

# 4. LEVELS OF SERVICE

The ultimate goal of asset management planning is ensuring that the City continues to provide a sustainable level of different services it commits to offer to its customers. The level of service is a measurable indicator that enables a service provider to measure its performance against set targets and review strategies to ensure sustainable delivery of services at an acceptable level. The level of service is defined by a number of key influences:

- Legislated/Statutory Standards and Requirements
- Prescribed Assets Intended Function
- Corporate Goals
- Community Expectations
- Technical Metrics for Assets
- Available Financing

Community levels of service define the expectation of what is a satisfactory service for the customers, whereas technical metrics or levels of service define how a service provider successfully delivers satisfactory service to its customers. Community levels of service use qualitative descriptions to describe the scope or quality of service delivered by an asset category. Technical levels of service use metrics to measure the scope or quality of service being provided by an asset category.

Ontario Regulation (O. Reg.) 588/17:

- Provides the qualitative description for minimum customer level of service and technical metrics for core assets
- Allows the municipality to establish its own customer and technical levels of service (metrics) for all other assets

## 4.1 WATER ASSETS

As mentioned above, levels of service are directly influenced by legislative regulatory requirements. One key legislation that governs drinking water is the Safe Drinking Water Act. What allows drinking water levels of service along with legislative requirements are guidelines and responsibilities attributed to licensing e.g. Drinking Water Licence and permit to operate a drinking water system in Ontario.

O. Reg. 588/17 requires legislated community levels of service for Water assets. Examples of legislated community levels of service include areas of the municipality that are serviced by the water system. Map in Figure 4-1 shows the extent of the services provided through the water assets.

In addition, O. Reg. 588/17 requires legislated technical levels of service for Water assets. An example of technical levels of service includes the percentage of urban properties serviced by the municipal water system.

Table 4.1 provides community levels of service and Table 4.2 provides technical levels of service per O. Reg. 588/17 requirements for water assets.

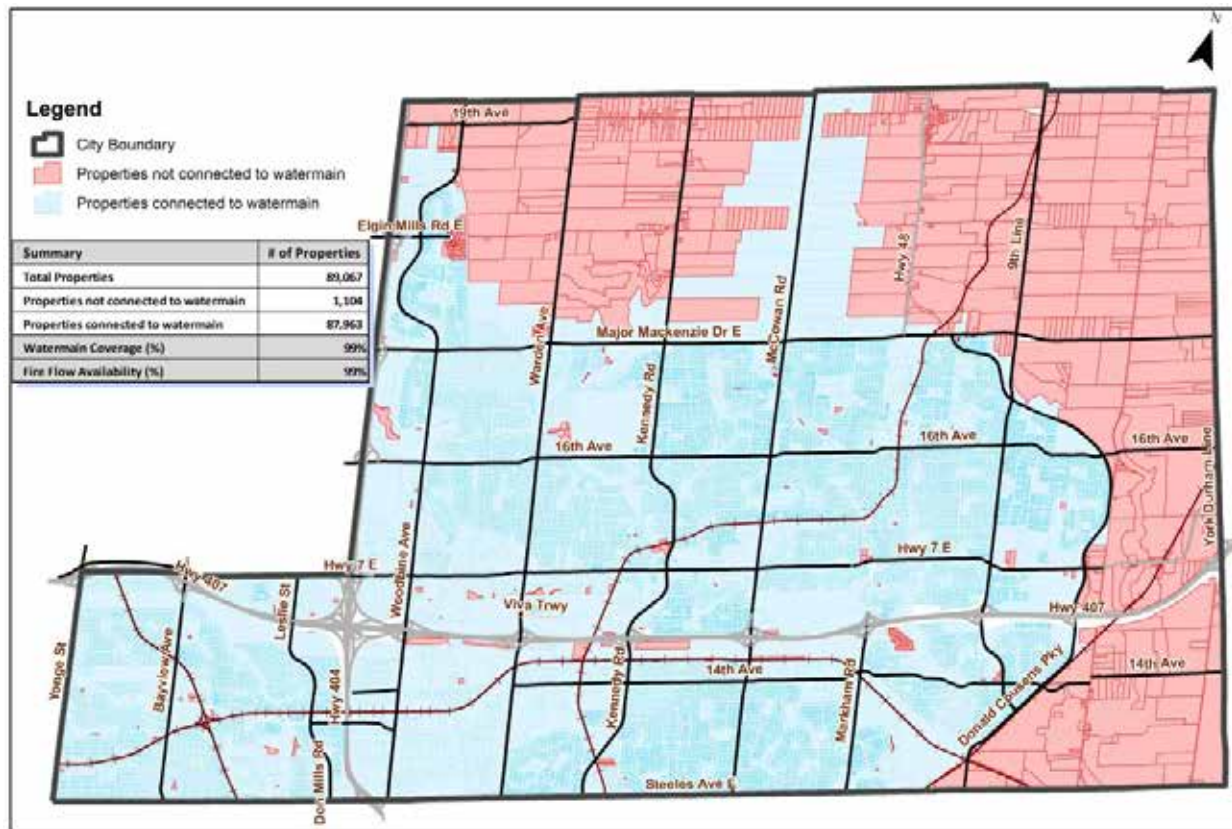
**Table: 4.1 - Community Levels of Service for Water Assets**

Service Attribute	Community Levels of Service	Qualitative Descriptions
<b>Scope</b>	1. Description, which may include maps, of the user groups or areas of the municipality that are connected to the municipal water system.	Refer to Figure 4.1 - Map showing properties connected to Municipal Water System and Fire Flow Availability
	2. Description, which may include maps, of the user groups or areas of the municipality that have fire flow.	Refer to Figure 4.1 - Map showing properties connected to Municipal Water System and Fire Flow Availability
<b>Reliability</b>	Description of boil water advisories and service interruptions.	No boil water advisories during 2019 and 2020 calendar year. Service interruptions typically occur due to watermain breaks.

**Table: 4.2 - Technical Levels of Service for Water Assets**

Service Attribute	Technical Levels of Service	Technical Metrics	
		2018	2019
<b>Scope</b>	1. Percentage of properties connected to the municipal water system.	99%	99%
	2. Percentage of properties where fire flow is available.	99%	99%
<b>Reliability</b>	1. The number of connection days per year where a boil water advisory notice is in place compared to the total number of properties connected to the municipal water system.	0	0
	2. The number of connection days per year due to water main breaks compared to the total number of properties connected to the municipal water system.	467 out of 87,317 properties connected to Municipal water system	267 out of 87,963 properties connected to Municipal water system

Figure 4-1: Properties connected to Municipal Water System and Fire Flow Availability (2019)



Levels of Service

### Additional Asset Specific Service Level examples:

The City of Markham tracks a variety of levels of service for each asset. Below provides a brief summary of key regulatory levels of service for water assets provided by the City. Note this is not an exhaustive list as there are many lower tier service levels (both legislative and non-legislative) that are also tracked:

Service Area	Service Standard	Legislated (Yes/No)	Service Level Target	Actual Performance
Fire hydrant inspection & pm	Annual (NFPA)	Yes	100%	100%
Sampling	# of Chlorine residual samples completed daily (MOE)	Yes	100%	100%
Sampling	# of Inorganic samples completed annually(MOE)	Yes	100%	100%
Sampling	# of Microbiological samples completed each week (MOE)	Yes	100%	100%
Sampling	# of Organic samples completed annually (MOE)	Yes	100%	100%

## 4.2 WASTEWATER ASSETS

O. Reg. 588/17 requires legislated community levels of service for Wastewater assets. Examples of legislated community levels of service include areas of the municipality that are serviced by the wastewater system. Map in Figure 4-2 shows the extent of the services provided through the wastewater assets.

In addition, O. Reg. 588/17 requires legislated technical levels of service for Wastewater assets. An example of technical levels of service includes the percentage of urban properties serviced by the municipal wastewater system.

Table 4.3 provides community levels of service and Table 4.4 provides technical levels of service per O. Reg. 588/17 requirements for wastewater assets.

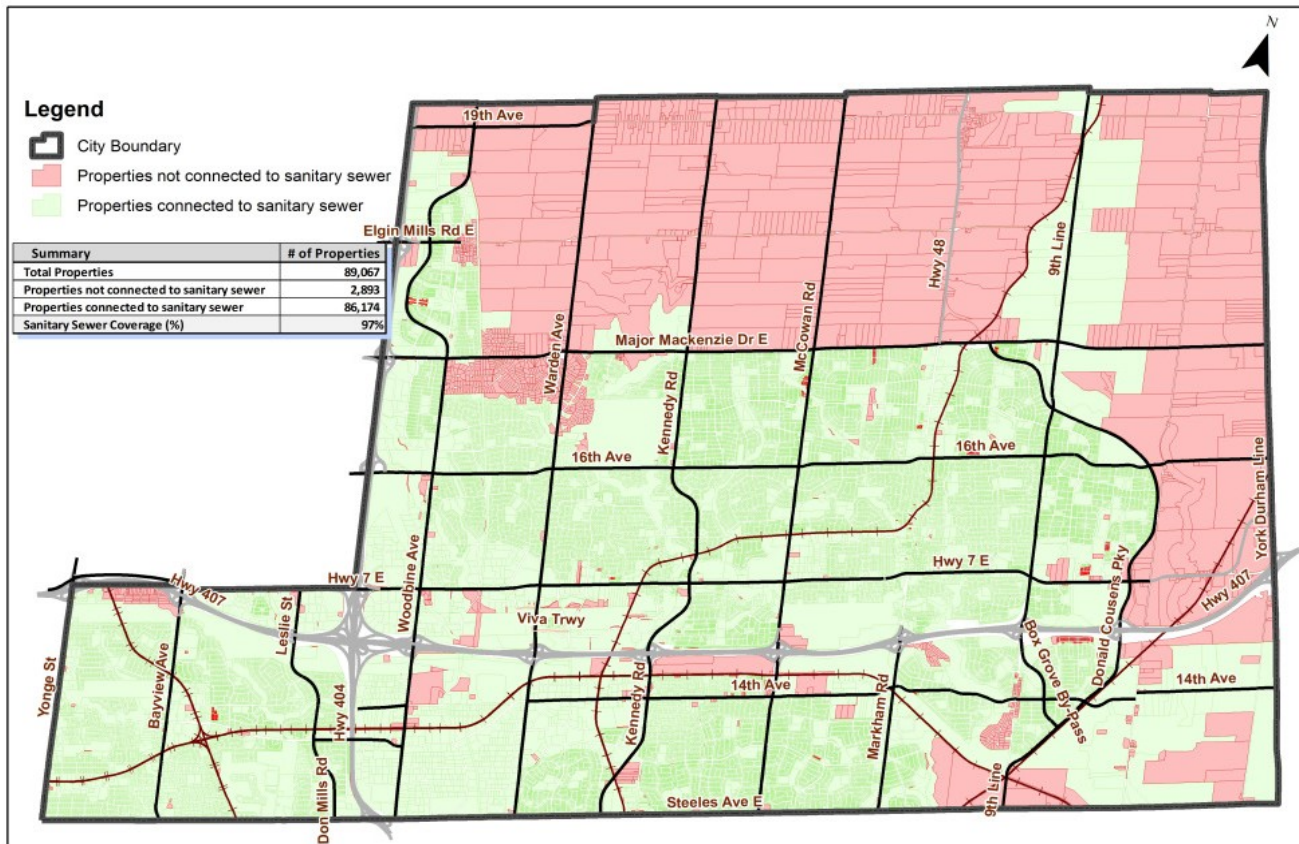
**Table 4.3 - Community Levels of Service for Wastewater Assets**

Service Attribute	Community Levels of Service	Qualitative Descriptions
<b>Scope</b>	Description, which may include maps, of the user groups or areas of the municipality that are connected to the municipal wastewater system.	Refer to Figure 4.2 - Map showing properties connected to the Municipal Wastewater System
<b>Reliability</b>	1. Description of how combined sewers in the municipal wastewater system are designed with overflow structures in place which allow overflow during storm events to prevent backups into homes.	City does not have any combined sewers
	2. Description of the frequency and volume of overflows in combined sewers in the municipal wastewater system that occur in habitable areas or beaches.	City does not have any combined sewers
	3. Description of how stormwater can get into sanitary sewers in the municipal wastewater system, causing sewage to overflow into streets or backup into homes.	Infiltration and inflow into sanitary sewers in both groundwater and stormwater which are not intended to be in sanitary system. Infiltration can enter through variety of sources - cracks in pipes, cross connections such as downspout connections, through manhole covers, etc. The City has implemented an annual Infiltration and Inflow (I&I) monitoring program to monitor the I&I impact and provide incentives to home owners to remove the downspouts from sanitary sewers.
	4. Description of how sanitary sewers in the municipal wastewater system are designed to be resilient to avoid events described in paragraph 3.	To minimize sewage overflow into streets and backups into homes, the City has established design standards with 0.26 l/s/ha and other measures to reduce infiltration and inflow such as: <ul style="list-style-type: none"> <li>• Place manholes outside of surface ponding areas and Regional flood plains;</li> <li>• Install seal tape around rings on the manholes; and</li> <li>• Implement water-tight measures when sewers are installed in high groundwater areas.</li> </ul>
	5. Description of the effluent that is discharged from sewage treatment plants into the municipal wastewater system.	City does not have sewage treatment plants

**Table 4.4 - Technical Levels of Service for Wastewater Assets**

Service Attribute	Technical Levels of Service	Technical Metrics	
		2018	2019
<b>Scope</b>	Percentage of properties connected to the municipal wastewater system.	97%	97%
<b>Reliability</b>	1. The number of events per year where combined sewer flow in the municipal wastewater system exceeds system capacity compared to the total number of properties connected to the municipal wastewater system.	City does not have any combined sewers	City does not have any combined sewers
	2. The number of connection-days per year due to wastewater backups compared to the total number of properties connected to the municipal wastewater system.	14 reported instances of basement flooding/ issues compared to 85,560 connected properties	15 reported instances of basement flooding/ issues compared to 86,174 connected properties
	3. The number of effluent violations per year due to wastewater discharge compared to the total number of properties connected to the municipal wastewater system.	21 violations compared to 85,560 connected properties	51 violations compared to 86,174 connected properties

**Figure 4-2: Properties connected to the Municipal Wastewater System (2019)**



Levels of Service



## 4.3 STORMWATER ASSETS

### Service Levels:

- **User Expectation** - To ensure adequate function and operation of storm drainage facilities as intended.
- **Regulatory** - To comply with NASSCO's PACP program.
- **Public Safety** - To eliminate the risk of flooding and minimizing disruption to the community.
- **Operational** - To ensure smooth functioning of the storm water system.
- **Public Safety and Sustainability** - Effective outfall rehabilitation program prevents flooding upstream and supports City's vision for a sustainable community.

O. Reg. 588/17 requires legislated community levels of service for Stormwater assets. Examples of legislated community levels of service include areas of the municipality that are serviced by the stormwater system. Map in Figure 4-3 shows the properties resilient to five-year and 100-year storm.

In addition, O. Reg. 588/17 requires legislated technical levels of service for Stormwater assets. An example of technical levels of service includes the percentage of properties resilient to 100-year and five-year storm events.

Table 4.5 provides community levels of service and Table 4.6 provides technical levels of service per O.Reg 588/17 requirements for stormwater assets.

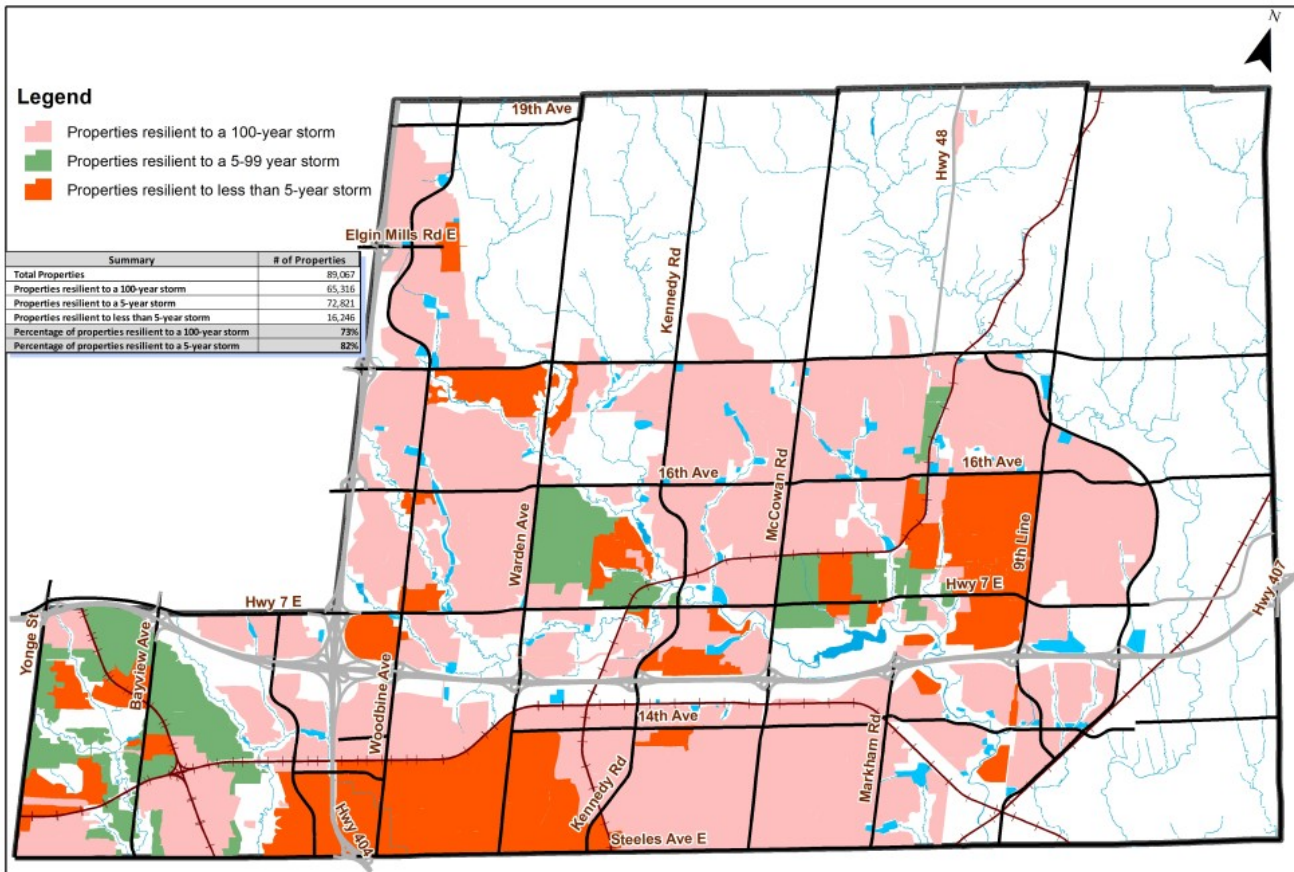
**Table 4.5 - Community Levels of Service for Stormwater Assets**

Service Attribute	Community Levels of Service	Qualitative Descriptions
<b>Scope</b>	Description, which may include maps, of the user groups or areas of the municipality that are protected from flooding, including the extent of the protection provided by the municipal stormwater management system.	Refer to Figure 4-3 - Map of properties resilient to five-year and 100-year storm

**Table 4.6 - Technical Levels of Service for Stormwater Assets**

Service Attribute	Technical Levels of Service	Technical Metrics	
		2018	2019
<b>Scope</b>	1. Percentage of properties in municipality resilient to a 100-year storm.	73%	73%
	2. Percentage of the municipal stormwater management system resilient to a five-year storm.	81%	82%

Figure 4-3: Properties Resilient to 5-year and 100-year storm (2019)



Levels of Service

## 4.4 STORMWATER MANAGEMENT (SWM) PONDS / NATURAL INFRASTRUCTURE

### Service Levels:

- **Environmental and Sustainability** - Efficient functioning of the pond enhances and protects environment and provide a sustainable ecosystem that is in line with City’s environmental initiatives.
- **Legislative** - To comply with the Ministry of the Environment and Climate Change (MOECC) requirements.
- **Public Safety** - Decrease the risk of downstream flooding (ponds with quantity control function).
- **Protect Infrastructure** - Decrease downstream erosion (ponds with erosion control function).
- **Environmental** - To protect the environment (watercourse, aquatic life, structures, banks, etc.) from erosion.
- **Public Safety** - To meet the individual and community needs to improve public safety.
- **Protect Infrastructure** - Stabilize watercourses at critical manholes, sewers, outfalls, and roadways.
- **Public Safety and Environmental** - To reduce risks of flooding to the adjoining private properties and roads while maintaining the storm water conveyance system.

## 4.5 STRUCTURES – VEHICULAR BRIDGES, PEDESTRIAN BRIDGES, AND CULVERTS

### Service Levels:

- **Public Safety & User Expectation** - To ensure safe vehicular and pedestrian passage for the public
- **Legislative** - To comply with Public and Highway Transportation Act - Regulation 104/97.
- **Operational** - To maintain culverts free of obstructions that may impede proper surface water flow

O. Reg. 588/17 requires legislated community levels of service for Bridges and Culverts. Examples of legislated community levels of service include images that illustrate the different condition (expressed as BCI) of bridges and culverts. BCI is an indication of a structure's current condition and dictates its rehabilitation/replacement needs. Timely rehabilitation/replacement of structures reduces costs, improves site safety, reduces impact on the environment and reduces time the bridge is out of service and reduces traffic impacts for users.

In addition, O. Reg. 588/17 requires legislated technical levels for Bridges and Culverts. Examples of technical levels of service include average Bridge Condition Index (BCI) for bridges and culverts. Vehicular bridges and culverts over 1.2m width are inspected in accordance with Ministry of Transportation (MTO) Ontario Structures Inspection Manual (OSIM, 2008) and are rated according to three condition states (good, fair and poor). The weighted average of all structural elements and their condition states is then summarized in a Bridge Condition Index (BCI) using MTO specifications.

Note: BCI is calculated for only culverts over 1.2m in width (or diameter). Culverts with diameter equal or smaller than 1.2m width (or diameter) are inspected regularly using CCTV.

Table 4.7 provides community levels of service and Table 4.8 provides technical levels of service per O. Reg. 588/17 requirements for bridges and culverts.

**Table: 4.7: Community Levels of Service for Bridges and Culverts**







Service Attribute	Community Levels of Service	Qualitative Descriptions
<b>Scope</b>	Description of the traffic that is supported by municipal bridges (e.g., heavy transport vehicles, motor vehicles, emergency vehicles, pedestrians, cyclists).	The City of Markham bridges have been designed in accordance with the municipality standard and requirements of the Canadian Highway Bridge Design Code (CHBDC) at the time of construction. The bridges have been designed to carry heavy transport vehicles, motor vehicles, emergency vehicles, pedestrians, and cyclists.
<b>Quality</b>	1. Description or images of the condition of bridges and how this would affect use of the bridges.	Refer to Figure 4-4 showing images of the condition of bridges. The condition of the bridge has no effect on the use of the bridges as the City undertakes rehabilitation/replacement works if BCI is less than 60.
	2. Description or images of the condition of culverts and how this would affect use of the culverts.	Refer to Figure 4-4 showing images of the condition of culverts. The condition of the culvert has no effect on the use of the culverts as the City undertakes rehabilitation/replacement works if BCI is less than 60.



**Table: 4.8: Technical Levels of Service for Bridges and Culverts**

Service Attribute	Technical Levels of Service	Technical Metrics	
		2018	2019
<b>Scope</b>	Percentage of bridges in the municipality with loading or dimensional restrictions.	8% 2 out of 25 vehicular bridges have dimensional restrictions, no loading restrictions for City's vehicular bridges.	8% 2 out of 25 vehicular bridges have dimensional restrictions, no loading restrictions for City's vehicular bridges.
<b>Quality</b>	1. For bridges in the municipality, the average bridge condition index value.	76 Average BCI calculated for 25 vehicular bridges	76 Average BCI calculated for 25 vehicular bridges
	2. For structural culverts in the municipality, the average bridge condition index value.	70 Average BCI calculated for 96 culverts over 1.2m width	70 Average BCI calculated for 98 culverts over 1.2m width

**Figure 4-4: Images of Condition of Bridges and Culverts**

Condition Ratings	Vehicular Bridges	Culverts
	Image of the condition of bridge and how this would affect use of bridges	Image of the condition of culvert and how this would affect use of culverts
<b>Good Condition 1 BCI Ratings (70 – 100)</b>	Bridge Condition Index (BCI) - 75 Good Condition 	Bridge Condition Index (BCI) - 81 Good Condition 
<b>Fair Condition 2 BCI Ratings (60-70)</b>	Bridge Condition Index (BCI) - 63 Hairline pattern and vertical cracks 	Bridge Condition Index (BCI) - 67 Light corrosion inside the barrel below the waterline 
<b>Poor Condition 3 BCI Ratings (&lt;60)</b>	Bridge Condition Index (BCI) - 42 Severe deterioration of concrete girders and slab 	Bridge Condition Index (BCI) - 41 Heavy corrosion of the steel plate 

Levels of Service

## Additional Asset Specific Service Level examples:

The City of Markham tracks a variety of levels of service for each asset. Below provides a brief summary of key regulatory levels of service for bridges and culverts provided by the City. Note this is not an exhaustive list as there are many lower tier service levels (both legislative as well non-legislative) that are tracked:

Service Area	Service Standard	Legislated (Yes/No)	Service Level Target	Actual Performance
<b>Bridges and Culverts</b>	Visual inspection of all bridges (vehicular and pedestrian) and culverts over 3m span once in two years.	Yes	100%	100%
<b>Culverts</b>	Visual inspection of all culverts less than 3m span once in four years if it is in good condition.	Yes	100%	100%

## 4.6 STREETLIGHTS

### Service Levels:

- **Public Safety and User Expectation** – Streetlight outage
- **Legislative** – Luminaires inspection (as per Ontario Regulation 239/02)
- **Public Safety and User Expectation** – To provide uninterrupted service to public.
- **Public Safety and User Expectation** – To provide better lighting to residents
- **Energy Efficiency** – To save energy cost
- **Public Safety and User Expectation** – To reduce streetlight public complaints

### Asset Specific Service Level examples:

The City of Markham tracks a variety of levels of service for each asset. Below provides a brief summary of key regulatory levels of service provided by the City. Note this is not an exhaustive list as there are many lower tier service levels (both legislative as well non-legislative) that are tracked;

Service Area	Service Standard	Legislated (Yes/No)	Service Level Target	Actual Performance
<b>Streetlights</b>	Streetlights are to be repaired within 7 days along Regional roads and 14 days within local roads	Yes	100%	80%

## 4.7 ROADS, SAFETY DEVICES AND TRAFFIC SIGNALS

### General Level of Service (Roads & Safety Devices):

- **Roads Asphalt** - Perform biannual pavement condition survey to assess the overall condition index (OCI) rating. As deficient segments are identified in accordance to the Minimum Maintenance Standard, they are repaired within the legislated timeline to provide public safety.
- **Roads Base and Subgrade** - As deficient locations are identified, it is placed under the rehabilitation program.
- **Sidewalk** - Minimum Maintenance Standards, O. Reg. 239/02.
- **Curb** - Subjective: broken, cracked, spalling and prioritized.
- **Parking Lot** - As deficient locations are identified, it is placed under rehabilitation program or the localized repair program based on the usage of the lot and to ensure public safety.
- **Guiderail** - Addressed safety concern within 30 days upon complaint received. As deficient locations are identified, it is placed under the rehabilitation program.
- **Fence** - Addressed safety concern within 30 days upon complaint received. As deficient locations are identified, it is placed under the rehabilitation program.
- **Retaining wall** - Addressed safety concern within 30 days upon complaint received. As deficient locations are identified, it is placed under the rehabilitation program.
- **Sign** - Regulatory and warning signs are repaired within 2 hours for stop signs and within 7 days for other regulatory signs or as indicated by reflectivity survey, other signs such as street name signs are replaced based on street patrols or public complaints and repaired within 21 days of defect identification.
- **Entrance feature** - Addressed safety concern within 30 days upon complaint received. As deficient locations are identified, it is placed under the rehabilitation program.

O.Reg. 588/17 requirements for Road assets is provided in Table 4.9 (Community Levels of Service) and Table 4.10 (Technical Levels of Service).

**Table 4.9: Community Levels of Service for Roads**

Service Attribute	Community Levels of Service	Qualitative Descriptions
<b>Scope</b>	Description, which may include maps, of the road network in the municipality and its level of connectivity.	Figure 4-5: City of Markham Road Network and connectivity. The City of Markham road network with total 2223 lane-kilometers are categorized to three different classification as arterial roads, major/minor collector roads and local/laneway roads
<b>Quality</b>	Description or images that illustrate the different levels of road class pavement condition.	Refer to Figure 4-6: Pavement Condition Index of Arterial Roads; Figure 4-7: Pavement Condition Index of Major/Minor Roads; Figure 4-8: Pavement Condition Index of Local/Laneway Roads

**Table 4.10: Technical Levels of Service for Roads**

Service Attribute	Technical Levels of Service	Technical Metrics
<b>Scope</b>	Number of lane kilometres of each of arterial roads, collector roads and local roads as a proportion of square kilometres of land area of municipality.	Refer to Table 4.11: O. Reg. 588/17 Technical Metrics for Roads
<b>Quality</b>	For paved roads in the municipality, the average pavement condition index.	Refer to Table 4.11: O. Reg. 588/17 Technical Metrics for Roads

Figure 4-5: City of Markham Road Network and Connectivity

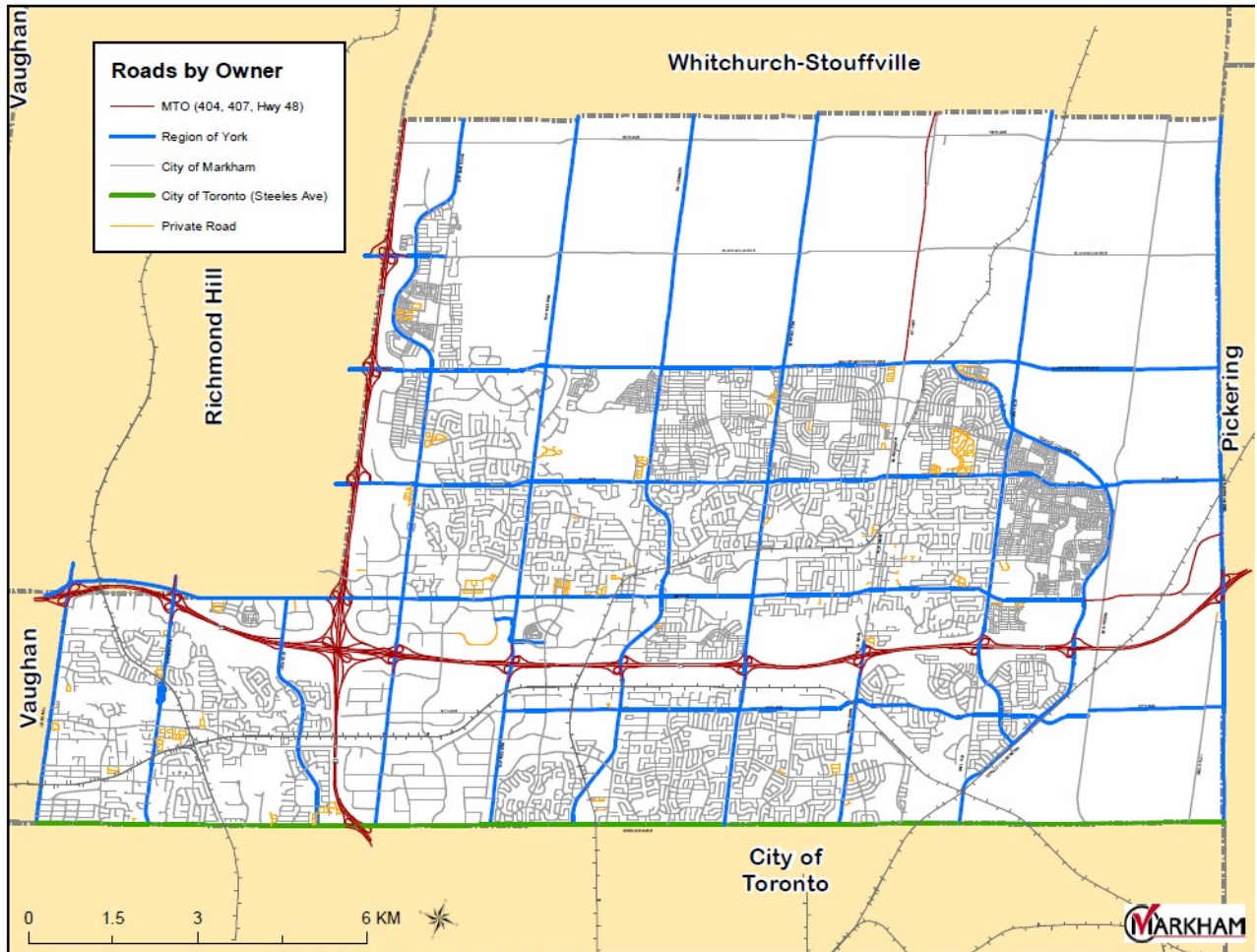


Table: 4.11: O. Reg. 588/17 Technical Metrics for Roads

Road Class	Lane-kilometer	Area (m <sup>2</sup> )	% Distribution	Average PCI	Target PCI	Reference Map
Arterial	14.2	50,869	0.6%	80.5	80	Figure 4-6
Major/Minor Collector	1276.2	3,513,638	40.1%	79.3	75	Figure 4-7
Local/Laneway	1405.5	5,205,808	59.4%	79.8	70	Figure 4-8
<b>Total/Overall</b>	<b>2223</b>	<b>8,770,315</b>	<b>100%</b>	<b>79.8</b>	<b>-</b>	<b>-</b>

The City established the PCI target based the University of Waterloo and Ontario Good Road Association (OGRA) pavement management reference materials. The current status of the PCI condition of each classification of road with respect to the defined target level of service are illustrated in following figures. The City of Markham’s road preservation and rehabilitation program strategy is to achieve 80 per cent of the entire road network meeting its PCI targets (i.e. Very Good Condition). As per 2019 pavement condition survey results, 80.42 per cent of overall road network have PCI above the target level and are in very good condition, which demonstrates the City’s pavement preservation and rehabilitation program is keeping the road network condition above the industry standard.



Figure 4-6: Pavement Condition Index of Arterial Roads

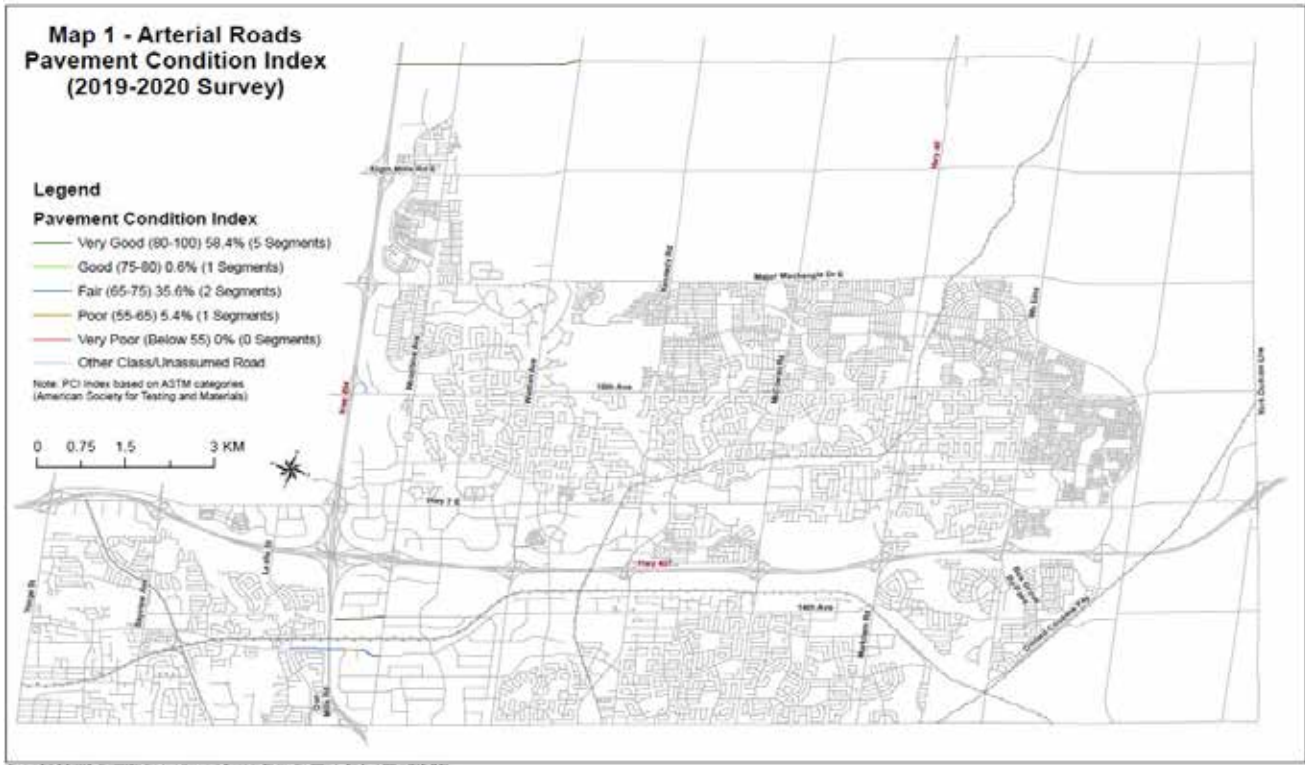
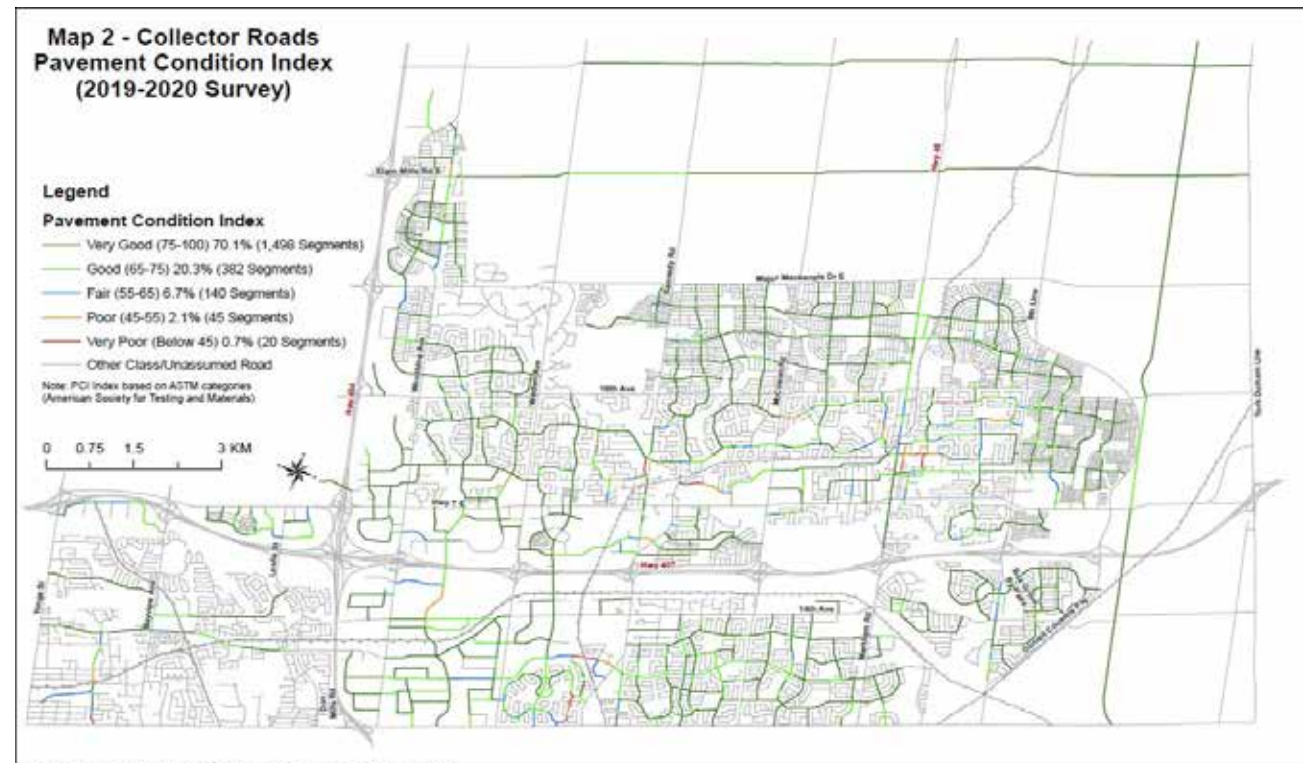


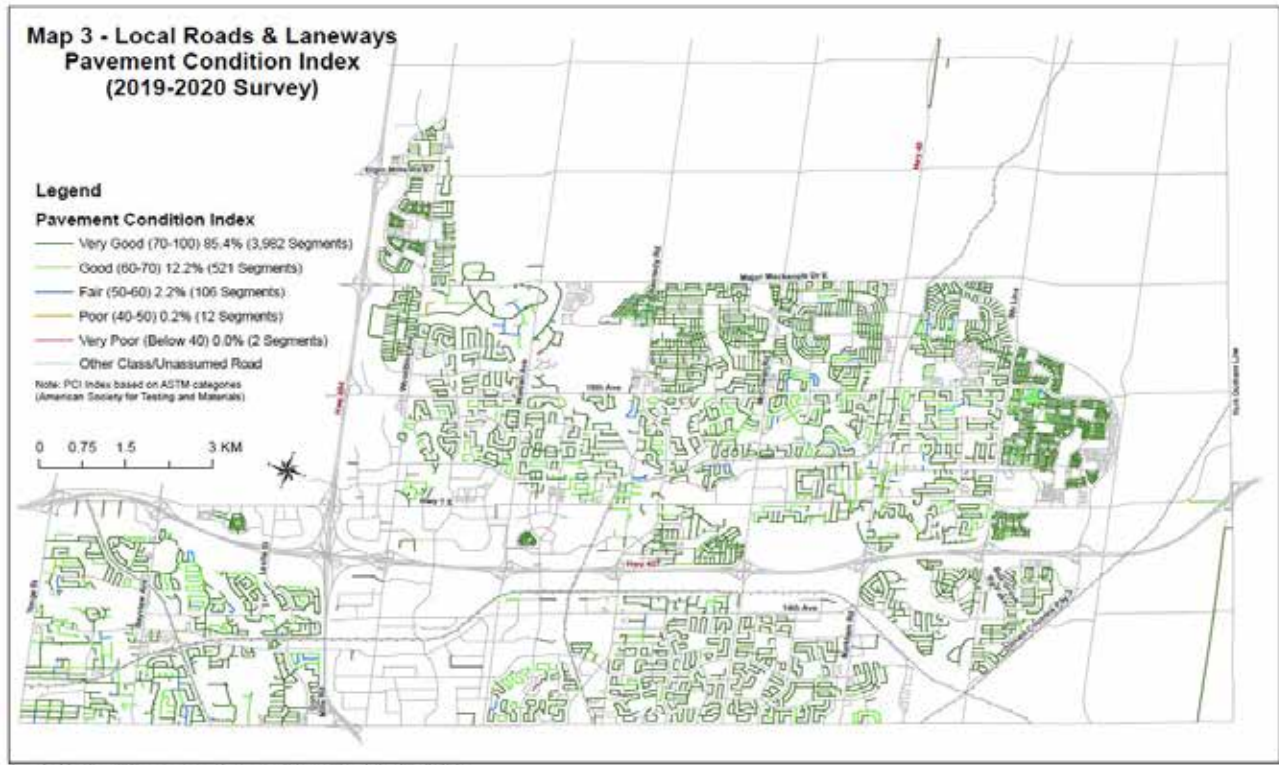
Figure 4-7: Pavement Condition Index of Major/Minor Roads



Levels of Service



Figure 4-8: Pavement Condition Index of Local/Laneway Roads



## Traffic Signals

### Service Levels:

- Maintenance practices are in accordance to the Ontario Traffic Manual Book 12 and the Municipal Act, Regulation 239/02 – Minimum Maintenance Standards for Municipal Highways.
- If a traffic control signal system is defective in any ways described in Section 13(2) of the Minimum Maintenance Standards for Municipal Highways, the standard is to deploy resources as soon as practicable after being made aware of the defect to repair or replace the defective equipment.
- If the posted speed of all approaches to the intersection or location of the non-functioning signal lamp or pedestrian control indication is less than 80 kilometres per hour and the signal that is not functioning is a green or a pedestrian “walk” signal, the standard is to repair or replace the defective component by the end of the next business day.
- The standard is to inspect, test and maintain the following traffic control signal system sub-systems once per calendar year, with each inspection taking place not more than 16 months from the previous inspection:
  - The display sub-system, consisting of traffic signal and pedestrian crossing heads, physical support structures and support cables.
  - The traffic control sub-system, including the traffic control signal cabinet and internal devices such as timer, detection devices and associated hardware, but excluding conflict monitors.
  - The external detection sub-system, consisting of detection sensors for all vehicles, including emergency and railway vehicles and pedestrian push-buttons.
- A traffic control signal system sub-system that has been inspected, tested and maintained in accordance with Section 14(1) of the Minimum Maintenance Standards for Municipal Highways is deemed to be in a state of repair until the next inspection in accordance with that subsection, provided that the municipality does not acquire actual knowledge that the traffic control signal system sub-system has ceased to be in a state of repair.
- The standard is to inspect, test and maintain conflict monitors every five to seven months and at least twice per calendar year.

## 4.8 FACILITIES

The City has a team of building professionals consisting of City Staff, specialized Consultants and Contractors who work to deliver the set service levels for the various facility types. The primary measure for the technical level of service at a City facility is the Facility Condition Index (FCI).

FCI is a widely used facility management benchmark that is used to objectively assess the current and projected condition of a building asset. FCI is defined as the ratio of the deferred renewal costs plus current year required renewal (capital and operating) cost to current replacement value for each facility. This is a quantitative measure which is not subjective and is easily calculated and as such provides clear direction for capital planning and other maintenance works. To clarify, FCI is not strictly a measure of condition, as it is focused only on the current and near-term needs for an asset and not the overall condition or safety of the facility. Condition and safety concerns will inform the required renewal cost.

The level of service for the City facility assets is encompassed by the following principles:

- Accountability and transparency;
- Consistent reporting and auditing of inputs and outcomes;
- To ensure efficiency in delivery of service both internally and externally;
- To align service delivery to organizational goals;
- To maximize useful life of assets and ensure positive relations with stakeholders; and
- To be sustainable and aggressively move toward net zero emissions by 2050.

The City has prepared an FCI for all facilities based on the construction type.

In addition to the factor mentioned above, based on occupancy and data availability, facility assets classification with average FCI as shown in Table 4.1 below. A total of 176 facilities have been taken into consideration in this study to determine the 2019 FCI. The FCI categorizations are interpreted as follows:

- **0% to 2.5%:** Building condition is very good;
- **Above 2.5% to 5%:** Building condition is good;
- **Above 5% to 7.5%:** Building condition is fair;
- **Above 7.5% to 10%:** Building condition is poor;
- **Above 10%:** Building condition is very poor.

**Table: 6.12: Facility Condition Index (FCI) of City Facilities (2019)**

Building Category Based on Usage Type (A)	Number of Buildings (B)	Replacement Cost (% of Total) (C)	Average FCI (D)	Comments (E)
Administrative Buildings	4	\$101.1M (11.6%)	0.84% (Very Good)	Markham Civic Centre, 8100 Warden Ave.
Culture Facilities	6	\$61.3M (7.0%)	1.91% (Very Good)	
Fire Stations	9	\$42.8M (4.9%)	0.82% (Very Good)	
Industrial type Construction	78	\$19.5M (2.2%)	6.4% (Fair)	555 Miller Avenue, West Parks Yard etc.
Libraries	3	\$19.2M (2.2%)	1.59% (Very Good)	
Recreation Facilities	26	\$583.9M (67%)	1.29% (Very Good)	
Residential Type Construction	48	\$25.9M (3.0%)	2.86% (Good)	
School Type Construction	2	\$18.6M (2.1%)	3.24% (Good)	7100 Birchmount, 160 Dudley Avenue.
<b>Total</b>	<b>176</b>	<b>\$872.3M</b>		

In Table: 4.12 under Column A all City facilities are grouped into eight (8) categories based on usage type. Column B to E of Table 4.1 is summarized as follows:

- Column B – Number of facilities for each Building category
- Column C – Total Replacement Cost for each category (Category Replacement Cost as a percentage of total Replacement cost for all Facilities)
- Column D – Average FCI for facilities within each category
- Column E – Examples of facilities in each category

## 4.9 PARKS

### Service Level:

- **City Sports Fields** - cultural practices (aerating, topdressing, over-seeding, and fertilizing) are performed on the sports fields from spring to fall. A cut schedule is also in place, where they are cut twice a week.
- **Artificial Turf Fields** - are inspected weekly to assess routine maintenance works and audited yearly.
- **Floodlights and Poles** - are inspected yearly.
- **Water Play** - inspections are conducted daily once the location opens and are inspected by a third party contractor at opening and closing.
- **Playgrounds** - inspections are to be completed twice monthly from April 1st to October 31st and then monthly from November 1st to March 31st. An annual audit is conducted once per year inclusive of safety surfacing.
- **Exercise Stations** - are inspected twice monthly from April 1st to October 31st and audited yearly.
- **Tennis Court Surfacing and Fences** - are inspected monthly and audited yearly.
- **Pathways** - inspections are to be conducted weekly. An annual audit is conducted once per year.
- **Stairways** - are inspected monthly at a minimum to address debris.
- **Tree Maintenance** - is dependent upon a current tree inventory which records all tree inquiries, activity, work orders and the history of each City tree with a unique GIS identification. Response time for work varies from hours for hazards and emergency issues to months for regular pruning.

## 4.10 FLEET

### Service Levels:

- Fleet Policy guidelines along with manufacturers recommended maintenance schedules are followed for a majority of units. In house maintenance program have been developed to better suit a majority of the severe and heavy duty applications such as Fire Apparatus, Plow Trucks and some Non-licensed units allowing the ability of the unit to achieve the full asset life expectancy.

## 4.11 ITS INFRASTRUCTURE HARDWARE

### Service Levels:

- Current Service levels are driven by commitment to deliver Excellent Customer Satisfaction by providing reliable information and efficient ITS systems at a reasonable cost.
- Service Levels are established with the City business units by understanding the business needs and expectations, delivery of their services and allocating appropriate resources. Service levels are mainly performance-related (response time, incident resolution, information availability, equipment failure, etc.). These are based on the business demands.

<b>Service Standards</b>	<ul style="list-style-type: none"> <li>• Service Requests (via ITS Ticketing System) will be resolved in accordance with the service standards applicable to the request (as specified in the ITS Service Catalogue on the City's Intranet 'Checkmark');</li> <li>• In the case of Critical Network Connectivity issues (Severity 1), all available resources will be assigned to resolve the issue and restore service as soon as possible.</li> <li>• Incidents resolved within set targets (severity-based): at least 85%</li> <li>• Average Customer Satisfaction (from monthly service follow-up survey): at least 75% satisfied or very satisfied</li> <li>• High severity (Severity 2) incidents will be resolved within 8 business hours; medium severity (Severity 3) incidents will be resolved within 2 business days.</li> <li>• Virus signatures updated within 24 actual hours of global release;</li> <li>• Overall Data Centre System Availability – 99% or better;</li> <li>• Individual Server Availability – 90% or better;</li> <li>• A complete list of services and related service standards is found in the ITS Service Catalogue on Checkmark.</li> </ul>
<b>Availability</b>	<ul style="list-style-type: none"> <li>• Network connectivity is normally available 24 hours a day, 7 days a week except during scheduled or emergency system maintenance;</li> <li>• Full support services are available 0800-1700, Monday to Friday (excluding Public Holidays);</li> <li>• Network connectivity incidents occurring after hours will be dealt with on a best effort support basis.</li> </ul>