Types of Assets within Transit Services - Responsibility View**

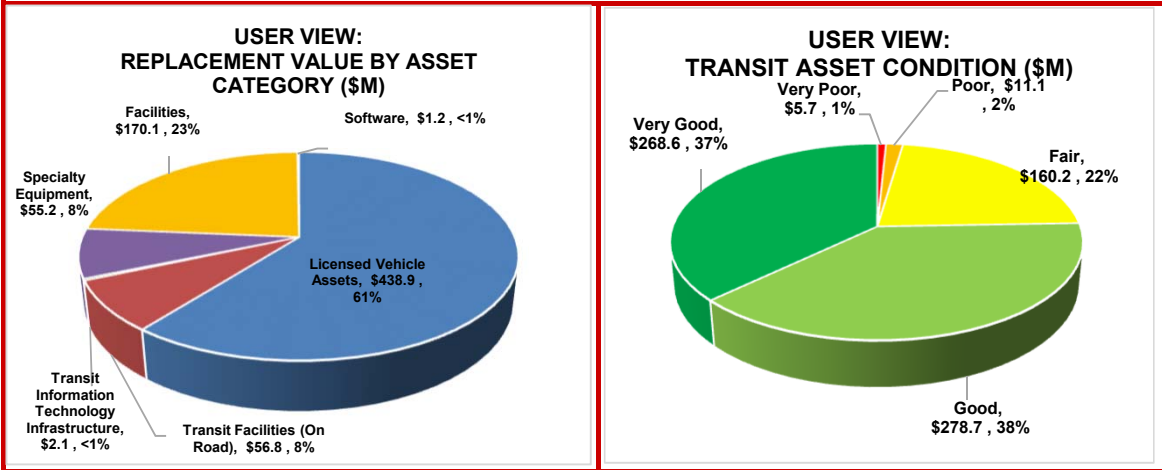
The figures below illustrate the replacement value and condition of Transit Service assets under the responsibility view. Under this view, the total replacement value of assets is \$552.9 million. As part of the 2021 SOLI, only Transit licensed vehicle assets, on road transit facilities, Transit IT infrastructure and specialty equipment are considered under the management of this service area. Overall, the Transit assets are in Good condition with only about 2% (\$10.6 million) of the total asset base rated in Poor condition and a further 1% (\$5.7 million) in Very Poor condition. It is important to note that assets classified in "Poor" and "Very Poor" condition are not considered to be unsafe; the condition indicates only that assets are nearing the end of an engineered UL and may need to be replaced to avoid inflated maintenance costs.



Data Source: Departmental Inventory and Asset Works (M5)

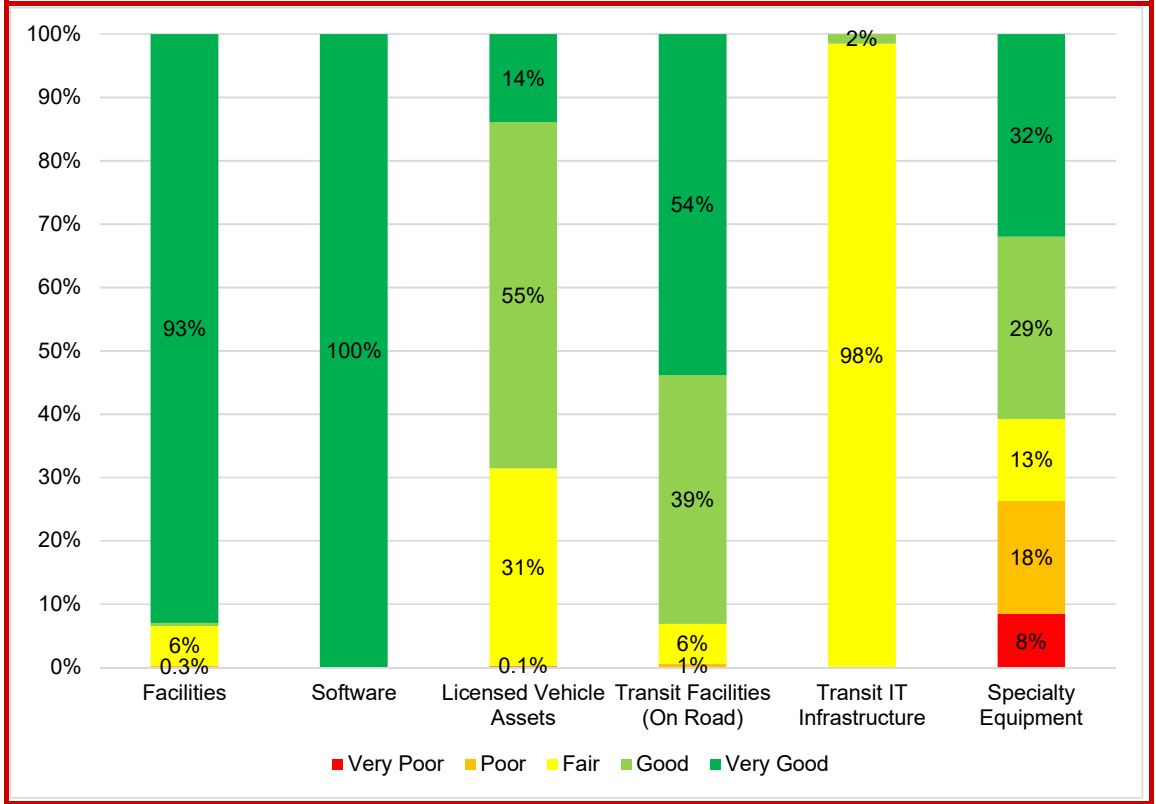
**Major Types of Assets within Transit Services - User View**

The figures below illustrate the replacement value and condition of Transit assets under the user view. Under the user view illustration which also captures transit facilities and software, the replacement value is about \$724.2 million. Of this total, licensed vehicles continue to represent the largest share at \$438.9 million. Approximately 75% of the assets are considered to be in Good to Very Good Condition. Only 3% of assets are in Poor and Very Poor condition. As above, assets classified in "Poor" and "Very Poor" condition are not considered to be unsafe; the condition indicates only that assets are nearing the end of an engineered UL and may need to be replaced to avoid inflated maintenance costs.





The figure below illustrates the condition of the various Transit assets by key sub-component areas based on the user view. While the assets are generally in Good to Very Good condition, specialty equipment has about 8% of assets in Very Poor condition and a further 18% in Poor condition. Much of these assets relate to Smart Bus on-board equipment, and although these assets continue to be operational and in working order, they are anticipated to be serviced over the short-term which will improve the condition of the assets. The Very Poor assets under Licensed Vehicle Assets pertain to Fleet Support vehicles which are not public facing assets and are safe and in working order.





**Comparison of 2021 vs. 2020 Inventory and Replacement Value (2022\$)**

The tables below outline the difference in Transit assets in the 2021 SOLI relative to the 2020 SOLI while considering reporting under the two different views. Please note, all values are expressed in 2022 dollars.

Under the responsibility view framework, the total value of Transit assets has increased by 3% from approximately \$538.5 million to \$552.9 million. This increase can generally be attributed to updated costing information as part of the 2021 SOLI, updated inventory information and recent acquisitions.

When considering the Transit Facilities and Software, the total asset value for Transit increases proportionately with the inclusion of these assets. In total, the value of Transit assets increased by 2% (or \$15.6 million) from the value reported in 2020 after inflationary adjustments. This increase is due to better information surrounding the City's facilities related to transit services.

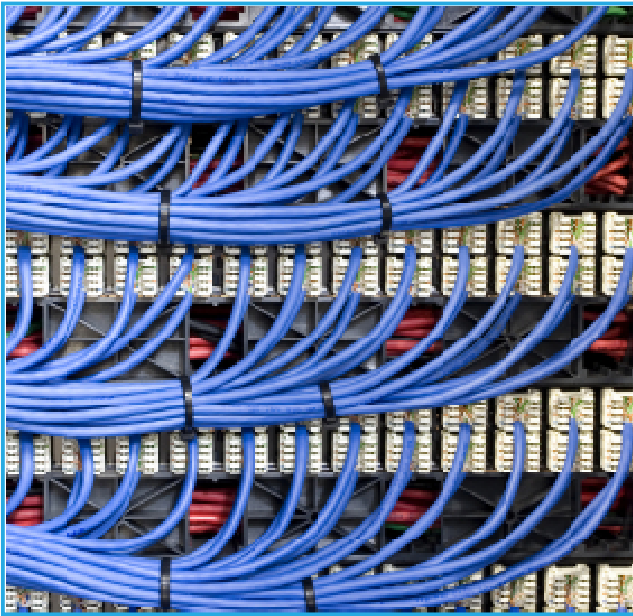
Please note, the Facilities and IT report cards include additional information on those assets used by Transit Services but maintained and managed by a different City department. Also note, future Transit SOLI reports will continue to transform as the City transitions to a more green based fleet which will impact the total value of infrastructure and number of assets required to deliver services.

Asset	2020 SOLI		2021 SOLI	
Licensed Vehicle Assets	498	Each	501	Each
Transit Facilities (On Road)	3,294	Each	3,351	Each
Transit Information Technology Infrastructure	27	Each	43	Each
<b>Specialty Equipment</b>				
Conveyance Systems	34	Each	34	Each
Communication Control	4		4	Each
Fare Systems	470	Each	498	Each
Presto	1,459	Each	1,082	Each
Maintenance/Admin Small Equipment	7		7	Each
Signage	3,093	Each	3,093	Each
Fueling	5	Each	5	Each
Stock Room		N/A		N/A
Electric Chargers	<i>Not Included in 2020 SOLI Analysis</i>		5	Each
Facilities	8	Each	8	Each
Software*	1	Each	2	Each

Asset	2020 SOLI (\$2022)	2021 SOLI (\$2022)	Difference	
<b>1. Assets Managed by Other Service Areas*</b>				
Facilities	\$ 168,917,319	\$ 170,064,733	\$ 1,147,413	1%
Software	\$ 1,170,450	\$ 1,222,470	\$ 52,020	4%
<b>Subtotal Assets Managed by Other Service Areas</b>	<b>\$ 170,087,769</b>	<b>\$ 171,287,203</b>	<b>\$ 1,199,433</b>	<b>1%</b>
<b>2. Assets Managed by Transit Services</b>				
Licensed Vehicle Assets	\$ 438,253,934	\$ 438,919,651	\$ 665,716	0%
Transit Facilities (On Road)	\$ 54,726,647	\$ 56,774,260	\$ 2,047,613	4%
Transit Information Technology Infrastructure	\$ 1,078,874	\$ 2,074,231	\$ 995,356	92%
<b>Specialty Equipment</b>				
Conveyance Systems	\$ 6,632,550	\$ 10,455,000	\$ 3,822,450	58%
Communication Control	\$ 15,017,460	\$ 15,158,000	\$ 140,540	1%
Fare Systems	\$ 8,843,400	\$ 9,088,674	\$ 245,274	3%
Presto	\$ 6,580,020	\$ 5,241,000	\$ (1,339,020)	-20%
Maintenance/Admin Small Equipment	\$ 478,584	\$ 478,584	\$ -	0%
Signage	\$ 3,102,473	\$ 3,102,473	\$ -	0%
Fueling	\$ 1,231,140	\$ 1,404,000	\$ 172,860	14%
Stock Room	\$ 2,593,860	\$ 2,977,722	\$ 383,862	15%
Electric Chargers	\$ -	\$ 7,260,000	\$ 7,260,000	N/A
<b>Subtotal Assets Managed by Transit Services (Responsibility View)</b>	<b>\$ 538,538,943</b>	<b>\$ 552,933,594</b>	<b>\$ 14,394,652</b>	<b>3%</b>
<b>Total Replacement Value: User View (1+2)</b>	<b>\$ 708,626,712</b>	<b>\$ 724,220,797</b>	<b>\$ 15,594,085</b>	<b>2%</b>

\* Software included are Hastus and AssetWorks. AssetWorks was not included under Transit in the 2020 SOLI

\*\* Responsibility of managing the assets lies with another service area, but assets are used by Transit



<b>Asset Replacement Value:</b>	\$109.4 Million
<b>Asset Replacement Value including software from other service areas</b>	\$126.1 Million
<b>Future Condition Trend (Next 10 Years):</b>	Stable - Assets are replaced frequently and therefore remain in stable condition
<b>Data Confidence &amp; Reliability:</b>	Medium (Condition Based)

The 2021 SOLI analysis continues to report assets under two different asset representation perspectives: "**Responsibility View**" and a "**User View**"

- Responsibility View:** Shows the assets under the service area that is responsible for managing them
- User View:** Shows the assets under the service area that is using them

While the User View shows the use of assets, the Responsibility View:

- ✓ provides a direct line of sight to those assets managed by the service area;
- ✓ will help prioritize lifecycle activities managed by the service area;
- ✓ aligns with industry best practices; and
- ✓ provides guidance to future asset management planning practice and departmental initiatives.

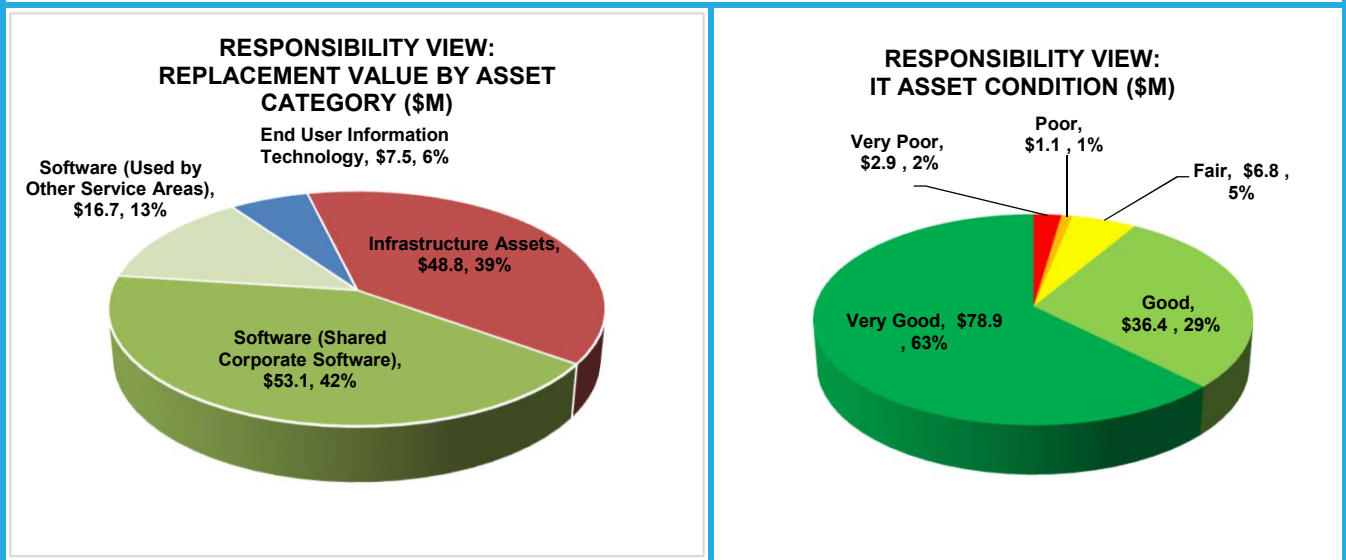
The table below illustrates the replacement value (in 2022\$).

Asset Type	Replacement Value (\$Millions)	Asset Inventory
<b>Assets Used by IT</b>		
End User Information Technology	\$7.5	7,936
Infrastructure Assets	\$48.8	Pooled
Software (Shared Corporate Software)	\$53.1	63
<i>Subtotal Assets Used by IT (User View)</i>	<i>\$109.4</i>	<i>-</i>
<b>IT Assets Used by Other Service Areas</b>		
Software	\$16.7	39
<b>Total Replacement Value (Responsibility View)</b>	<b>\$126.1</b>	<b>-</b>



**Major Types of Assets within IT - Responsibility View**

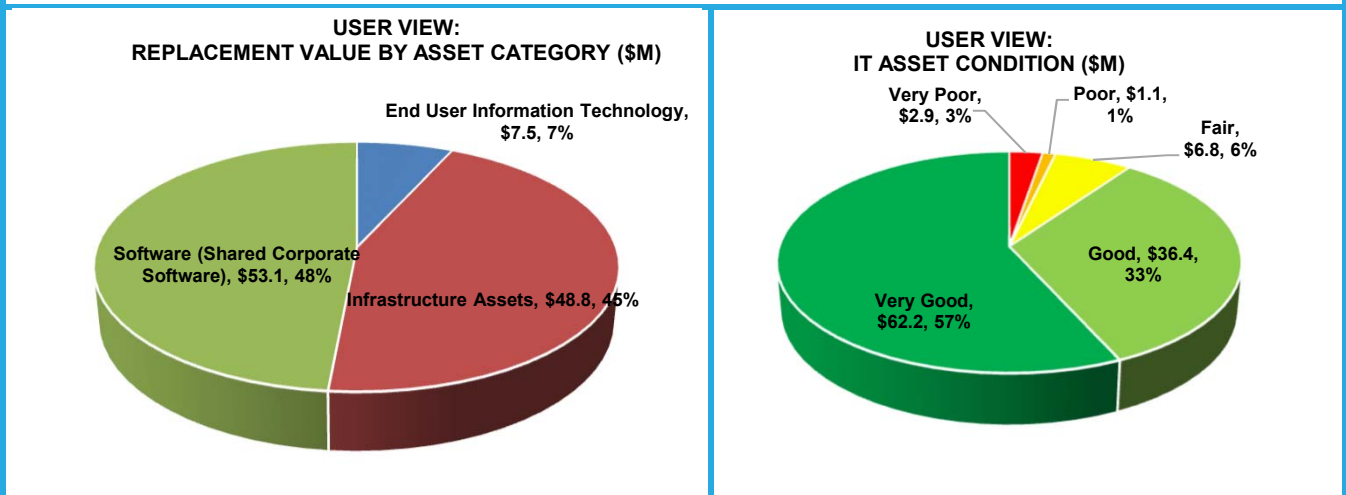
The figure below illustrates the replacement value and condition of IT services under the responsibility view. Under this view, the total replacement value of IT assets is \$126.1 million, of which, nearly 40% of the total value is related to the City's IT infrastructure assets. Over 90% of IT assets are in Good or Very Good condition, with only 3% of assets in Poor to Very Poor condition. As IT assets are replaced and serviced frequently, their condition will remain stable. Overall, the Corporate IT assets are in Good condition and are meeting current needs.



Data Source: Departmental Inventory

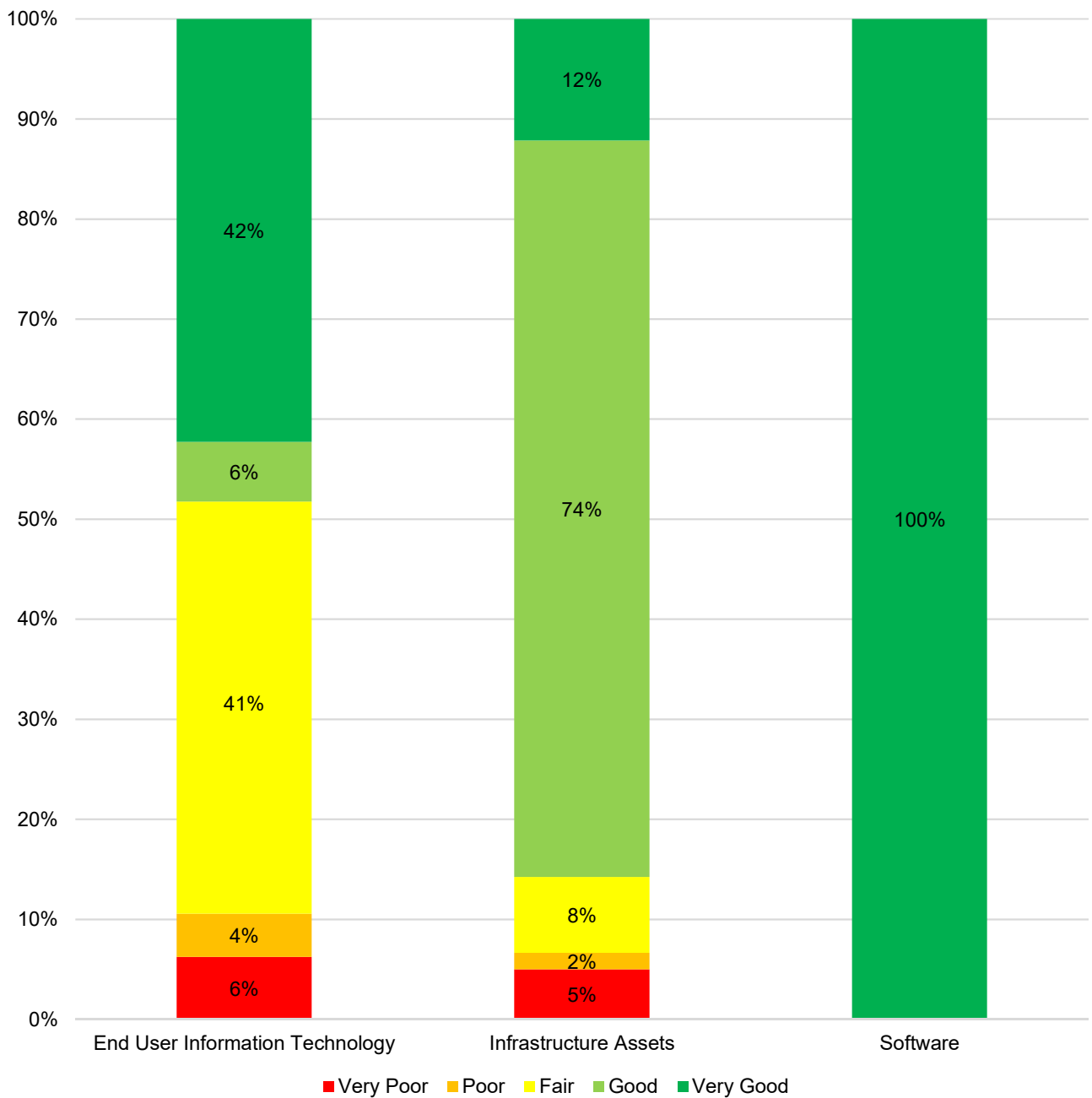
**Major Types of Assets within IT - User View**

The figures below illustrate the replacement value and condition of IT assets under the user view. IT is an internal service provider that manages assets on behalf of many other service areas. However, under the user view, IT accounts for Software assets used exclusively by IT services. The replacement value under the user view amounts to about \$109.4 million. The difference between the user view and responsibility view is entirely attributed to software assets used by various service areas. The overall condition assessment of IT assets generally does not change under the user view as all software assets are considered to be in "Very Good" condition.





The figure below illustrates the condition of the three sub-component assets of Information Technology services under the responsibility view. All sub-component asset categories are mostly in Good to Very Good Condition. With this said about 41% of End User IT assets are in Fair condition. This amount mostly relates to computers, monitors and mobile phones which have been considered in Fair condition, however assets continually receive regular maintenance and continue to be in good working condition.







**Comparison of 2021 vs. 2020 Inventory and Replacement Value (2022\$)**

The tables below outline the difference in IT assets in the 2021 SOLI relative to the 2020 SOLI, while considering reporting under the two different views. All values are expressed in 2022 dollars.

Looking only at those assets included under the responsibility view framework, the total value of IT has increased from approximately \$99.0 million to \$126.1 million, the increase can largely be attributed to comprehensive costing information in the 2021 SOLI associated to software. The inclusion of a more robust valuation for software (i.e. the workforce (employment scheduling, time/attendance, etc.) and other software accounts for much of the variance. There is also a decrease in cable plant valuation as a result of updated costing for a sepcific segment of outdoor fibre cables.

Asset	2020 SOLI		2021 SOLI	
<b>End User Information Technology</b>				
Computers	2,915	Each	3,700	Each
Monitors	2,843	Each	2,843	Each
Mobile Phones	1,141	Each	1,249	Each
Audio Visual Equipment	115	Each	144	Each
<b>Infrastructure Assets</b>				
Servers	84	Each	83	Each
Storage And Back-Up	29	Each	22	Each
Wireless	806	Each	806	Each
Cable Plants	286,977	Meters	284,723	Meters
Network Infrastructure	671	Each	671	Each
Communication System	4,141	Each	4,127	Each
<b>Software</b>	109	Each	102	Each

Asset	2020 SOLI (2022\$)	2021 SOLI (2022\$)	Difference	
<b>Assets Used and Managed by IT</b>				
<b>End User Information Technology</b>				
Computers	\$ 4,711,686	\$ 6,112,146	\$ 1,400,460	30%
Monitors	\$ 724,965	\$ 724,965	\$ -	0%
Mobile Phones	\$ 414,025	\$ 456,106	\$ 42,081	10%
Audio Visual Equipment	\$ 191,250	\$ 228,588	\$ 37,338	20%
<b>Infrastructure Assets</b>				
Servers	\$ 2,432,844	\$ 2,407,491	\$ (25,353)	-1%
Storage And Back-Up	\$ 4,295,801	\$ 4,093,406	\$ (202,395)	-5%
Wireless	\$ 1,939,127	\$ 1,939,127	\$ (0)	0%
Cable Plants	\$ 37,844,811	\$ 30,415,876	\$ (7,428,936)	-20%
Network Infrastructure	\$ 6,111,292	\$ 6,111,292	\$ -	0%
Communication System	\$ 4,118,647	\$ 3,865,483	\$ (253,164)	-6%
<b>Software (Shared Corporate Software)</b>	\$ 27,787,039	\$ 53,078,030	\$ 25,290,991	91%
<b>Subtotal Assets Managed by IT (User View)</b>	<b>\$ 90,571,488</b>	<b>\$ 109,432,510</b>	<b>\$ 18,861,022</b>	<b>21%</b>
<b>Assets Used By Other Service Areas but Managed by IT</b>				
Software	\$ 8,470,785	\$ 16,688,733	\$ 8,217,948	97%
<b>Total Replacement Value - Responsibility View</b>	<b>\$ 99,042,273</b>	<b>\$ 126,121,243</b>	<b>\$ 27,078,970</b>	<b>27%</b>



## City Support Fleet



<b>Total Asset Replacement Value (excl. Software):</b>	\$49.3 Million
<b>Future Condition Trend (Next 10 Years):</b>	Stable - Assets are replaced frequently and therefore remain in stable condition
<b>Data Confidence &amp; Reliability:</b>	Low-Medium (Age and Condition Based)

The 2021 SOLI analysis continues to report assets under two different asset representation perspectives: "**Responsibility View**" and "**User View**"

**Responsibility View:** Shows the asset under the service area that is responsible for managing them

**User View:** Shows the assets under the service area that is using them

While the User View shows the use of assets, the Responsibility View:

- ✓ provides a direct line of sight to those assets managed by the service area;
- ✓ will help prioritize lifecycle activities managed by the service area;
- ✓ aligns with industry best practices; and
- ✓ provides guidance to future asset management planning practice and departmental initiatives.

The table below illustrates the replacement value (in 2022\$) under the two different views.

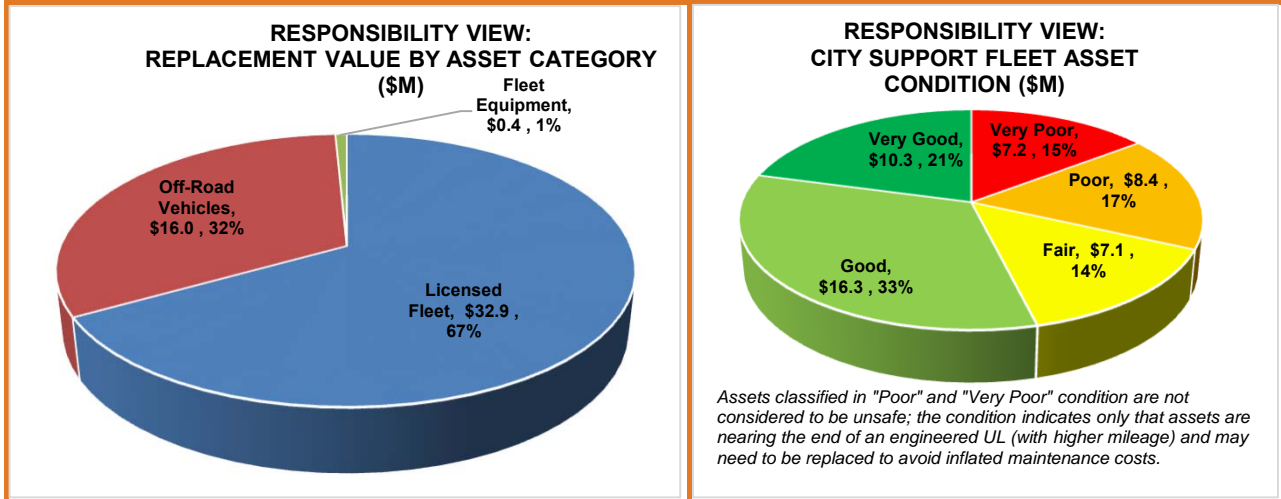
Asset Type	Replacement Value (\$Millions)	Asset Inventory
<b>1. Assets Managed by Other Service Areas but used by City Support Fleet</b>		
Software (Moved to IT)	\$0.8	2
<i>Subtotal Assets Managed by Other Service Areas and Used by City Support Fleet</i>	\$0.8	-
<b>2. Assets Managed and Used by City Support Fleet</b>		
Licensed Fleet	\$4.1	111
Off-Road Vehicles	\$0.9	24
Fleet Equipment	\$0.0	4
<i>Subtotal Assets Managed and Used by City Support Fleet</i>	\$5.0	139
<b>Total Replacement Value - User View (1+2)</b>	<b>\$5.8</b>	<b>-</b>
<b>3. Assets Managed by Fleet and Used by Other Service Areas</b>		
Licensed Fleet	\$28.8	389
Off-Road Vehicles	\$15.1	271
Fleet Equipment	\$0.4	84
<i>Subtotal Assets Managed by Fleet and Used by Other Service Areas</i>	\$44.3	744
<b>Total Replacement Value - Responsibility View (2+3)</b>	<b>\$49.3</b>	<b>883</b>

City Support Fleet excludes Transit and Fire Assets and Parks Fleet Equipment which are managed by respective service areas.



**Major Types of Assets within City Support Fleet - Responsibility View**

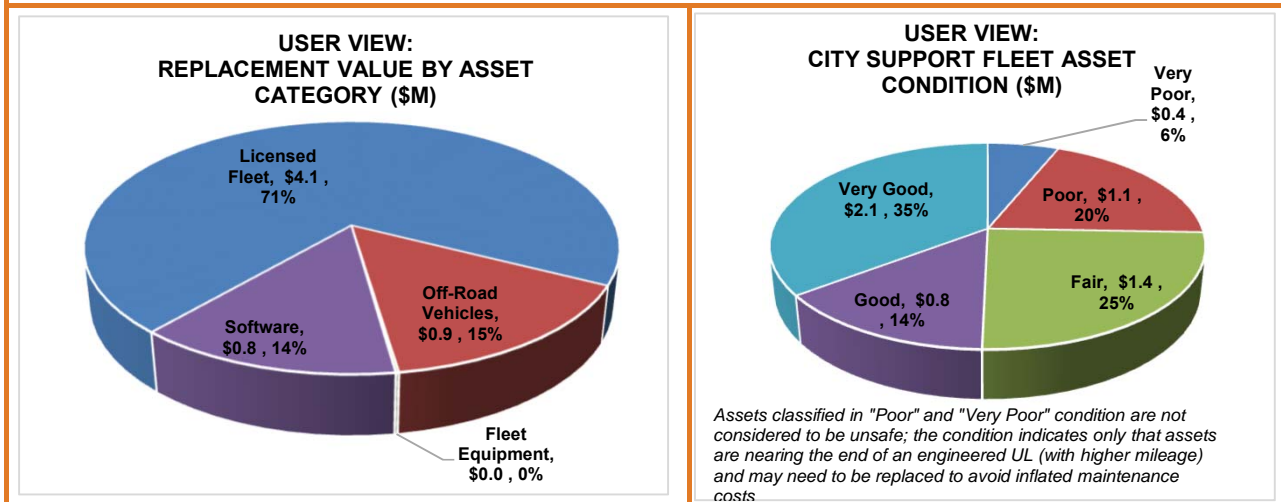
The figure below illustrates the replacement value and condition of City Support Fleet assets under the responsibility view. Under this view, the total replacement value of assets is \$49.3 million. Approximately 67% of the total value is related to the City's licensed fleet. About 54% of assets are considered to be in Good to Very Good condition. However, about 32% remain in Poor to Very Poor condition. The condition of City Support Fleet assets for the most part is based on age and/or vehicle mileage and not necessarily always reflective of the comprehensive asset condition. Assets classified in "Poor" and "Very Poor" condition are not considered to be unsafe; the condition indicates only that assets are nearing the end of an engineered UL (with higher mileage) and may need to be replaced to avoid inflated maintenance costs.



Data Source: Assetworks M5-Fleet Management Solution

**Major Types of Assets within City Support Fleet - User View**

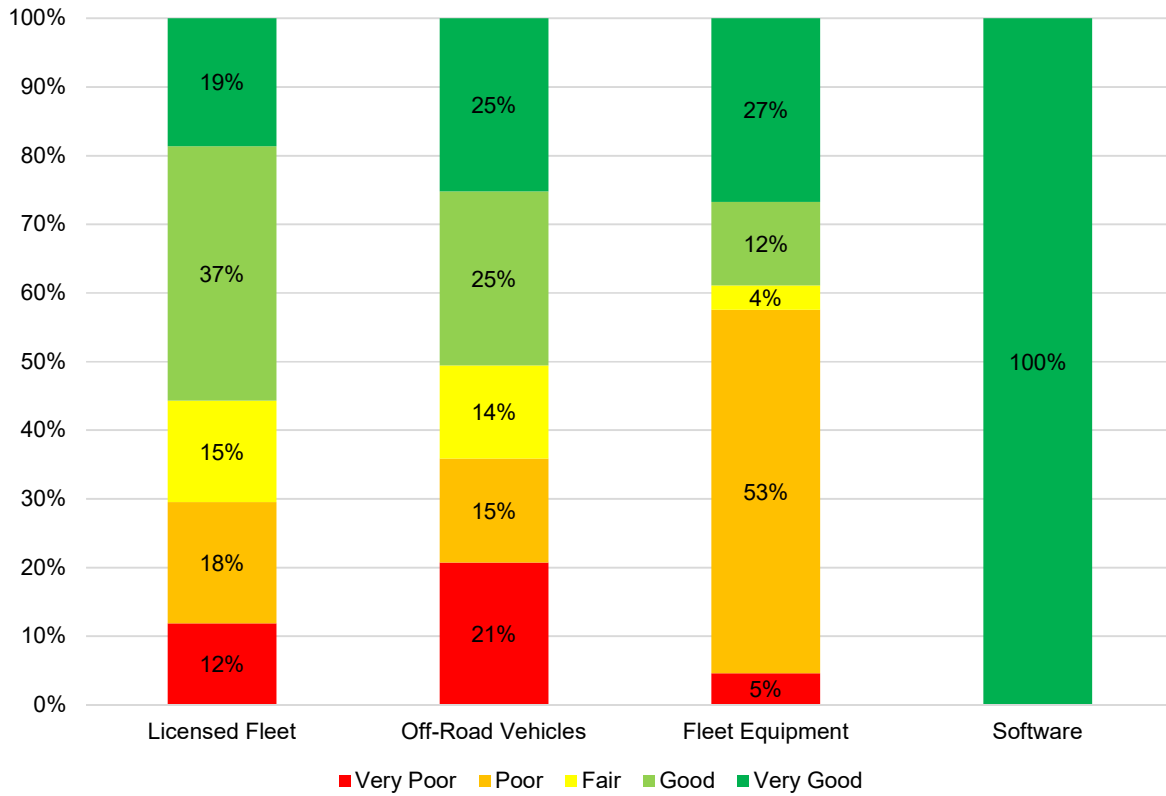
The figures below illustrate the replacement value and condition of City Support Fleet assets under the user view. Under the user view illustration which also captures software, the replacement value is about \$5.8 million. This view only includes City Support Fleet assets, as those assets used by other service areas under the user view are reported under each area respectively.





## City Support Fleet

The figure below illustrates the condition of the various City Support Fleet assets by key sub-component areas based on the user view. While a portion of the assets are in Good to Very Good condition, a share of the Licensed Fleet, Off-Road Vehicles and Fleet Equipment are in Poor or Very Poor condition. It is important to note that assets classified in "Poor" and "Very Poor" condition are not considered to be unsafe; the condition indicates only that assets are nearing the end of an engineered UL (with higher mileage) and may need to be replaced to avoid inflated maintenance costs.





**Comparison of 2021 vs. 2020 Inventory and Replacement Value (2022\$)**

The tables below outline the difference in City Support Fleet assets in the 2021 SOLI relative to the 2020 SOLI while considering reporting under the two different views. Please note, all values are expressed in 2022 dollars.

Under the responsibility view framework, the total value of City Support Fleet assets has increased by 1% from approximately \$49.0 million to \$49.3 million. This increase can generally be attributed to updated costing information and revised license fleet inventories as part of the 2021 SOLI. Conversely, when considering assets only used by City Support Fleet, inclusive of software, the total asset value is \$5.8 million, which does represent a decrease of 22% when compared to 2020. This variance can be attributed to a reclassification of assets used and managed by city support fleet assets managed with those assets used by other service areas.

Please note the IT report card will include additional information on those assets used by City Support Fleet but maintained and managed by a different City department.

Asset	2020 SOLI		2021 SOLI	
Licensed Fleet	517	Each	500	Each
Off-Road Vehicles	284	Each	295	Each
Fleet Equipment*	123	Each	88	Each
Software	2	Each	2	Each

Asset	2020 SOLI (\$2022)	2021 SOLI (\$2022)	Difference	
<b>1. Assets Managed by Other Service Areas and Used by City Support Fleet*</b>				
Software	\$ 790,704	\$ 790,704	\$ -	0%
<b>Subtotal Assets Managed by Other Service Areas and Used by City Support Fleet</b>	<b>\$ 790,704</b>	<b>\$ 790,704</b>	<b>\$ -</b>	<b>0%</b>
<b>2. Assets Used and Managed by City Support Fleet</b>				
Licensed Fleet	\$ 5,194,012	\$ 4,132,523	\$ (1,061,488)	-20%
Off-Road Vehicles	\$ 1,396,147	\$ 880,347	\$ (515,801)	-37%
Fleet Equipment*	\$ 42,954	\$ 9,102	\$ (33,852)	-79%
<b>Subtotal Assets Used and Managed by City Support Fleet</b>	<b>\$ 6,633,113</b>	<b>\$ 5,021,972</b>	<b>\$ (1,611,141)</b>	<b>-24%</b>
<b>Subtotal Replacement Value - User View (1+2)</b>	<b>\$ 7,423,817</b>	<b>\$ 5,812,676</b>	<b>\$ (1,611,141)</b>	<b>-22%</b>
<b>3. Assets Managed by City Support Fleet and Used by Other Service Areas</b>				
Licensed Fleet	\$ 27,655,177	\$ 28,796,031	\$ 1,140,855	4%
Off-Road Vehicles	\$ 14,403,354	\$ 15,112,369	\$ 709,015	5%
Fleet Equipment*	\$ 345,490	\$ 362,433	\$ 16,943	5%
<b>Subtotal Assets Managed by City Support Fleet and Used by Other Service Areas</b>	<b>\$ 42,404,020</b>	<b>\$ 44,270,833</b>	<b>\$ 1,866,813</b>	<b>4%</b>
<b>Subtotal Replacement Value - Responsibility View (2+3)</b>	<b>\$ 49,037,133</b>	<b>\$ 49,292,805</b>	<b>\$ 255,672</b>	<b>1%</b>

\*Responsibility of managing the assets lies with another service area, but assets are used by City Support Fleet



<b>Total Asset Replacement Value:</b>	\$36.9 Million
<b>Total Asset Replacement Value Including Facilities:</b>	\$158.2 Million
<b>Future Condition Trend (Next 10 Years):</b>	Declining - As assets age they may require attention in the future
<b>Data Confidence &amp; Reliability:</b>	Age and Condition Based

The 2021 SOLI analysis is being reported under two different asset representation perspectives: **"Responsibility View"** and **"User View"** representation

**Responsibility View:** Shows the assets under the service area that is responsible for managing them  
**User View:** Shows the assets under the service area that is using them

The responsibility view is also being illustrated in this 2021 SOLI as it is an important viewpoint from an Asset Management Planning perspective. The responsibility view:

- ✓ provides a direct line of sight to those assets managed by the service area;
- ✓ will help prioritize lifecycle activities managed by the service area;
- ✓ aligns with industry best practices; and
- ✓ provides guidance to future asset management planning practice and departmental initiatives.

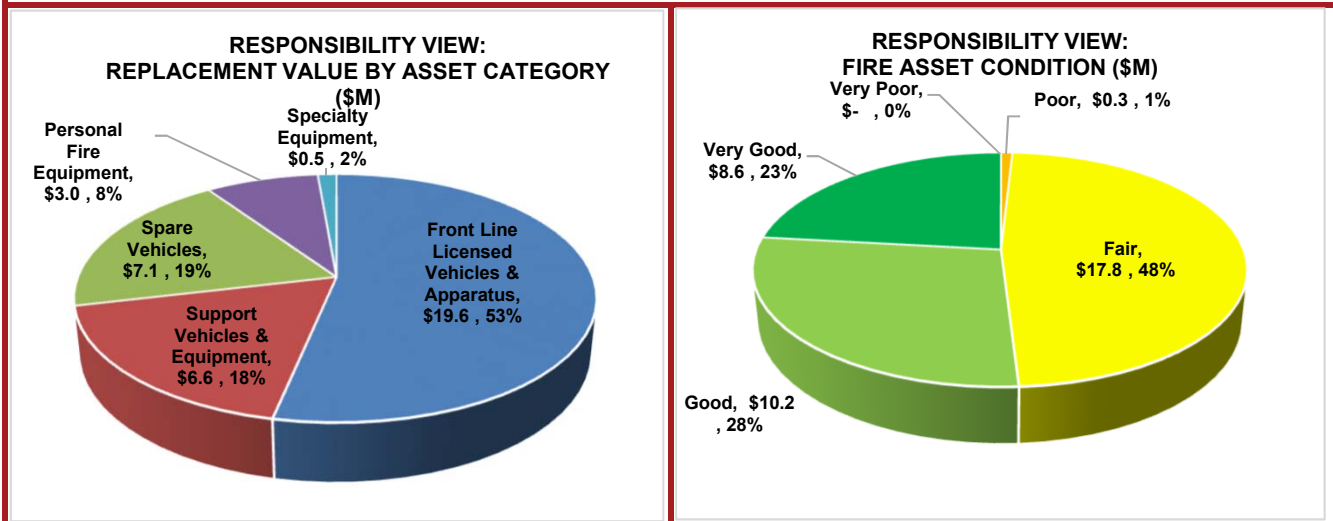
The table below illustrates the replacement value (in 2022\$) under the two different views.

Asset Type	Replacement Value (\$Millions)	Asset Inventory
<b>Assets Managed by Fire Services</b>		
Front Line Licensed Vehicles & Apparatus	\$19.6	21
Support Vehicles & Equipment	\$6.6	65
Spare Vehicles	\$7.1	31
Personal Fire Equipment	\$3.0	1,078
Specialty Equipment	\$0.5	6
<i>Subtotal Assets Managed by Fire Services (Responsibility View)</i>	<b>\$36.9</b>	-
<b>Assets Managed by Other Service Areas</b>		
Fire Services Facilities	\$118.1	16
Fire Services Software	\$3.2	5
<b>Total Replacement Value (User View)</b>	<b>\$158.2</b>	-



**Major Types of Assets within Fire Services - Responsibility View**

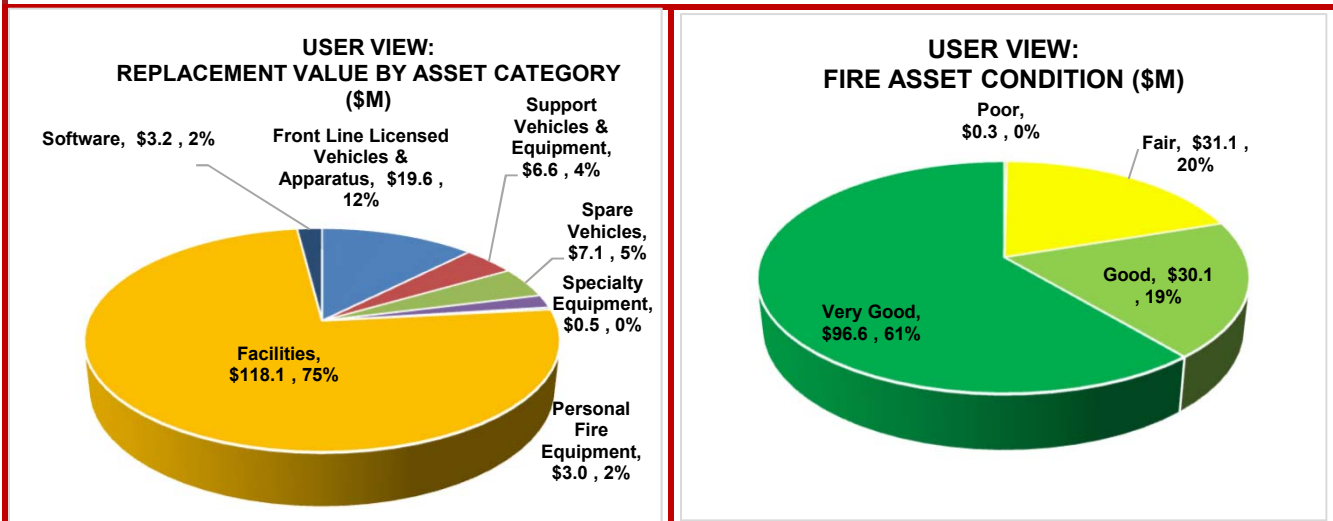
The figure below illustrates the replacement value and condition of Fire Services assets under the responsibility view. Under this view, the total replacement value of assets is \$36.9 million. Of this total, roughly 90% is related to the Fire fleet (including front line licensed vehicles & apparatus, support vehicles & equipment and spare vehicles). About 51% of the assets are considered to be in Good to Very Good condition, with the majority of the remaining assets in fair condition. No assets for Fire Services are in Very Poor condition.



Data Source: M5 and City Databases

**Major Types of Assets within Fire Services - User View**

The figures below illustrate the replacement value and condition of Fire Services assets under the user view. Under the user view illustration which also captures facilities, the replacement value is about \$158.2 million. Approximately 80% of the assets are considered to be in Good to Very Good Condition. No assets for Fire Services are in Very Poor condition.

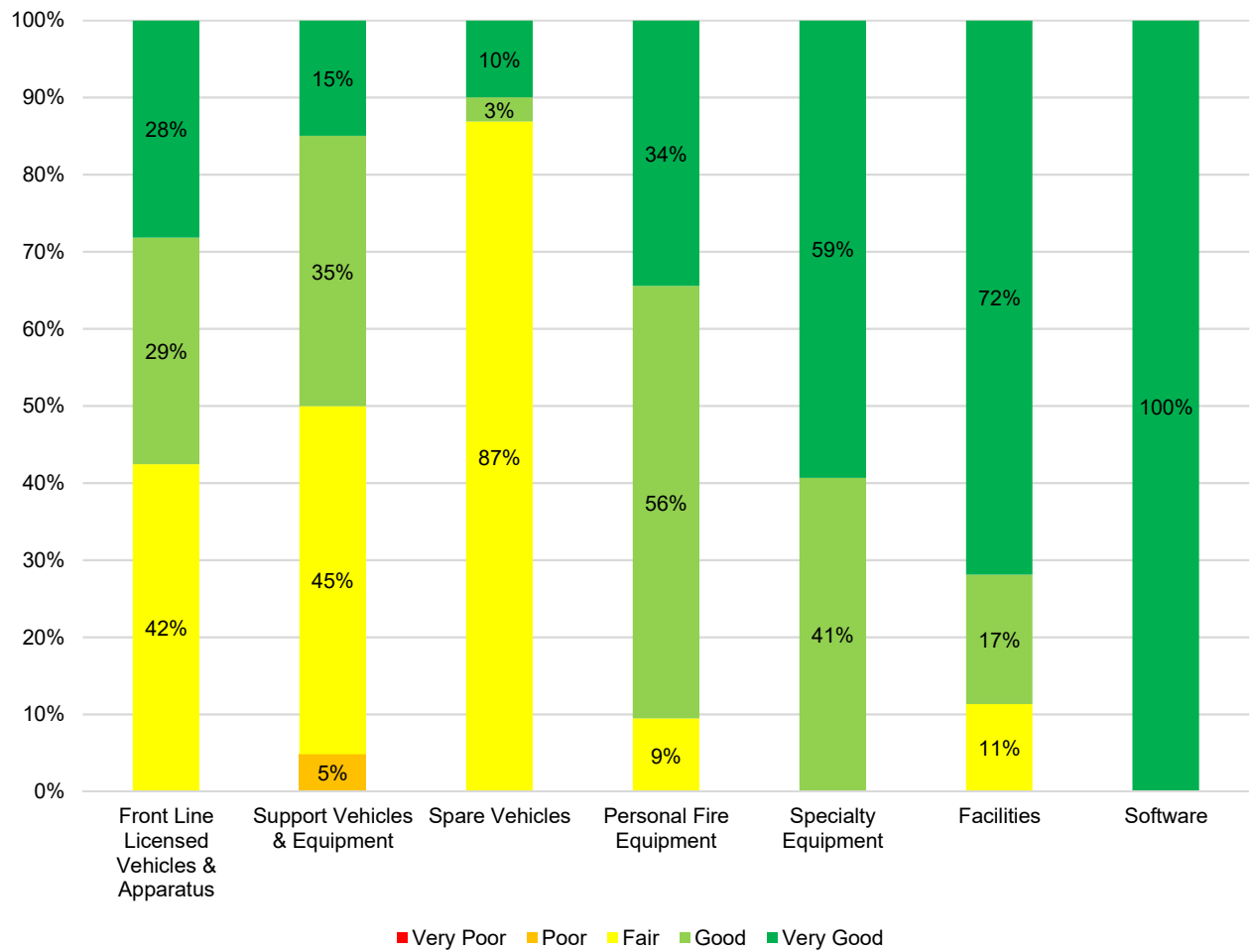


Data Source: M5, City Databases, Suncorp valuations report and recent tenders (for facility)



## Fire Services

The figure below illustrates the condition of the five sub-component assets of Fire Services. Facilities are generally in Good to Very Good condition. There are no assets in any sub-area that are in Very Poor condition. Assets in Poor condition are generally associated with a limited number of support vehicles and does not represent a safety issue or preclude fire from delivering services to meet the needs of residents.







**Comparison of 2020 vs. 2021 Inventory and Replacement Value (2022\$)**

The tables below outlines the difference in Fire Services assets in the 2020 SOLI relative to the 2021 SOLI, while considering reporting under the two different views. All values are expressed in 2022 dollars.

Under the responsibility view framework, the value of Fire Services assets has increased by about 1% from approximately \$36.3 million to \$36.9 million. This increase can be attributed to better asset data, costing information and increased confidence in the City's special equipment inventory (which is new for 2021).

When considering the Fire Services Facilities and Software, the total asset value for Fire Services increases proportionately with the inclusion of these assets. Furthermore, the total value of Fire Services assets represents an increase of less than 1% (or \$351,000) from the value reported in 2020 after inflationary adjustments.

Please note, the Facilities and IT report cards will include additional information on those assets used by Fire Services but maintained and managed by a different City department.

Asset	2020 SOLI		2021 SOLI	
Front Line Licensed Vehicles & Apparatus	21	Each	21	Each
Support Vehicles & Equipment	63	Each	65	Each
Spare Vehicles	31	Each	31	Each
Personal Fire Equipment	1,026	Each	1,078	Each
Specialty Equipment	-	Each	6	Each
Facilities	19	Each	16	Each
Software	5	Each	5	Each

*Note: the reduction in facility is related to the exclusion of station 203 paint shop and storage portables*

Asset	2020 SOLI (\$2022)	2021 SOLI (\$2022)	Difference	
<b>1. Assets Managed by Other Service Areas*</b>				
Facilities	\$ 118,298,781	\$ 118,123,549	\$ (175,231)	-0.1%
Software	\$ 3,164,595	\$ 3,164,595	\$ -	0%
<b>Subtotal Assets Managed by Other Service Areas</b>	<b>\$ 121,463,375</b>	<b>\$ 121,288,144</b>	<b>\$ (175,231)</b>	<b>0%</b>
<b>2. Assets Managed by Fire Services</b>				
Front Line Licensed Vehicles & Apparatus	\$ 19,648,682	\$ 19,648,682	\$ -	0%
Support Vehicles & Equipment	\$ 6,573,430	\$ 6,640,669	\$ 67,239	1%
Spare Vehicles	\$ 7,056,097	\$ 7,056,097	\$ -	0%
Personal Fire Equipment	\$ 3,062,150	\$ 3,019,328	\$ (42,822)	-1%
Specialty Equipment	\$ -	\$ 501,840	\$ 501,840	N/A
<b>Subtotal Assets Managed by Fire Services (Responsibility View)</b>	<b>\$ 36,340,359</b>	<b>\$ 36,866,616</b>	<b>\$ 526,257</b>	<b>1%</b>
<b>Total Replacement Value: User View (1+2)</b>	<b>\$ 157,803,734</b>	<b>\$ 158,154,760</b>	<b>\$ 351,025</b>	<b>0%</b>

\*Responsibility of managing the assets lies with another service area, but assets are used by Fire Services



<b>Total Asset Replacement Value:</b>	\$623.2 Million
<b>Total Asset Replacement Value Including Facilities, City Support Fleet and Software</b>	\$664.3 Million
<b>Future Condition Trend (Next 10 Years):</b>	Declining - As assets age they may require attention in the future
<b>Data Confidence &amp; Reliability:</b>	Age & Condition Based

The 2021 SOLI analysis continues to report assets under two different asset representation perspectives: "**Responsibility View**" and a "**User View**" representation

- Responsibility View:** Shows the assets under the service area that is responsible for managing them
- User View:** Shows the assets under the service area that is using them

While the User View shows the use of assets, the Responsibility View

- ✓ provides a direct line of sight to those assets managed by the service area;
- ✓ will help prioritize lifecycle activities managed by the service area;
- ✓ aligns with industry best practices; and
- ✓ provides guidance to future asset management planning practice and departmental initiatives.

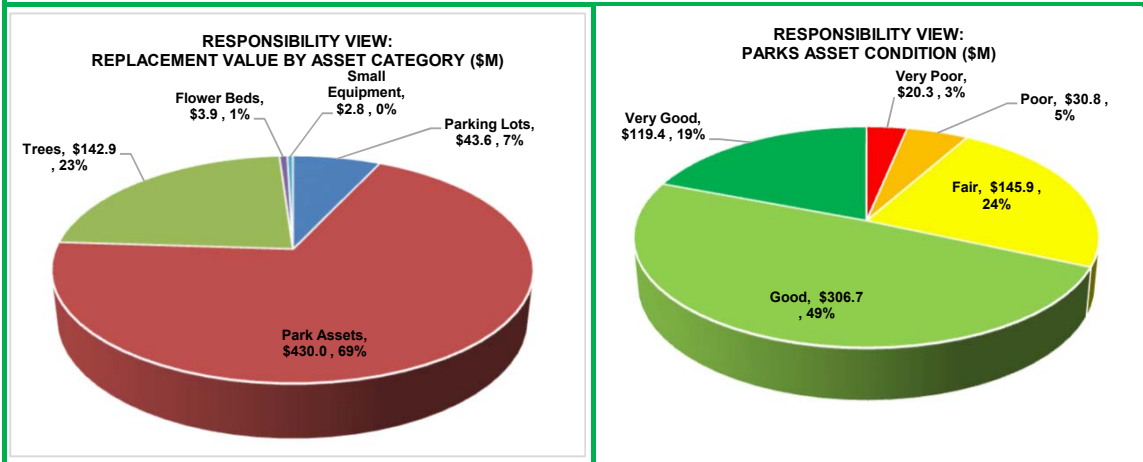
The table below illustrates the replacement value (in 2022\$) under the two different views.

Asset Type	Replacement Value (\$Millions)	Asset Inventory
<b>Assets Managed by Parks Services</b>		
Parking Lots	\$43.6	333
Small Engine Equipment	\$2.8	892
Trees	\$142.9	249,749
Flower Beds	\$3.9	1,200
<b>Park Assets</b>		
Parks	\$115.4	1,119 Hectares
Natural Heritage Lands	\$0.0	1,645 Hectares
Park Furnishing	\$3.6	4,898
Playgrounds	\$101.3	340
Shade Structures	\$34.4	290
Splash Pads & Outdoor Pools	\$3.2	8
Fitness Equipment	\$0.8	18
Skate Parks	\$1.7	4
Sports Facilities	\$127.4	1,181
Pathways	\$42.3	278,379 Metres
<i>Subtotal Assets Managed by Parks (Responsibility View)</i>	\$623.2	-
<b>Assets Managed by Other Service Areas</b>		
Parks Facilities	\$20.7	18
City Support Fleet Used by Parks	\$20.4	357
Software Used by Parks	\$0.0	1
<b>Total Replacement Value (User View)</b>	<b>\$664.3</b>	<b>-</b>



**Major Types of Assets within Parks - Responsibility View**

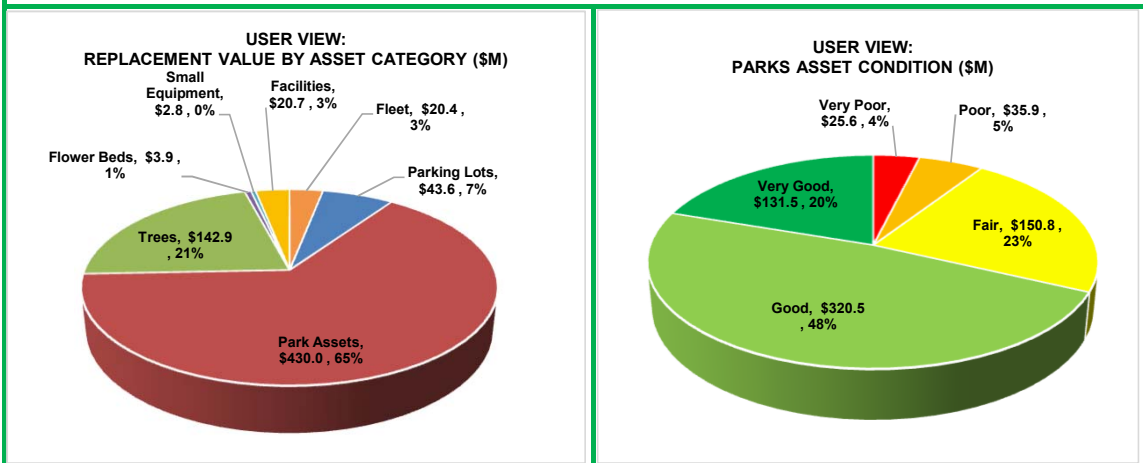
The figure on the below illustrates the replacement value and condition of Parks assets under the responsibility view. Under the responsibility view, the total replacement value of the Parks assets is \$623.2 million. Of the \$623.2 million replacement value, about 70%, or \$430.0 million, is attributed to park assets, which include sports facilities infrastructure, parkland, playgrounds, etc. Furthermore, about 23%, or \$142.9 million is attributed to trees. The remaining assets are valued as detailed below. As the Parks infrastructure is in overall Good condition, the infrastructure is meeting current needs, however, these assets may require attention as they age over time. Only about 8% of assets are considered to be in Poor and Very Poor Condition.



Data Source: Departmental Inventories, GIS database, City of Brampton 2019 DC Background Study

**Major Types of Assets within Parks - User View**

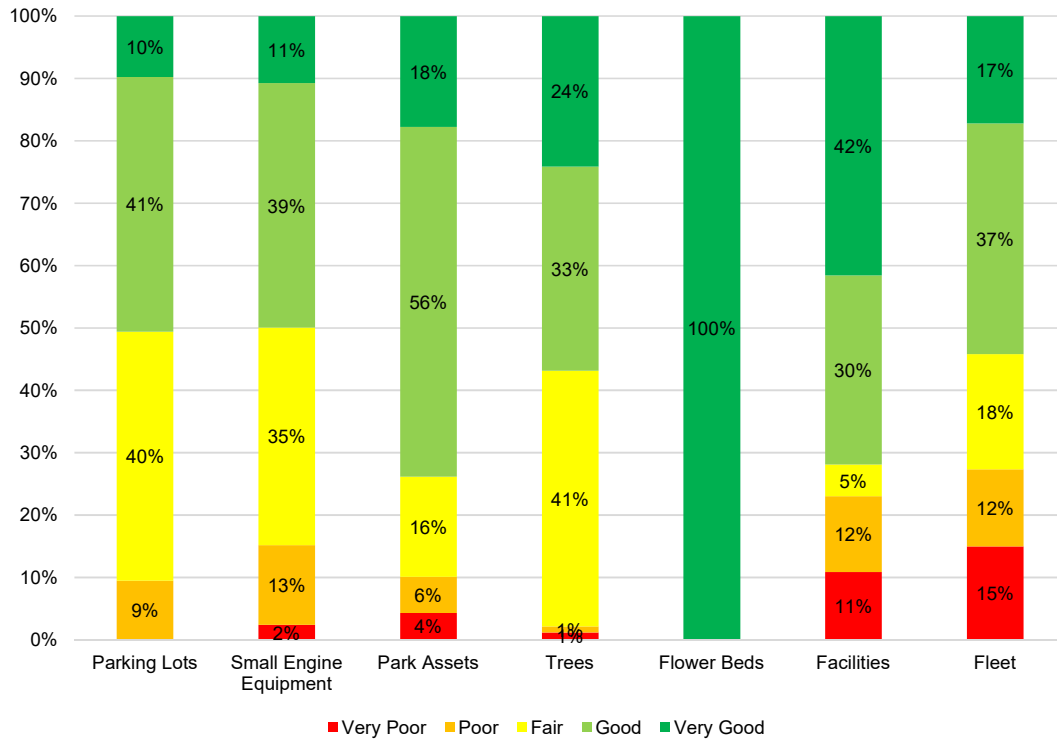
The figures below illustrate the replacement value and condition of Parks assets under the user view. Under the user view illustration which also captures facilities, fleet and software, the replacement value is about \$663.1 million. Of this total, the Park Assets continue to represent the largest share at \$430.0 million of the assets considered. Facilities assets add \$20.7 million to the total replacement value while Fleet adds \$20.4 million. Approximately 68% of the assets used by Parks are considered to be in Good to Very Good Condition. Only 3% of assets are in Very Poor condition, largely related to walls, curbs and fences in parks, trees and fleet. This condition assessment does not mean the assets are unsafe.





## Parks

The figure below illustrates the condition of the various Parks assets by key sub-component areas based on the user view. While the assets are generally in Good to Very Good condition, a small portion of Park Assets, Trees, Small Engine Equipment, Park Assets and Fleet are in Very Poor condition. These condition assessments do not indicate that the assets are unsafe; generally these assets are nearing the end of their useful life and are due for replacement in the near future. Poor and Very Poor condition assessments do not represent a safety issue or preclude service areas from delivering services to meet the needs of residents and will be addressed through the budget.





**Comparison of 2021 vs. 2020 Inventory and Replacement Value (2022\$)**

The tables below outline the difference in Parks assets in the 2021 SOLI relative to the 2020 SOLI while considering reporting under the two different views. Please note, all values are expressed in 2022 dollars.

Under the responsibility view framework, the total value of Parks assets has increased by 18% from approximately \$527.8 million to \$623.2 million. This increase can generally be attributed to better costing information as part of the 2021 SOLI as well as better asset data (especially as it pertains to Parkland, which is more accurately reflected as part of this analysis relative to 2020).

When considering the facilities, fleet and IT assets, the total value has increased by \$95.4 million from the value reported in 2020 after inflationary adjustments. This again is attributed to better asset information for various categories included as part of the 2021 SOLI.

Please note that Facilities, City Support Fleet and IT report cards include additional information on those assets used by Parks but maintained and managed by different City departments.

Asset	2020 SOLI		2021 SOLI	
Parking Lots	333	Pooled	333	Pooled
Small Equipment	716	Each	892	Each
Trees	249,749	Each	249,749	Each
Flower Beds	1,200	Each	1,200	Each
<b>Park Assets</b>				
Parkland (Excluding Natural Heritage Lands)**	676	Hectares	1,119	Hectares
Natural Heritage Lands	1,653	Hectares	1,645	Hectares
Park Furnishing	4,405	Each	4,898	Each
Playgrounds	332	Each	340	Each
Shade Structures	310	Each	290	Each
Splash Pads & Outdoor Pools	8	Each	8	Each
Fitness Equipment	18	Each	18	Each
Skate Parks	4	Each	4	Each
Sports Facilities	1,180	Each	1,181	Each
Pathways	278,379	Metres	278,379	Metres
Facilities	16	Each	18	Each
Fleet	319	Each	357	Each
Software	1	Each	1	Each

Asset	2020 SOLI (\$2022)	2021 SOLI (\$2022)	Difference	
<b>1. Assets Managed by Other Service Areas*</b>				
Facilities	\$ 18,108,553	\$ 20,723,422	\$ 2,614,868	14%
Fleet	\$ 17,689,064	\$ 20,350,325	\$ 2,661,262	15%
Software	\$ -	\$ -	\$ -	0%
<b>Subtotal Assets Managed by Other Service Areas</b>	<b>\$ 35,797,617</b>	<b>\$ 41,073,747</b>	<b>\$ 5,276,130</b>	<b>15%</b>
<b>2. Assets Managed by Parks Services</b>				
Parking Lots	\$ 15,331,786	\$ 43,646,809	\$ 28,315,023	185%
Small Equipment	\$ 2,354,799	\$ 2,761,877	\$ 407,078	17%
Trees	\$ 132,517,818	\$ 142,911,373	\$ 10,393,554	8%
Flower Beds	\$ 3,870,288	\$ 3,870,288	\$ -	0%
<b>Park Assets</b>				
Parkland (Excluding Natural Heritage Lands)**	\$ 69,758,543	\$ 115,371,049	\$ 45,612,506	65%
Natural Heritage Lands	\$ -	\$ -	\$ -	0%
Park Furnishing	\$ 3,091,132	\$ 3,557,856	\$ 466,723	15%
Playgrounds	\$ 87,496,600	\$ 101,288,280	\$ 13,791,680	16%
Shade Structures	\$ 37,067,253	\$ 34,382,396	\$ (2,684,856)	-7%
Splash Pads & Outdoor Pools	\$ 3,236,684	\$ 3,236,684	\$ -	0%
Fitness Equipment	\$ 691,597	\$ 795,906	\$ 104,309	15%
Skate Parks	\$ 1,697,933	\$ 1,697,933	\$ -	0%
Sports Facilities	\$ 122,524,527	\$ 127,425,724	\$ 4,901,197	4%
Pathways	\$ 48,209,718	\$ 42,270,713	\$ (5,939,006)	-12%
<b>Subtotal Assets Managed by Parks Services (Responsibility View)</b>	<b>\$ 527,848,678</b>	<b>\$ 623,216,887</b>	<b>\$ 95,368,209</b>	<b>18%</b>
<b>Total Replacement Value: User View (1+2)</b>	<b>\$ 563,646,295</b>	<b>\$ 664,290,634</b>	<b>\$ 100,644,339</b>	<b>18%</b>

\*Responsibility of managing the assets lies with another service area, but assets are used by Parks

\*\* 2020 SOLI did not fully capture all Parkland and has been updated to reflect actual values as part of the 2021 SOLI



<b>Total Asset Replacement Value:</b>	\$46.30 Million
<b>Total Asset Replacement Value Including Facilities, City Support Fleet and Software:</b>	\$677.3 Million
<b>Future Condition Trend (Next 10 Years):</b>	Declining - As assets age they may require attention in the future
<b>Data Confidence &amp; Reliability:</b>	Age & Condition Based

The 2021 SOLI analysis continues to report assets under two different asset representation perspectives: "**Responsibility View**" and "**User View**" representation

- Responsibility View:** Shows the assets under the service area that is responsible for managing them
- User View:** Shows the assets under the service area that is using them

While the User View shows the use of assets, the Responsibility View:

- ✓ provides a direct line of sight to those assets managed by the service area;
- ✓ will help prioritize lifecycle activities managed by the service area;
- ✓ aligns with industry best practices; and
- ✓ provides guidance to future asset management planning practice and departmental initiatives.

The table below illustrates the replacement value (in 2022\$) under the two different views.

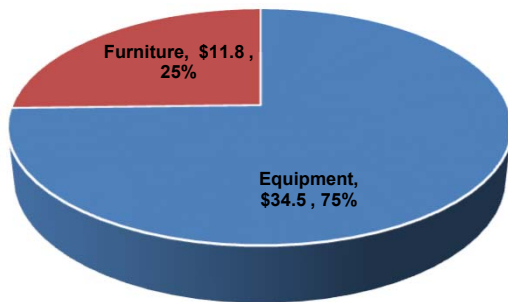
Asset Type	Replacement Value (\$Millions)	Asset Inventory
<b>Assets Managed by Recreation</b>		
Equipment	\$34.5	3,012
Furniture	\$11.8	303
<i>Subtotal Assets Managed by Recreation (Responsibility View)</i>	\$46.3	3,315
<b>Assets Managed by Other Service Areas</b>		
<i>Recreation Facilities</i>	\$626.9	68
<i>City Support Fleet Used by Recreation</i>	\$3.8	129
<i>Software Used by Recreation</i>	\$0.3	3
<b>Total Replacement Value (User View)</b>	<b>\$677.3</b>	-



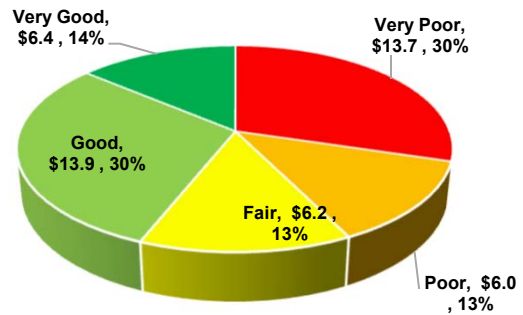
### Major Types of Assets within Recreation - Responsibility View

The figures below illustrate the replacement value and condition of Recreation assets under the responsibility view. Under this view, the total replacement value of assets is \$46.3 million. As part of the 2021 SOLI, only equipment and furniture are considered under the management of this service area. Overall, the Recreation assets are in Fair condition, although, about 44% of the total asset base is rated in Poor to Very Poor condition. The determination of condition for recreation assets is mainly "age based" meaning the condition is set relative to the remaining useful life of the asset. It is expected that future iterations of the SOLI will look to further incorporate condition based assessments which may improve the overall confidence and reliability of the identified condition ratings.

**RESPONSIBILITY VIEW:  
REPLACEMENT VALUE BY ASSET  
CATEGORY (\$M)**



**RESPONSIBILITY VIEW:  
RECREATION ASSET CONDITION  
(\$M)**



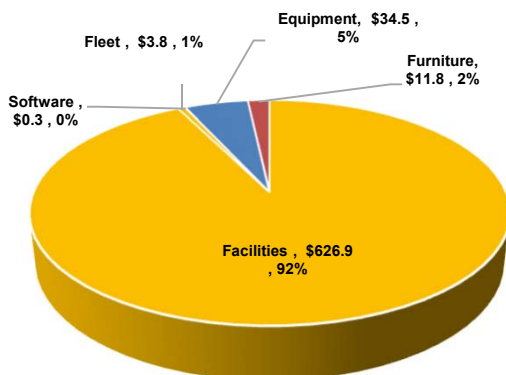
Data Source: PSAB data and historical budgets

### Major Types of Assets within Recreation - User View

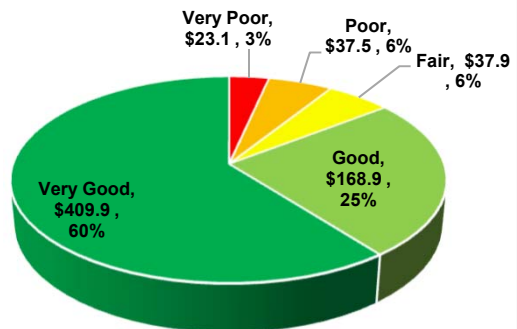
The figures below illustrate the replacement value and condition of Recreation assets under the user view. Under the user view illustration, which also captures facilities, fleet and software, the replacement value is about \$676.9 million. Of this total, the Recreation facilities represent the largest share at \$626.9 million. Approximately 85% of the assets are considered to be in Good to Very Good Condition. Only 3% of assets are in Very Poor condition.

It is important to note, that the proportion of assets considered to be in Poor condition can be attributed to some of the Recreation facilities, although, the facilities continue to be operational and safe for use and these facilities will be addressed through the budget as required.

**USER VIEW:  
REPLACEMENT VALUE BY ASSET  
CATEGORY (\$M)**



**USER VIEW:  
RECREATION ASSET CONDITION (\$M)**

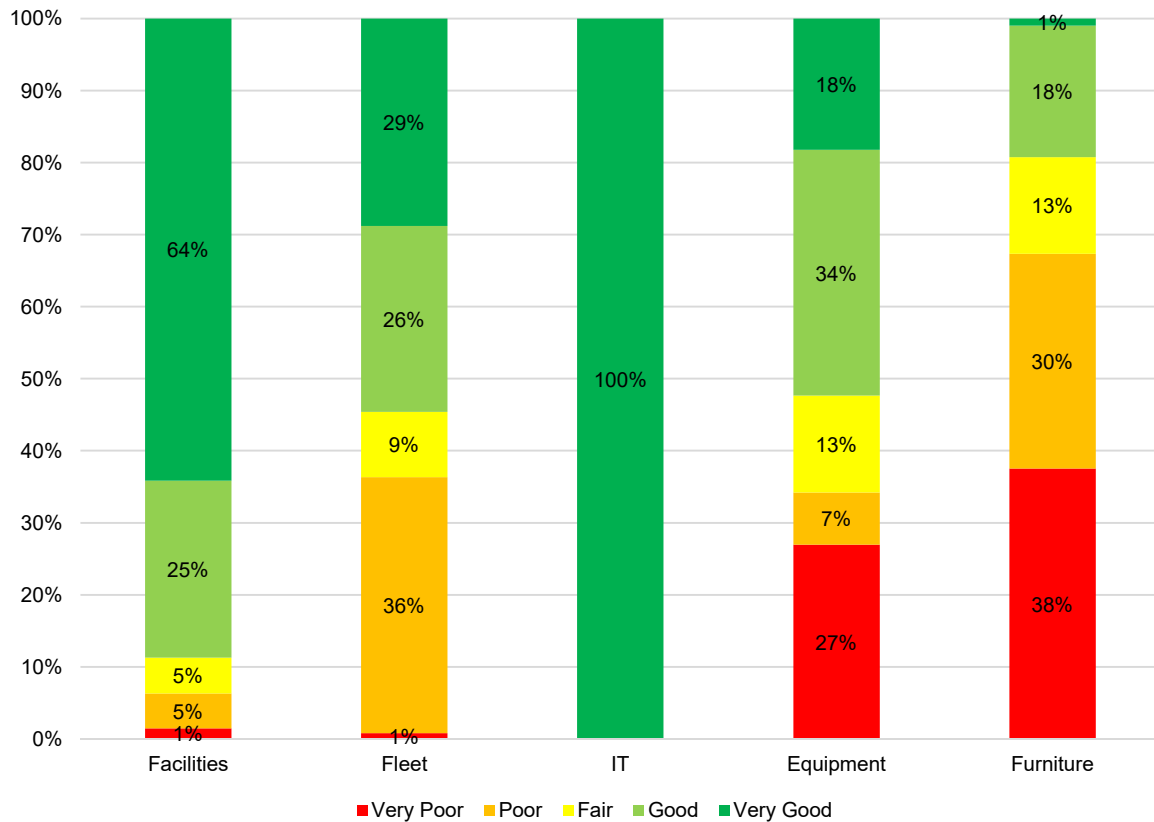






## Recreation

The figure below illustrates the condition of the various Recreation assets by key sub-component areas based on the user view. While the assets are generally in Good to Very Good condition, Equipment & Furniture have assets in Poor and Very Poor condition based on age. Approximately 37% of Fleet are also in Poor or Very Poor condition. Assets that are reported in Very Poor condition are based on the age of the asset and not necessarily reflect the actual asset condition. The City is implementing Asset Information Management Strategy (AIMS) project which will advance its asset management practices and improve confidence and reliability in data including condition.







**Comparison of 2021 vs. 2020 Inventory and Replacement Value (2022\$)**

The tables below outline the difference in Recreation assets in the 2021 SOLI relative to the 2020 SOLI, while considering reporting under the two different views. Please note, all values are expressed in 2022 dollars.

Under the responsibility view framework, the total value of Recreation assets has increased by 4% from approximately \$44.1 million to \$46.0 million.

When considering the Recreation Facilities, City Support Fleet and IT assets, the total asset value for Recreation has increased proportionately with the inclusion of these assets. In total, the value of Recreation managed assets increased by 7% (or \$43.4 million) from the value reported in 2020 after inflationary adjustments.

Please note, the Facilities, City Support Fleet and IT report cards will include additional information on those assets used by Recreation but maintained and managed by these different City departments.

Asset		2020 SOLI*		2021 SOLI	
Facilities	Each	73	Each	68	Each
Fleet	Each	135	Each	129	Each
Software	Each	3	Each	3	Each
Equipment	Each	3,002	Each	3,012	Each
Furniture		303	Each	303	Each

\*2020 SOLI Software and Facility count has been corrected for comparison

Asset	2020 SOLI (\$2022)	2021 SOLI (\$2022)	Difference	
<b>1. Assets Managed by Other Service Areas*</b>				
Facilities	\$ 584,875,990	\$ 626,924,411	\$ 42,048,421	7%
Fleet	\$ 4,315,855	\$ 3,752,966	\$ (562,889)	-13%
Software	\$ 309,519	\$ 309,519	\$ -	0%
<b>Subtotal Assets Managed by Other Service Areas</b>	<b>\$ 589,501,364</b>	<b>\$ 630,986,896</b>	<b>\$ 41,485,532</b>	<b>8%</b>
<b>2. Assets Managed by Recreation</b>				
Equipment	\$ 32,292,556	\$ 34,190,648	\$ 1,898,092	6%
Furniture	\$ 11,759,592	\$ 11,759,592	\$ -	0%
<b>Subtotal Assets Managed by Recreation - Responsibility View</b>	<b>\$ 44,052,148</b>	<b>\$ 45,950,239</b>	<b>\$ 1,898,092</b>	<b>4%</b>
<b>Total Replacement Value - User View (1+2)</b>	<b>\$ 633,553,511</b>	<b>\$ 676,937,135</b>	<b>\$ 43,383,624</b>	<b>7%</b>

\*Responsibility of managing the assets lies with another service area, but assets are used by Recreation



<b>Total Asset Replacement Value:</b>	\$18.7 Million
<b>Total Asset Replacement Value Including Facilities, City Support Fleet and Software:</b>	\$110.1 Million
<b>Future Condition Trend (Next 10 Years):</b>	Declining - As assets age they may require attention in the future
<b>Data Confidence &amp; Reliability:</b>	Age and Condition Based

The 2021 SOLI analysis continues to report assets under two different asset representation perspectives: "Responsibility View" and a "User View".

**Responsibility View:** Shows the assets under the service area that is responsible for managing them

**User View:** Shows the assets under the service area that is using them

While the User View shows the use of assets, the Responsibility View:

- ✓ provides a direct line of sight to those assets managed by the service area;
- ✓ will help prioritize lifecycle activities managed by the service area;
- ✓ aligns with industry best practices; and
- ✓ provides guidance to future asset management planning practice and departmental initiatives.

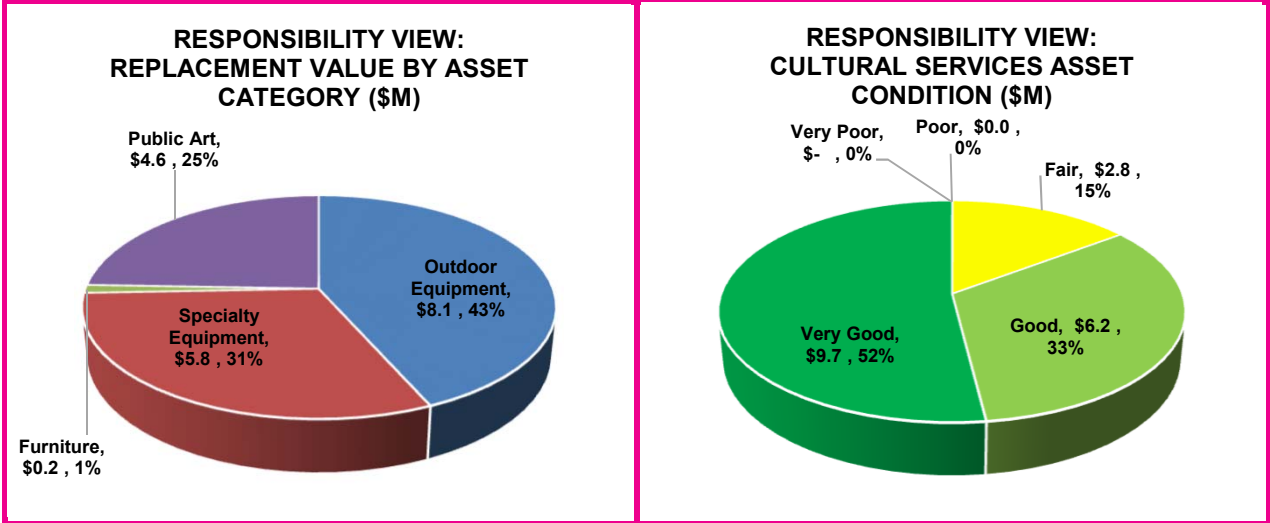
The table below illustrates the replacement value (in 2022\$) under the two different views.

Asset Type	Replacement Value (\$Millions)	Asset Inventory
<b>Assets Managed by Cultural Services</b>		
Outdoor Equipment	\$8.1	Pooled
Specialty Equipment	\$5.8	5,283
Furniture	\$0.2	614
Public Art	\$4.6	28
<i>Subtotal Assets Managed by Cultural Services (Responsibility View)</i>	<i>\$18.7</i>	<i>-</i>
<b>Assets Managed by Other Service Areas</b>		
<i>Cultural Services Facilities</i>	<i>\$90.9</i>	<i>2</i>
<i>City Support Fleet Used by Cultural Services</i>	<i>\$0.5</i>	<i>14</i>
<b>Total Replacement Value (User View)</b>	<b>\$110.1</b>	<b>-</b>



**Major Types of Assets within Cultural Services - Responsibility View**

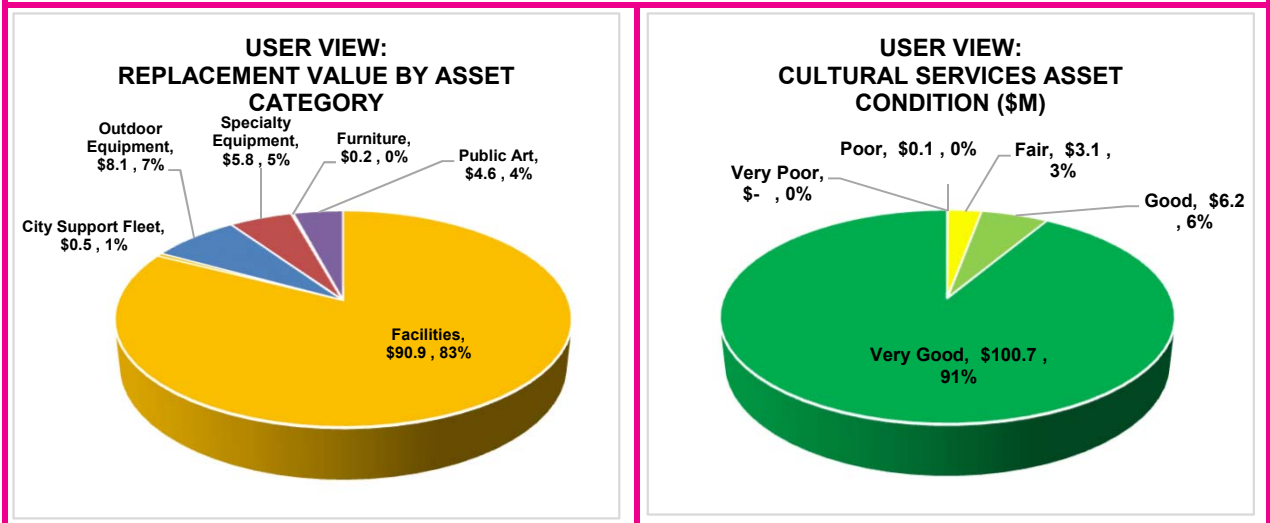
The figure below illustrates the replacement value and condition of Cultural Services assets under the responsibility view. Under this responsibility view, the total replacement value of assets is \$18.7 million. Of this total, approximately 43% is associated with outdoor equipment with a further 31% related to speciality equipment. About 85% of assets are considered to be in Good to Very Good condition, with the remaining assets in Fair condition. As the City's Cultural Services assets are overall in Good condition, these assets are meeting current needs.



Data Source: Departmental Inventory

**Major Types of Assets within Cultural Services - User View**

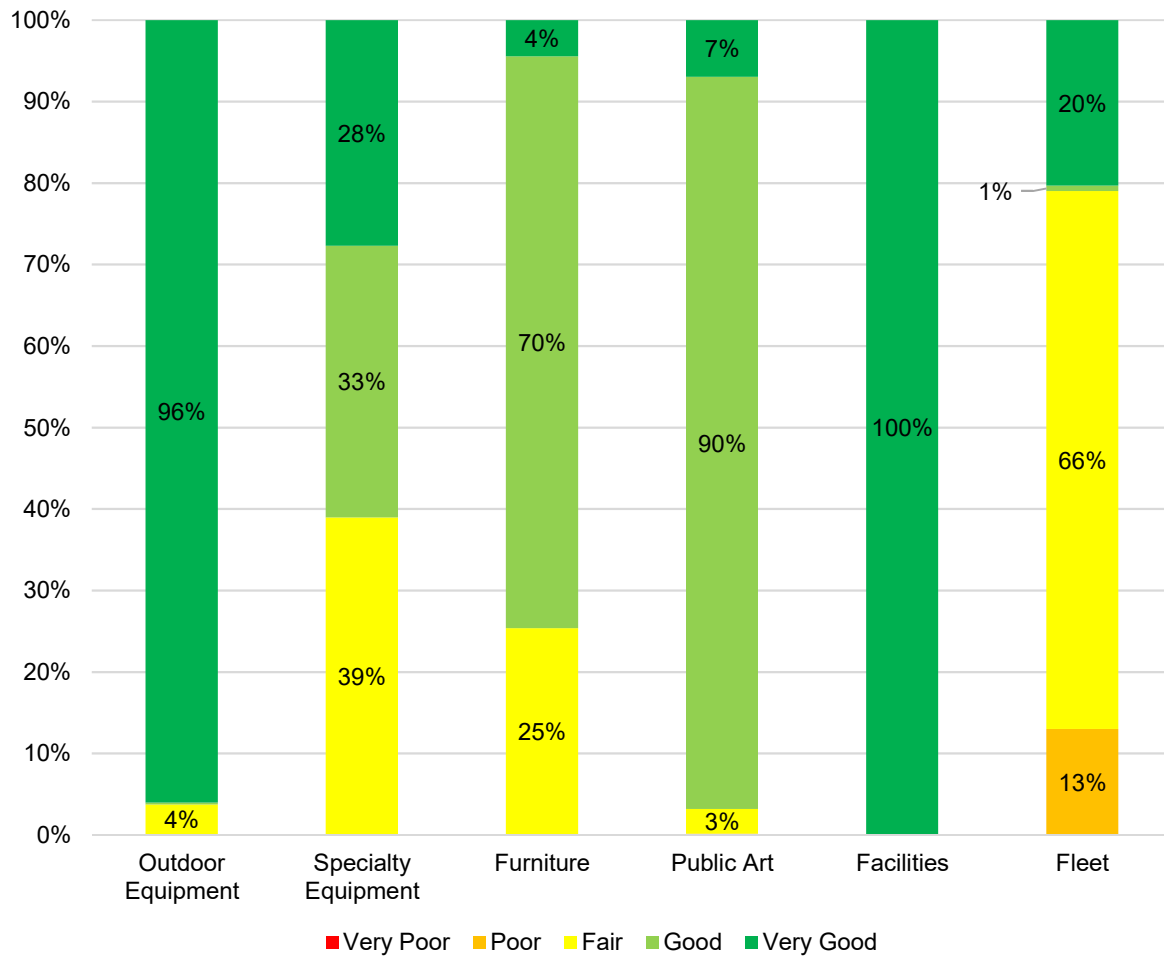
The figures below illustrate the replacement value and condition of Cultural Services assets under the user view. Under the user view illustration, which also captures facilities, City support fleet and software, the replacement value is about \$110.1 million. Of this total, the Cultural Services facilities represent the largest share at \$90.9 million. Approximately 97% of the assets are considered to be in Good to Very Good Condition. No assets are in Very Poor condition.





## Cultural Services

The figure below illustrates the condition of the various Cultural Services assets by key sub-component areas based on the user view. Most asset categories are all generally considered to be in Good or Very Good Condition. About 13% of Fleet assets are considered to be in Poor condition as they reach the end of their service life and will be replaced.





**Comparison of 2021 vs. 2020 Inventory and Replacement Value (All Costs in 2022\$)**

The tables below outline the difference in Cultural Services assets in the 2021 SOLI relative to the 2020 SOLI, while considering reporting under the two different views. Please note, all values are expressed in 2022 dollars.

Under the responsibility view framework, the total value of Cultural Services assets has increased by 40% from approximately \$13.4 million to \$18.7 million. This increase can be attributed to better asset data within outdoor equipment and public art. Please note, the replacement value reduction in specialty equipment can generally be attributed to a recategorization of specific assets from specialty equipment to outdoor equipment.

When considering the Cultural Services Facilities, City Support Fleet and IT assets, the total asset value for Cultural Services has increased proportionately with the inclusion of these assets. Furthermore, the total value of Cultural Services assets increased by about 6% from the value reported in 2020.

Please note, the Facilities, City Support Fleet and IT report cards will include additional information on those assets used by Cultural Services but maintained and managed by a different City department.

Asset	2020 SOLI		2021 SOLI	
Outdoor Equipment	Pooled		Pooled	
Specialty Equipment	2,699	Each	5,283	Each
Furniture	424	Each	614	Each
Public Art	25	Each	28	Each
Facilities	1	Each	1	Each
Fleet	9	Each	7	Each
Software	1	Each	1	Each

Asset	2020 SOLI (\$2022)	2021 SOLI (\$2022)	Difference	
<b>1. Assets Managed by Other Service Areas*</b>				
Facilities	\$ 90,274,280	\$ 90,902,704	628,424	1%
City Support Fleet	\$ 668,449	\$ 542,048	(126,401)	-19%
IT	\$ -	\$ -	-	N/A
<b>Subtotal Assets Managed by Other Service Areas</b>	<b>\$ 90,942,729</b>	<b>\$ 91,444,752</b>	<b>502,023</b>	<b>1%</b>
<b>2. Assets Managed by Cultural Services</b>				
Outdoor Equipment	\$ 1,780,601	\$ 8,107,462	\$ 6,326,861	355%
Specialty Equipment	\$ 10,527,689	\$ 5,803,313	\$ (4,724,377)	-45%
Furniture	\$ 211,101	\$ 219,203	\$ 8,102	4%
Public Art	\$ 862,204	\$ 4,570,582	\$ 3,708,378	430%
<b>Subtotal Assets Managed by Cultural Services (Responsibility View)</b>	<b>\$ 13,381,595</b>	<b>\$ 18,700,559</b>	<b>\$ 5,318,964</b>	<b>40%</b>
<b>Total Replacement Value: User View (1+2)</b>	<b>\$ 104,324,324</b>	<b>\$ 110,145,311</b>	<b>\$ 5,820,987</b>	<b>6%</b>

\*Responsibility of managing the assets lies with another service area, but assets are used by Cultural Services



<b>Asset Replacement Value:</b>	\$20.5 Million
<b>Total Asset Replacement Value including Facilities and City-Support Fleet:</b>	\$109.4 Million
<b>Future Condition Trend (Next 10 Years):</b>	Declining – As assets age they may require attention in the future
<b>Data Confidence &amp; Reliability:</b>	Age and Condition Based

The 2021 SOLI analysis continues to report assets under two different asset representation perspectives: "**Responsibility View**" and "**User View**"

- Responsibility View:** Shows the assets under the service area that is responsible for managing them
- User View:** Shows the assets under the service area that is using them

While the User View shows the use of assets, the Responsibility View:

- ✓ provides a direct line of sight to those assets managed by the service area;
- ✓ will help prioritize lifecycle activities managed by the service area;
- ✓ aligns with industry best practices; and
- ✓ provides guidance to future asset management planning practice and departmental initiatives.

The table below illustrates the replacement value (in 2022\$) under the two different views.

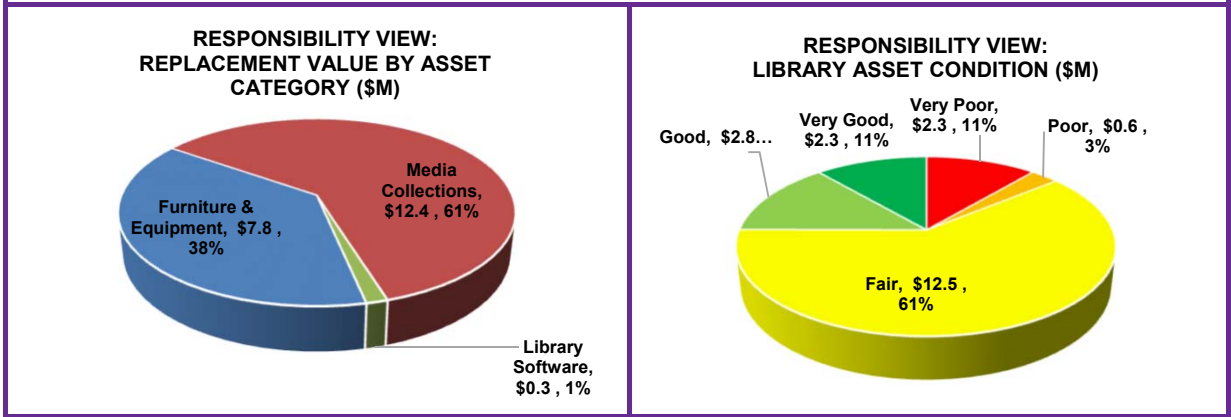
Asset Type	Replacement Value (\$Millions)	Asset Inventory
<b>Assets Managed by Library</b>		
Furniture and Equipment	\$7.8	6,842
Media Collections	\$12.4	Pooled
Library Software	\$0.3	18
<i>Subtotal Assets Managed by Library (Responsibility View)</i>	<i>\$20.5</i>	<i>-</i>
<b>Assets Managed by Other Service Areas</b>		
<i>Library Facilities</i>	<i>\$88.7</i>	<i>6</i>
<i>City Support Fleet Used by Library</i>	<i>\$0.1</i>	<i>4</i>
<b>Total Replacement Value (User View)</b>	<b>\$109.4</b>	<b>-</b>

The Library facility figure reported includes the four (4) standalone library branches as well as two (2) libraries located within Recreation Facilities (Gore Meadows Community Centre and Susan Fennel Sportslex (formerly South Fletchers Sports Complex)). The library portion of those shared facilities are included in the above facilities total of \$88.7 million.



**Major Types of Assets within Brampton Library - Responsibility View**

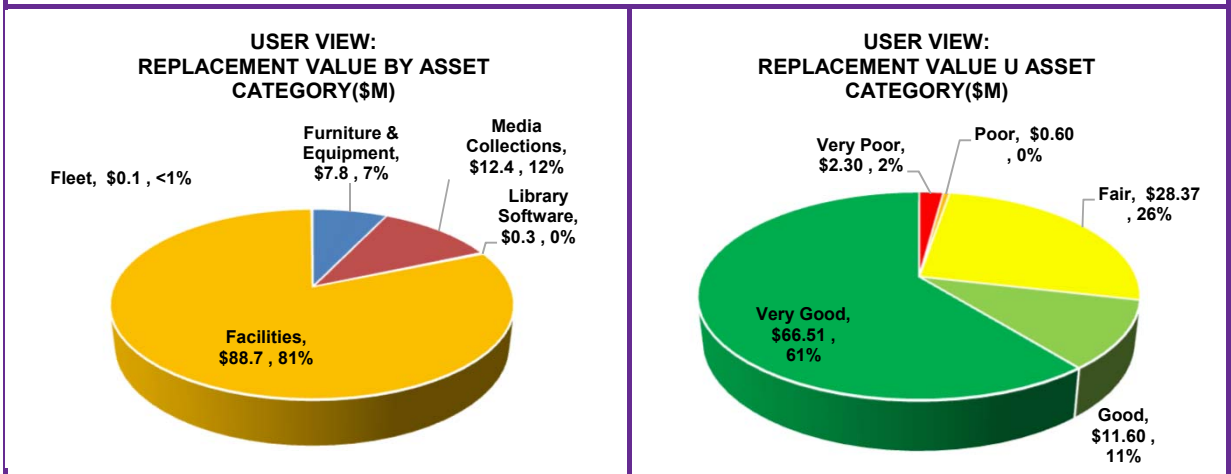
The figure below illustrates the replacement value and condition of Library service assets under the responsibility view. Under the responsibility view, the total replacement value of the Library assets is \$20.5 million. Of the \$20.5 million replacement value, about 61%, or \$12.4 million, is attributed to Media Collections. Furthermore, about 38%, or \$7.8 million is attributed to Furniture and Equipment, while the remaining \$305,000 is related to Library Software. 14% of the total assets managed by Library services are identified in Very Poor or Poor condition. This condition of a small subset of the total Library assets does not represent a safety issue or preclude Brampton Library from delivering services to meet the needs of residents



Data Source: PSAB data and consultation with Library staff

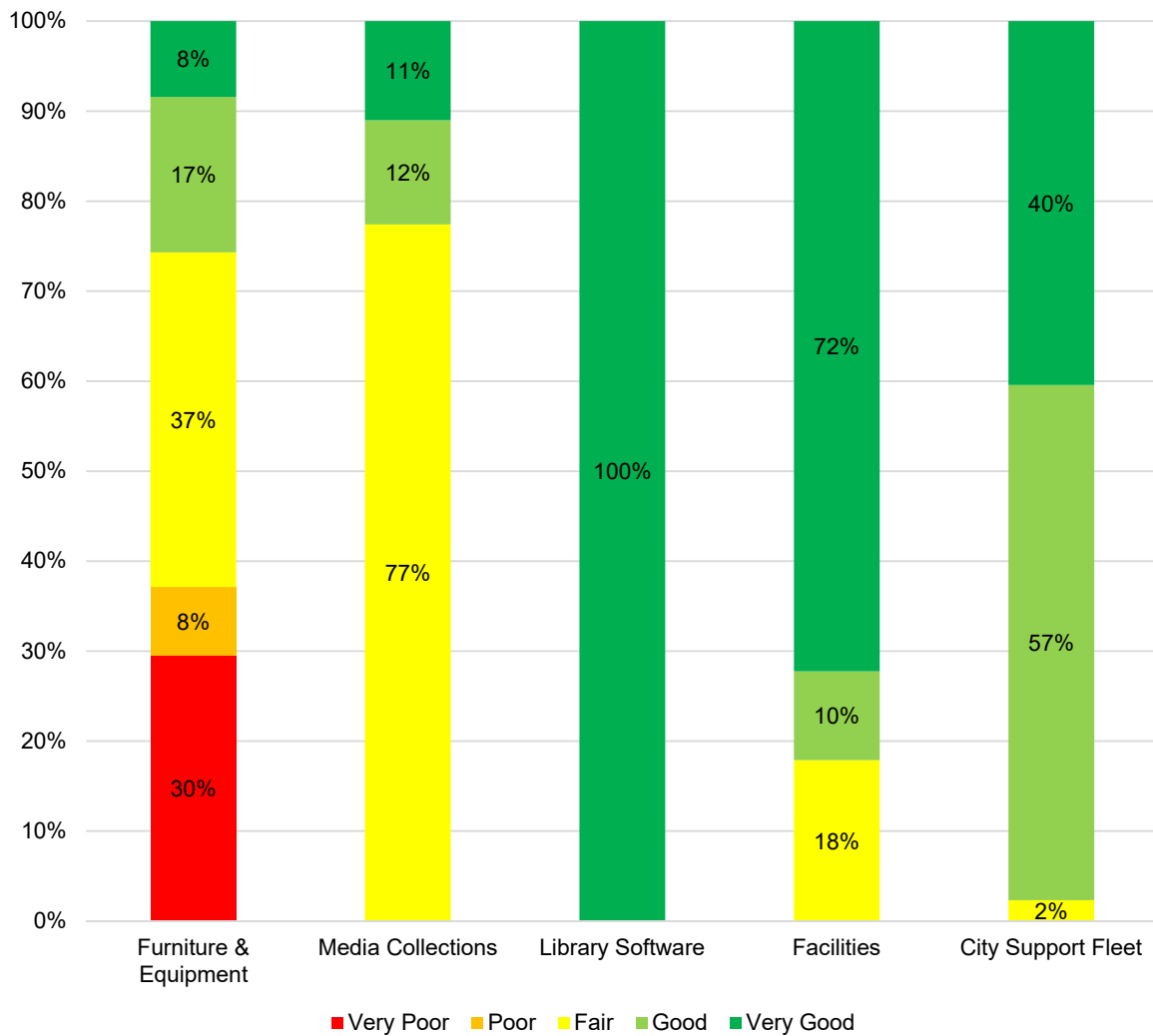
**Major Types of Assets within Brampton Library - User View**

The figures below illustrates the replacement value and condition of Library service assets under the user view. Under the user view illustration which captures facilities and city support fleet, the replacement value increases to \$109.4 million from \$20.5 million reported under the responsibility view framework. Of this total \$109.4 million, the Library facilities represent the largest component at \$88.7 million. Over 70% of the Library's assets are considered to be in Good to Very Good condition, with the remaining assets close to, or past, the end of their service life.





The figure below illustrates the condition of the various Library service assets by key sub-component areas. While the assets are cumulatively in Good condition, Furniture and Equipment have a significant component of assets in Poor or Very Poor condition. Lastly, all Library Software assets and most facilities are in Very Good Condition.







**Comparison of 2021 vs. 2020 Inventory and Replacement Value (All Costs in \$2022)**

The tables below outline the difference in Library assets in the 2021 SOLI relative to the 2020 SOLI while considering reporting under the two different views. Please note, all values are expressed in 2022 dollars.

Looking only at those assets included under the responsibility view framework, the total value of Library Services has increased by 6% from approximately \$19.4 million to \$20.5 million. This increase can generally be attributed to media collections.

Including the Library Facility and City Support Fleet assets, the total asset value for Library Services has increased proportionately with those assets. In total, the value of library assets has increased by 6% (or \$6.3 million) from 2020. This increase can largely be attributed to the valuations of City Library facilities.

Please note, the Facilities and City Support Fleet report cards will include additional information on those assets used by Library but maintained and managed by a different city department.

Asset	2020 SOLI		2021 SOLI	
Furniture & Equipment	6,882	Each	6,842	Each
Media Collections	Pooled		Pooled	
Library Software	19	Each	18	Each
Facilities	6	Each	6	Each
Fleet	5	Each	4	Each

Asset	2020 SOLI (\$2022)	2021 SOLI (\$2022)	Difference	
<b>1. Assets Managed by Other Service Areas*</b>				
Facilities	\$ 83,528,891	\$ 88,728,313	\$ 5,199,421	6%
Fleet	\$ 174,448	\$ 138,459	\$ (35,989)	-21%
<b>Subtotal Assets Managed by Other Service Areas</b>	<b>\$ 83,703,339</b>	<b>\$ 88,866,771</b>	<b>\$ 5,163,432</b>	<b>6%</b>
<b>2. Assets Managed by Library</b>				
Furniture & Equipment	\$ 8,165,843	\$ 7,794,516	\$ (371,327)	-5%
Media Collections	\$ 10,878,949	\$ 12,406,648	\$ 1,527,698	14%
Library Software	\$ 352,617	\$ 305,420	\$ (47,197)	-13%
<b>Subtotal Assets Managed by Library (Responsibility View)</b>	<b>\$ 19,397,409</b>	<b>\$ 20,506,584</b>	<b>\$ 1,109,175</b>	<b>6%</b>
<b>Total Replacement Value: User View (1+2)</b>	<b>\$ 103,100,748</b>	<b>\$ 109,373,355</b>	<b>\$ 6,272,607</b>	<b>6%</b>

\*Responsibility of managing the assets lies with another service area, but assets are used by Library Services



<b>Total Asset Replacement Value:</b>	\$300,400
<b>Total Asset Replacement Value Including Facilities, City Support Fleet and Software</b>	\$11.0 Million
<b>Future Condition Trend (Next 10 Years):</b>	Declining - As assets age they may require attention in the future
<b>Data Confidence &amp; Reliability:</b>	Medium (Condition Based)

The 2021 SOLI analysis continues to report assets under two different asset representation perspectives: "Responsibility View" and a "User View" representation

- Responsibility View:** Shows the assets under the service area that is responsible for managing them
- User View:** Shows the assets under the service area that is using them

While the User View shows the use of assets, the Responsibility View

- ✓ provides a direct line of sight to those assets managed by the service area;
- ✓ will help prioritize lifecycle activities managed by the service area;
- ✓ aligns with industry best practices; and
- ✓ provides guidance to future asset management planning practice and departmental initiatives.

The table below illustrates the replacement value (in 2022\$) under the two different views.

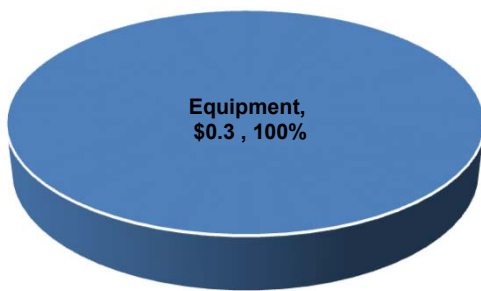
Asset Type	Replacement Value (\$Millions)	Asset Inventory
<b>Assets Managed by Animal Services</b>		
Equipment	\$0.3	143
<i>Subtotal Assets Managed by Animal Services (Responsibility View)</i>	\$0.3	143
<b>Assets Managed by Other Service Areas</b>		
<i>Animal Services Facilities <sup>(1)</sup></i>	\$9.4	2
<i>City Support Fleet Used by Animal Services</i>	\$1.0	13
<i>Software Used by Animal Services</i>	\$0.2	1
<b>Total Replacement Value (User View)</b>	<b>\$11.0</b>	<b>-</b>



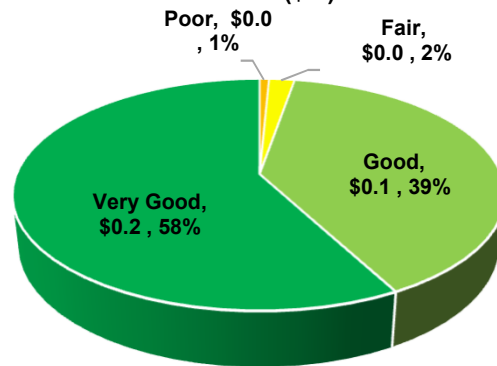
**Major Types of Assets within Animal Services - Responsibility View**

The figure below illustrates the replacement value and condition of Animal Services assets under the responsibility view. Under this view, the total replacement value of assets is \$300,400. As part of the 2021 SOLI, only Animal Services equipment is considered under the management of the service area and therefore makes up the entire replacement value. Overall, the Animal Services assets are in Very Good condition with about 1% of the total asset rated in Poor condition.

**RESPONSIBILITY VIEW:  
REPLACEMENT VALUE BY ASSET  
CATEGORY (\$M)**



**RESPONSIBILITY VIEW:  
ANIMAL SERVICES ASSET CONDITION  
(\$M)**



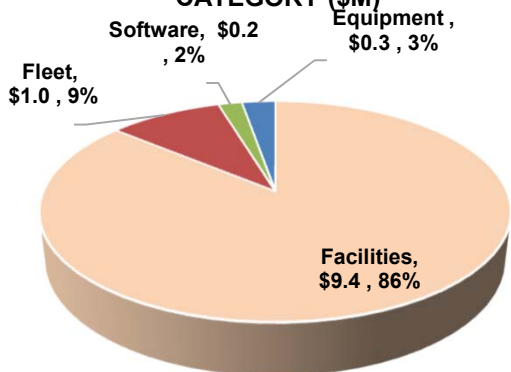
Data Source: Departmental Inventory, PSAB data as of year-end 2021

**Major Types of Assets within Animal Services - User View**

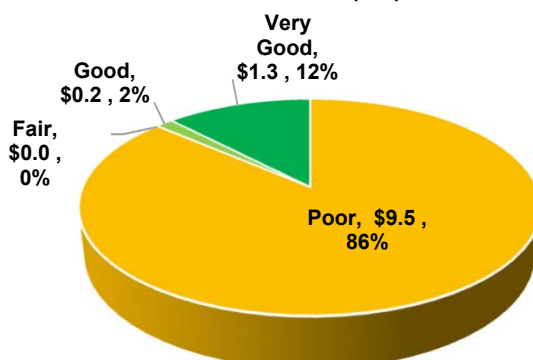
The figures below illustrate the replacement value and condition of Animal Services assets under the user view. Under the user view illustration, which also captures facilities, City support fleet and software, the replacement value is about \$11.0 million. Of this total, the Animal Services facilities represent the largest share at \$9.4 million. Approximately 14% of the City's assets are considered to be in Good to Very Good Condition with the remaining value in poor condition.

It is important to note that although the animal facilities are considered to be in Poor condition based on the City's condition threshold methodology, the facility continues to be in good working order. It is expected that detailed condition assessments of the animal facilities will be developed in the next iteration of the City's facilities asset management plan.

**USER VIEW:  
REPLACEMENT VALUE BY ASSET  
CATEGORY (\$M)**

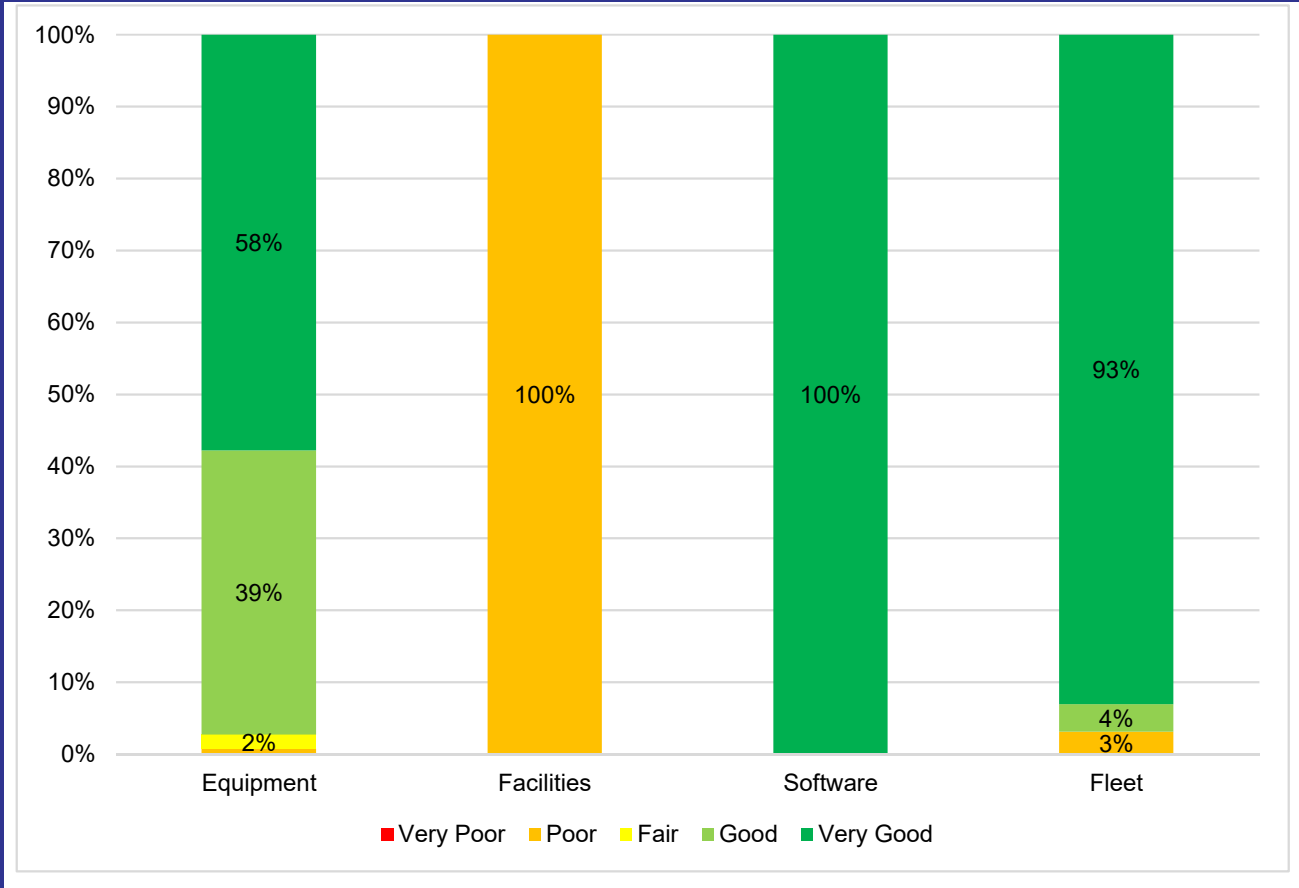


**USER VIEW:  
ANIMAL SERVICES ASSET  
CONDITION (\$M)**





The figure below illustrates the condition of the various Animal Services assets by key sub-component areas based on the user view. While the assets are generally in Good to Very Good condition, Facilities are in generally Poor condition and approximately 3% of Fleet is in Poor condition.





**Comparison of 2021 vs. 2020 Inventory and Replacement Value (2022\$)**

The tables below outline the difference in Animal Services assets in the 2021 SOLI relative to the 2020 SOLI, while considering reporting under the two different views. Please note, all values are expressed in 2022 dollars.

Under the responsibility view framework, the total value of Animal Services assets has increased from \$280,400 to \$300,400. This increase can generally be attributed to updated costing information as part of the 2021 SOLI.

When considering the Animal Services Facilities, City Support Fleet and IT assets, the total asset value for Animal Services increased proportionately with the inclusion of these assets. In total, the value of Animal Services assets has remained relatively constant from the value reported in 2020 after inflationary adjustments.

Please note, the Facilities, City Support Fleet and IT report cards include additional information on those assets used by Animal Services but maintained and managed by a different City department.

Asset	2020 SOLI		2021 SOLI	
Facilities	2	Each	2	Each
Fleet	14	Each	13	Each
Software	1	Each	1	Each
Equipment	124	Each	143	Each

Asset	2020 SOLI (\$2022)	2021 SOLI (\$2022)	Difference	
<b>1. Assets Managed by Other Service Areas*</b>				
Facilities	\$ 9,428,661	\$ 9,444,949	\$ 16,289	0%
Fleet	\$ 1,153,913	\$ 1,018,233	\$ (135,680)	-12%
Software	\$ 159,181	\$ 213,282	\$ 54,101	34%
<b>Subtotal Assets Managed by Other Service Areas</b>	<b>\$ 10,741,755</b>	<b>\$ 10,676,464</b>	<b>\$ (65,291)</b>	<b>-1%</b>
<b>2. Assets Managed by Animal Services</b>				
Equipment	\$ 280,443	\$ 300,353	\$ 19,910	7%
<b>Subtotal Assets Managed by Animal Services (Responsibility View)</b>	<b>\$ 280,443</b>	<b>\$ 300,353</b>	<b>\$ 19,910</b>	<b>7%</b>
<b>Total Replacement Value: User View (1+2)</b>	<b>\$ 11,022,197</b>	<b>\$ 10,976,817</b>	<b>\$ (45,380)</b>	<b>0%</b>

\*Responsibility of managing the assets lies with another service area, but assets are used by Animal Services

## Appendix II – Provisions for Repair & Replacement Lifecycle Activities

Service	Methodology
<b>Transportation</b>	<p><b>Roads:</b> Annual provision accounts for the asset renewal needs to maintain assets above PCI thresholds by road type (2 interventions per road). In addition, the annual provision also accounts for road replacement activities over a 50-year timeframe.</p> <p><b>Bridges:</b> Annual provision accounts for both Bridge/Culvert Reconstruction costs <i>and</i> regular asset rehabilitation expenditures over the planning period.</p> <p><b>Street Lighting:</b> Annual provision accounts for the rehabilitation <i>and</i> replacement of both Poles and Brackets over the planning period.</p> <p><b>Sidewalks, Traffic Signals:</b> Annual provision accounts for the rehabilitation <i>and</i> replacement of assets over an asset's useful life.</p> <p><b>All Other Assets:</b> Annual provision accounts for the replacement of assets over the planning period based on reconstruction cost.</p>
<b>Stormwater</b>	<p><b>Stormwater Management Ponds:</b> Average annual provision based on the total replacement value of ponds spread equally over the estimated useful life.</p> <p><b>All Other Assets:</b> Annual provision accounts for the replacement of assets at the end of their UL over the planning period based on the age of the asset.</p> <p><i>Note: A discount was applied to the annual provisions associated with Sewer conveyance systems to align with the SW revenue identified in the SW Rate Study that is currently implemented. The City undertakes a condition assessment program (CCTV) for the sewer conveyance system that will allow for refinement of useful life assumptions and replacement needs of the SW system in the future.</i></p>
<b>Facilities</b>	<p>Annual provision is based on asset renewal needs and considers two parts to the calculation:</p> <ol style="list-style-type: none"> <li>1. The first 10 years are based on the adjusted BCAs (2019-2021) with forecast information from 2022 to 2030, annualized for 10 years.</li> <li>2. "Sherman-Dergis" formula for estimating capital funding requirements for a facility for the next 15 years or where BCAs are not available</li> </ol> <p>The total investment over the 25-year period is illustrated on an annual basis. Complete asset replacement is not considered in the calculation model.</p>
<b>Transit</b>	<p><b>Heavy Duty Vehicles (Buses):</b> Annual provision accounts for both regular Bus Refurbishment costs <i>and</i> regular asset replacement (at 18 years) over the planning period. The refurbishments include engine replacements, transmission changes, general refurbishments, etc.</p> <p><b>Stops (excluding Shelters), IT Infrastructure, Fare Systems, Signage, and Stock Room:</b> Average annual provision based on the total replacement value of assets spread equally over their estimated useful life.</p> <p><b>All Other Assets:</b> Annual provision accounts for the replacement of assets at the end of their UL over the planning period based on the age or condition of the asset. When condition is used, the UL of assets are adjusted relative to the condition applied.</p>
<b>IT</b>	<p><b>All Assets:</b> Annual provision accounts for the replacement of assets at the end of their UL over the planning period based on the age of the asset.</p>

Service	Methodology
<b>City Support Fleet</b>	<p><b>Licensed Fleet:</b> Annual provision accounts for the replacement of assets over the planning period based on the age and mileage of the asset.</p> <p><b>All Other Assets:</b> Annual provision accounts for the replacement of assets at the end of their UL over the planning period based on the age of the asset.</p>
<b>Fire</b>	<p><b>Licensed Vehicles &amp; Apparatus:</b> Annual provision accounts for the replacement of assets over the planning period based on the age of the asset irrespective of condition to meet regulatory requirements.</p> <p><b>Specialty Equipment:</b> Annual provision accounts for the replacement of assets over the planning period based on the condition of the asset.</p> <p><b>All Other Assets:</b> Annual provision accounts for the replacement of assets over the planning period based on the age of the asset.</p>
<b>Parks</b>	<p><b>Playgrounds:</b> Annual provision accounts for the replacement of playgrounds at the end of the useful life (20 years).</p> <p><b>Sports Fields:</b> Annual provision accounts largely for the replacement of the fields' main components such as artificial turf, irrigation system and lights at the end of their useful life.</p> <p><b>Pathways:</b> Annual provision accounts for the replacement of each pathway at the end of its useful life. Replacement schedule is based on condition, so the UL of assets are extended relative to the condition applied.</p> <p><b>All Other Assets:</b> Annual provision accounts for the replacement of assets at the end of their UL over the planning period based on the age or condition of the asset. When condition is used, the UL of assets are extended relative to the condition applied.</p>
<b>Recreation</b>	<p><b>All Assets:</b> Annual provision accounts for the replacement of assets at the end of their UL over the planning period based on the age or condition of the asset. When condition is used, the UL of assets are extended relative to the condition applied.</p>
<b>Cultural Services</b>	<p><b>Public Art:</b> Replacement provisions for permanent public art have been included in this analysis, while temporary installations are not being replaced and are therefore excluded from the replacement analysis. Replacement values are based on the recent appraisals.</p> <p><b>Outdoor Equipment:</b> Annual provision accounts for the replacement of assets at the end of their UL over the planning period based on the condition of the asset. Average annual provision for some assets is based on the total replacement value of outdoor equipment spread equally over the estimated useful life.</p> <p><b>All Other Assets:</b> Annual provision accounts for the replacement of assets at the end of their UL over the planning period based on the condition of the asset. When condition is used, the UL of assets are extended relative to the condition applied.</p>
<b>Library</b>	<p><b>Library Software:</b> Average annual provision based on the total replacement value of software spread equally over the estimated useful life.</p> <p><b>All Other Assets:</b> Annual provision accounts for the replacement of assets at the end of their UL over the planning period based on the age of the asset.</p>
<b>Animal Services</b>	<p><b>Equipment:</b> Annual provision accounts for the replacement of assets at the end of their UL over the planning period based on the condition of the asset. When condition is used, the UL of assets are extended relative to the condition applied.</p>

## Appendix III – Revenue Analysis Assumptions

Revenue Source	Analysis Assumptions
<b>Infrastructure Levy (2%)</b>	<ul style="list-style-type: none"> <li>Levy maintained over the planning period. This means the dedicated 2% levy is calculated each year on the previous year's taxation revenue.</li> <li>2022 Total Contribution = <b>\$76 Million</b></li> <li>Assumption beyond 2022 = the base reserve contribution of \$76 Million in 2022 will increase each year the 2% dedicated levy continues to be in force throughout the period.</li> <li>The increase in contribution will be relative to how much the 2% levy adds to the base (Example: 2023 estimated increase over the 2022 base is approximately \$10 million)</li> </ul>
<b>Transit Levy (1%)</b>	<ul style="list-style-type: none"> <li>Levy maintained over the planning period. This means the dedicated 1% levy is calculated each year on the previous years' taxation revenue.</li> <li>2022 Total Contribution = \$11.2 Million</li> <li>Assumption beyond 2022 = the base of \$11.2 Million will increase each year the 1% dedicated levy continues to be in force throughout the period.</li> <li>The increase in contribution will be relative to how much the 1% levy adds to the base (Example: 2022 estimated increase over the 2022 base is approximately \$5 million)</li> <li>It is not assumed that the entire transit Levy is allocated to R&amp;R activities. Approximately 50% of the annual levy is directed to fund the BTE share of net new growth-related busses)</li> </ul>
<b>Growth in Tax Levy Base</b>	<ul style="list-style-type: none"> <li>The forecast assumes a net growth in tax levy revenues (net of special purpose levies) at 1% each year to account for general growth in the base from new residential and non-residential development.</li> <li>Revenues are in constant \$2022 and does not make consideration for a change in reassessment or inflation.</li> </ul>
<b>Stormwater User Fees</b>	<ul style="list-style-type: none"> <li>Average annual revenues from the dedicated user fees are assumed at \$24.3 million per annum based on currently budgeted SW fee collection and allowance for annual revenue growth of 2.2% due to new billing units associated with growth.</li> <li>This amount is set equal to average annual costs and therefore considered to be revenue neutral with costs.</li> </ul>
<b>Federal Gas Tax</b>	<ul style="list-style-type: none"> <li>2022 = Equal to \$34.5 Million and generally consistent with 5-year average (net of any top-up amounts).</li> <li>Assumption beyond 2022 = assumed to increase relative to population growth as gas tax monies usually are distributed based on population every few years. <ul style="list-style-type: none"> <li>Entire amount is assumed to be allocated to R&amp;R activities (consistent with current practice)</li> </ul> </li> <li>Other minor one-time confirmed grants included</li> </ul>
<b>Provincial Gas Tax</b>	<ul style="list-style-type: none"> <li>Totals \$13.3 Million in 2022 and the entire amount is used to offset transit-operating costs.</li> <li>These funds are not assumed for capital repair and replacement activities in the forecast period (consistent with current practice).</li> </ul>



Revenue Source	Analysis Assumptions
<b>PTIF</b>	<ul style="list-style-type: none"> <li>• Approximately \$35 million is assumed over the next 10-years, which will be allocated to capital repair and replacement activities for Transit.</li> <li>• The remaining \$315 Million is assumed to be directed towards the acquisition of new transit buses (consistent with approach outlined in the DC Study)</li> </ul>
<b>One-time Government Funding Top-up</b>	<ul style="list-style-type: none"> <li>• Other minor one-time confirmed grants included (\$4.6 million)</li> <li>• Assumption beyond 2022 = Any potential one-time Federal and Provincial grants have not been considered</li> </ul>
<b>DCs</b>	<ul style="list-style-type: none"> <li>• Development Charges are used to fund first round growth-related infrastructure and any existing funds in these obligatory accounts are not considered for asset management purposes.</li> <li>• That said, Reserve #4 (the City's asset management reserve) has sometimes been used to fund growth-related capital when DCs were not available. It is assumed that future DCs will not be used to repay Reserve #4 in those instances where non-dc sources were used to fund growth capital.</li> </ul>
<b>Existing Reserves</b>	<ul style="list-style-type: none"> <li>• Approximately \$98.9 million in existing tax supported reserve funds are considered and applied towards funding asset repair and replacement activities. Only certain capital related reserves are considered in this study and other dedicated and special purpose reserves are not considered to be "available" for capital asset Repair and Replacement.</li> <li>• This total is allocated over 3-years in the Corporate AMP (consistent with previous City's AMP methodology)</li> <li>• About 15% of the total \$658M Reserve and Reserve Funds are considered as other key non-obligatory reserves such as the Legacy Fund (\$93M), General Rate Stabilization (\$94M) or the Community Investment Fund (\$48M) are excluded.</li> <li>• \$11.4 million in Stormwater reserves are accounted for and only applied to offset stormwater costs. This is in addition to the \$98.9 million identified above.</li> <li>• Reserve fund balances applied are actuals as of year-end 2021</li> </ul>
<b>Existing Taxation &amp; User Fee Revenues</b>	<ul style="list-style-type: none"> <li>• Approximately \$175 Million per annum in existing capital related operating and maintenance costs, which are currently funded through existing taxation and user fee revenues is assumed to remain constant over the period to maintain the existing asset base.</li> <li>• It is assumed that any new asset acquisitions would result in increased capital operating and maintenance costs that would need to be absorbed by the City and captured in the full life cycle model.</li> <li>• This share relates only to capital related operating and maintenance costs (i.e. to maintain parks, maintain fleet or facilities) and does not account for general operating costs that may arise from new infrastructure.</li> </ul>