



**City of Hamilton**  
**GENERAL ISSUES COMMITTEE**

**Meeting #:** 20-002(d)  
**Date:** January 28, 2020  
**Time:** 9:30 a.m.  
**Location:** Council Chambers, Hamilton City Hall  
71 Main Street West

Stephanie Paparella, Legislative Coordinator (905) 546-2424 ext. 3993

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	<b>Pages</b>
1. APPROVAL OF AGENDA	
2. DECLARATIONS OF INTEREST	
3. APPROVAL OF MINUTES OF PREVIOUS MEETING	
4. COMMUNICATIONS	
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7. DISCUSSION ITEMS	
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8. MOTIONS	
9. NOTICES OF MOTION	
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11. ADJOURNMENT	



# **PUBLIC WORKS 2020 OPERATING BUDGET**

**General Issues Committee  
January 28, 2020**

**Public Works contributes towards the City of Hamilton's vision to be the best place to raise a child and age successfully.**

The Public Works Department supports the City's vision by providing high quality cost conscious public services that contribute to a healthy, safe and prosperous community, in a sustainable manner. The department brings the City's vision and mission to life through its core services including corporate facility management, infrastructure rehabilitation, roads operations, parks and green space maintenance, transit, and waste management which are essential to the lives of residents and visitors to the City.

**Public Works provides services that are central to the lives of Hamiltonians.**

# SERVICES AND SUB-SERVICES

## Cemeteries

- Active Cemetery Management
- Dormant Cemetery Management
- Active Cemeteries Support Services

## Corporate Security

## Energy Initiatives

- Energy Engineering Services
- Utilities

## Engineering Services

- Asset Management
- Construction Services
- Corridor Services
- Design Services
- Survey and Technical Services
- Waterfront Development Initiative

## Facilities Management

- Accommodations
- Capital Planning and Project Management
- Facilities Operations and Maintenance
- Energy Engineering Services
- Facilities Planning and Business Support
- Stadium Operations

## Fleet Services Management

- Capital Planning and Contract Management
- Fleet Maintenance
- Materials, Fuel and Systems Management
- Regulatory Compliance and Driver Training

## Forestry

- Tree Maintenance
- Tree Planting
- Tree Maintenance and Planting Support Services

## Horticultural Programs

- Beautification
- Beautification Support Services

## Parks and Open Space Access

- Parks Maintenance
- Planning, Design, Development and Acquisition
- Natural Open Spaces
- Parks and Natural Open Space Support Services

## Public Transportation

- Conventional Public Transit
- Rapid Transit
- Specialized Public Transit

## Roadway Maintenance

- Right of Way Infrastructure Maintenance Support Services
- Right of Way Infrastructure Repairs and Maintenance
- Business Initiatives

## Transportation Operations

- Traffic Engineering and Road Safety
- Traffic Signals, Traffic Signs and Traffic Pavement Markings

## Solid Waste Management

- Cleanliness Services
- Organic Waste Collection
- Leaf and Yard Waste Collection Services
- Recycling Collection
- Bulk Waste Collection Services
- Garbage Collection
- Community Recycling Centres & Waste Transfer Facilities
- Organic Waste Processing
- Recycling Processing
- Landfill Operation
- Closed Landfill Monitoring
- Solid Waste Support Services

## Storm Water Management

- Infrastructure Maintenance
- Storm Water Collection
- Storm Water Support Services
- Storm Water Treatment

## Water Supply and Distribution

- Water Distribution
- Water Supply
- Water Support Services

## Wastewater Collection and Treatment

- Wastewater Collection
- Wastewater Support Services
- Wastewater Treatment



# BUDGET SCHEDULE: HAMILTON WATER & TRANSIT

**Water – Rate Budget** November 25, 2019

**Capital Budget** November 29, 2019

**Transit Day** January 24, 2020

**Public Works** January 28, 2020

- Energy, Fleet & Facilities
- Engineering Services
- Environmental Services
- Transportation Operations & Maintenance

# 2019 Highlights

## Public Works



# STRATEGIC PLAN

## OUR PRIORITIES



### COMMUNITY ENGAGEMENT & PARTICIPATION

Hamilton has an open, transparent and accessible approach to City government that engages with and empowers all citizens to be involved in their community.



### ECONOMIC PROSPERITY & GROWTH

Hamilton has a prosperous and diverse local economy where people have opportunities to grow and develop.



### HEALTHY & SAFE COMMUNITIES

Hamilton is a safe and supportive city where people are active, healthy, and have a high quality of life.



### CLEAN & GREEN

Hamilton is environmentally sustainable with a healthy balance of natural and urban spaces.



### BUILT ENVIRONMENT & INFRASTRUCTURE

Hamilton is supported by state of the art infrastructure, transportation options, buildings and public spaces that create a dynamic City.



### CULTURE & DIVERSITY

Hamilton is a thriving, vibrant place for arts, culture, and heritage where diversity and inclusivity are embraced and celebrated.



### OUR PEOPLE & PERFORMANCE

Hamiltonians have a high level of trust and confidence in their City government.



# Clean & Green 2019 Highlights



# CLEAN & GREEN 2019 HIGHLIGHTS



## 40%



**24,500**





# CLEAN & GREEN 2019 HIGHLIGHTS



# 34

vehicles downsized



# 169

vehicles replaced with lower tailpipe emissions

# 220,000

Plants Grown



# 6.5%

reduction in energy consumption since 2017



# 6

new solar pedestrian crossovers



# 3

new solar School Zone flashing beacons



# 2.5 km

of new bike paths

## Beautified

# 325

floral traffic islands

# 70

roundabouts

# 133

perennial medians

# 94

civic buildings

# 739

hanging baskets

# 570

planters

# CLEAN & GREEN 2019 HIGHLIGHTS



## Parks and Cemeteries

- 12 pollinator gardens/sites recognized
- Protocol developed with Social Navigator team for the safe and ethical approach to handling homeless camps in City parks

## Waste Programs

- Program change for green bin organics and yard waste to improve processing capacity
- Recycling program changes to reduce contamination

## Energy

- LED lighting projects at arenas and recreation centres



**York Blvd. Pollinator Garden**  
Photo credit: Hamilton Naturalists' Club



**Yard waste collection**

# Built Environment & Infrastructure 2019 Highlights







# BUILT ENVIRONMENT & INFRASTRUCTURE 2019 HIGHLIGHTS

## Road Right-of-Way Infrastructure

**30** Projects

Worth

**\$74 Million**



## Infrastructure Inspections



**123 km**  
Mainline sewers

**7 km**  
Watermains

**123 km**  
Sewer laterals

**20,000**  
Catch basins inspected & cleaned

## Infrastructure Rehabilitation

**11 km**  
Sewers

**274.9 lane km**  
Roads paved

**88.1 lane km**  
Rural roads resurfaced

**5.5 km**  
Watermains

**10.5 km**  
Roads with crack sealing

**5.0 lane km**  
Resurfaced cycle track lanes



# BUILT ENVIRONMENT & INFRASTRUCTURE 2019 HIGHLIGHTS

## Asset Management

- Strategic Asset Management Policy

## Major Right-of-Way Projects

- Red Hill Valley Parkway resurfacing
- Arvin Avenue
- Cannon Street
- Locke Street
- Governors Road
- Parkdale Avenue
- Wilson Street (Ancaster)
- Neighbourhood resurfacing: Balfour, Buchanan, MacNab St., Mountview



Red Hill Valley Parkway



Locke Street





# BUILT ENVIRONMENT & INFRASTRUCTURE 2019 HIGHLIGHTS



**Arvin Ave.**



**Cannon St.**



**Parkdale Ave.**



**Rymal Rd.**



**Wilson St. (Ancaster)**



**Shorewall Reconstruction**

# BUILT ENVIRONMENT & INFRASTRUCTURE 2019 HIGHLIGHTS



## Facilities

- \$24.2 M capital delivery for facilities (within Public Works budget)
- Major projects in 2019:
  - Grightmire Arena
  - Norman Pinky Lewis Recreation Centre
  - Hamilton Public Library window replacement
  - Locke Street Library
  - Bus port
  - 703 Highway 8 (new yard)
- Master Office Space Management Plan - approval of downtown office accommodations
- Space management solutions for Public Works Yards



Grightmire Arena



Norman Pinky Lewis Recreation Centre

15

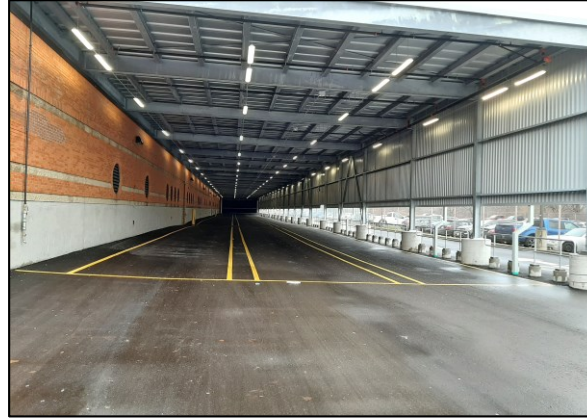




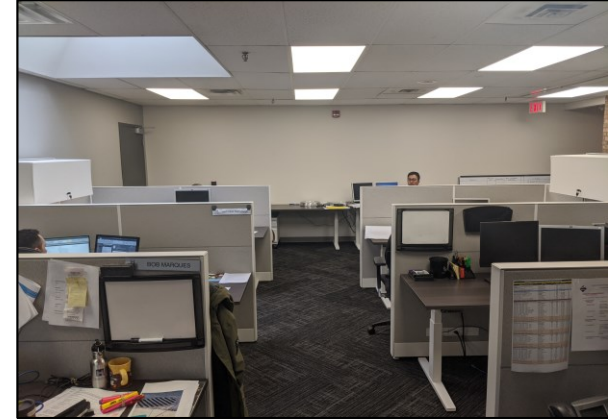
# BUILT ENVIRONMENT & INFRASTRUCTURE 2019 HIGHLIGHTS



**Locke St Library**



**Bus Port**



**703 Hwy 8 (new yard)**



**Hamilton Public Library**



**Hamilton Convention Centre**



**500 MacNab St. – City Housing Hamilton**



# BUILT ENVIRONMENT & INFRASTRUCTURE 2019 HIGHLIGHTS

## Disaster Mitigation and Adaptation Fund

- Shoreline protection
- Combined sewer outfall backflow valves

## Waterfront Development:

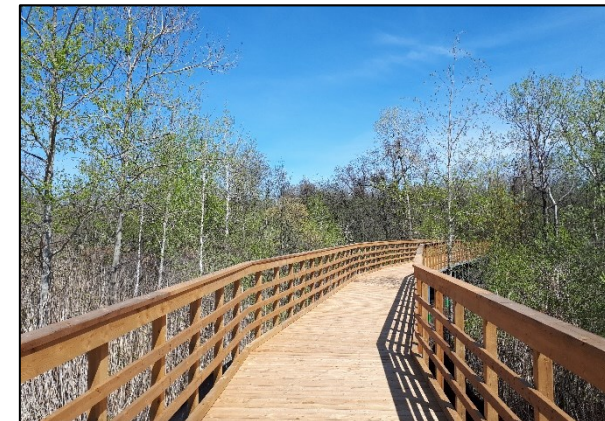
- Pier 8 construction
- Macassa Bay



Pier 8 Development

## Landscape Architecture:

- 13.2 hectares of new parkland
- 24 park and trail construction projects
- John Rebecca Park, Bookjans Park, Churchill Park  
Rain Gardens, Crown Point Parkette, Shaver Estates  
Trail, Tiffany Hills Park



Shaver Estates Trail





# BUILT ENVIRONMENT & INFRASTRUCTURE 2019 HIGHLIGHTS



**Bruce Park Spray Pad**



**Churchill Park Rain Gardens**



**Crown Point Parkette**



**John Rebecca Park**



**East Mountain Trail Loop**



**Tiffany Hills Park** 18



# Healthy & Safe Communities

## 2019 Highlights





# HEALTHY & SAFE COMMUNITIES 2019 HIGHLIGHTS

**15** Neighbourhoods added to Vision Zero speed reduction program

25

650

88



20,114

9

1500

10

Repainted

7,200



2,200



1,024



# HEALTHY & SAFE COMMUNITIES 2019 HIGHLIGHTS



## Security

- Corporate Security Office growth
- Development of security policies
- New security features at City Hall
- New trespassing by-law (corporate owned properties)

## Road and Traffic Safety

- Vision Zero Action Plan
  - 20% decrease in injury collisions since 2016
- Neighbourhood Speed Reduction Program
- RHVP & LINC safety enhancements
- Rural intersection stop bar compliance audit
- Railway crossing safety audit and action plan



Neighbourhood Speed Reductions



Pedestrian Safety 21



# Our People & Performance

## 2019 Highlights



# OUR PEOPLE & PERFORMANCE 2019 HIGHLIGHTS



## CVOR rating improvements

- Driver training, new reporting guidelines, collision toolkit

## Technology improvements

- GIS mobile applications
- Fleet dash cam

## Our People Survey

- Implementation of action plans
- 187 actions in Public Works

## Leadership development

- Cutting Edge of Leadership program
- Green Belt training



Driver Trainer Simulator



NAOSH Health & Safety Week 23

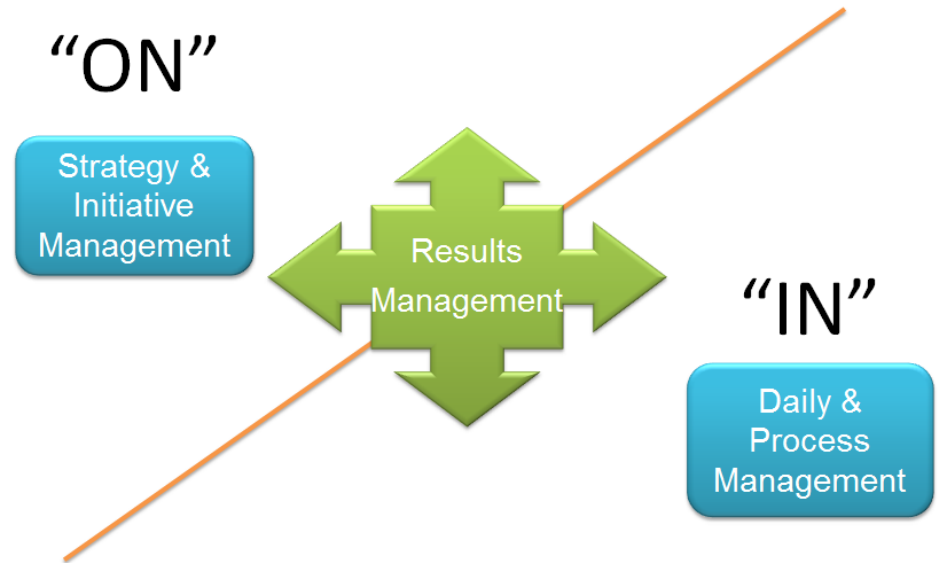


# OUR PEOPLE & PERFORMANCE 2019 HIGHLIGHTS



## Working on the business

- Business acumen/change management response to loss of corporate knowledge with staff departures (retirements, job changes)
- Process Standardization
  - (e.g. *Construction Act Prompt Payment*)
- Divisional/Sectional Annual Reports
- Developmental Senior Project Manager roles across divisions
- Divisional leadership programs



# OUR PEOPLE & PERFORMANCE 2019 HIGHLIGHTS

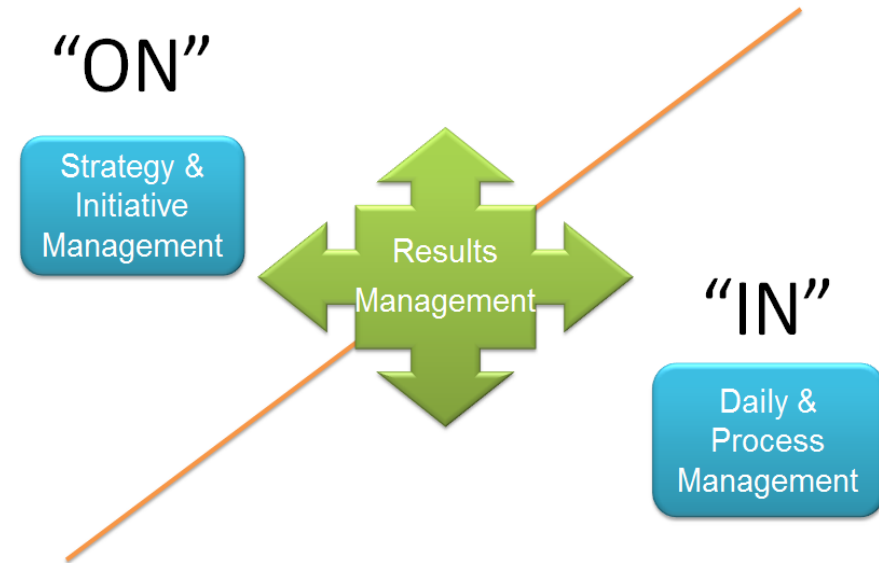


## Departmental Strategic Planning

- Strategic framework/DLT mandate
- Quality management
- Workforce planning
- Common objectives for 2020-2023
- Balanced Scorecard/PW Analytics

## Project Management Standardization

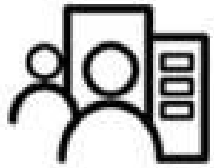
- Approach aligned to project management body of knowledge
- Standard project charter and other templates for improved project performance and reporting



# Community Engagement & Participation 2019 Highlights







# COMMUNITY ENGAGEMENT & PARTICIPATION 2019 HIGHLIGHTS

## Community Outreach

- Increased outreach with the public and community groups on major infrastructure projects
- Communications for Red Hill Valley Parkway resurfacing project, LINC maintenance weekends, and Locke Street reconstruction

## Community Participation

- Community input in play structure design
- More than 22,000 registered participants for Team Up to Clean Up events
- \$51K traffic island sponsorship



Spring 2019 RHVP Construction



Team Up to Clean Up

# Economic Prosperity & Growth 2019 Highlights







## 2019 HIGHLIGHTS

### Open for Business

- Major Telco installation in progress
- Established the Bell Special Project team

### Revenues

- Hamilton Forge Soccer at Tim Hortons Field
- Film shoots and leasing opportunities

### Hamilton Youth in Construction

- Four classes graduated to date



Telco Roll Out





# Culture & Diversity 2019 Highlights



30



# CULTURE & DIVERSITY 2019 HIGHLIGHTS

- \$300k funding received for Inch Park redesign for Challenger Baseball
- Cemeteries consideration for cultural needs
- Installation of temporary commissioned artwork as vinyl wraps on 37 traffic signal and electrical boxes in Downtown Hamilton



Inch Park – Challenger Baseball

## City Facilities

- Accessibility is broadening to inclusivity
- Delivering projects that support culture, e.g. Development of the Ancaster Memorial Arts & Culture Centre



Design by Charlit Floriano  
Photo credit: Jocelyn Reynolds 31



# Continuous Improvement 2019 Highlights





# CONTINUOUS IMPROVEMENT 2019 HIGHLIGHTS

## Ideas Generated



94

Since Program Inception

399

## Projects Started



133

Since Program Inception

289

## Projects Completed



78

Since Program Inception

171

## Kaizen Events



13

Since Program Inception

35

## Recovered Capacity

\$634k



Since Program Inception

\$2.05 M

## Cost Reduction



\$719k

Since Program Inception

\$1.73 M

## Cross-Dep. / Cross Div. Collaboration

20



## Staff Involvement



630

## Green Belts Trained



15

Since Program Inception

29

# Metrics

## Public Works



# ASSET METRICS

## Facilities Management

Manage

# \$2.1 Billion

in Assets  
>500 Facilities



1,196 km Sanitary Sewer  
 1,216 km Storm Sewer  
 574 km Combined Sewer  
 9 Combined sewer overflow tanks

## Fleet Services

Manage and Maintain



## Transportation Operations

Manage

# 45,385

Street Lights

# 600

Streetscape litter containers

## Solid Waste Management

- Operate:
- 3 Community Recycling Centres & Transfer Stations
  - 1 Open Landfill
  - 12 Closed Landfills
  - 1 Material Recycling Facility
  - 1 Central Composting Facility



# 2,101

<sup>km</sup>

of watermains

Manage  

# 70

Municipal Cemeteries

Manage and maintain  

# 2,445

<sup>km</sup>



of sidewalks

Manage and maintain


# 389

Bridges and Structures




## Parks and Open Spaces


# 283

 Playgrounds  
  

# 69

 Spray pads  
  

# 523

 Park Locations  


## Road Maintenance

Manage

# 2,964

centerlane km of Roads

# 230

 lane km  
Bike lanes



# PERFORMANCE METRICS

# 215,000

km

of roadway patrolled for deficiencies

# 3500

Traffic signs repaired/replaced




# 395

metres of trails constructed



# 25,000

Pothole sites repaired



# 5,649

MWH Electricity produced

# 1250

Internments at Hamilton Cemeteries



## Solid Waste Management

Manage

# 213,400

tonnes of residential waste



Over 

# 27 Million

 Waste Pickups per year



# 54,803

Visitors to the new Gage Park Tropical Greenhouse

## Winter Operations

Maintain 

# 6,492

 Lane km of Road



## Natural Open Space & Parkland

Manage

# 24,082

hectares

# 3,804

Play structure inspections <sup>36</sup>

# PERFORMANCE METRICS

## Web Analytics Tool

- Web-based tool allows staff to monitor performance in real-time
- Helps to demonstrate compliance, achieve efficiency and improve consistency



Reported By: Mckinnon,Daniel Stephen (GM Public Works)

Data for the Calendar Month of: December

Division: PublicWorksAdmin  
Section: ALL

Year of: 2019  
Variance Threshold: 5%

Printed Date: 09-Jan-2020

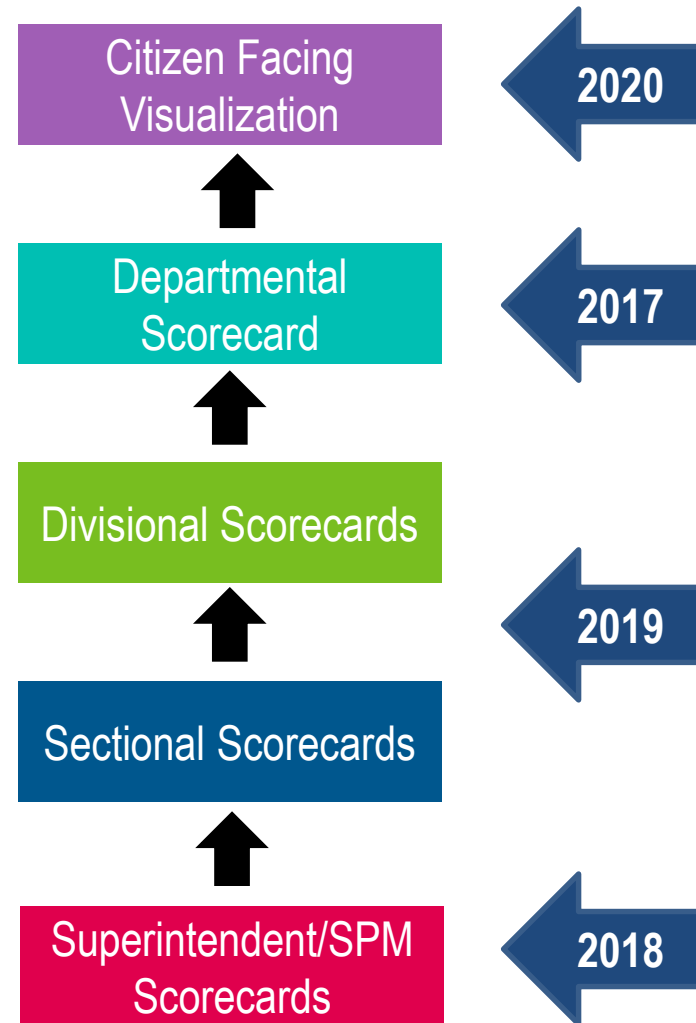
Priority	Division	Metric Name	Metric Description (Metric ID)	YE Target	Month Target	Month Actual	YTD Target	YTD Actual	Health Indicator	Trend To Target	Comments
Division: PublicWorksAdmin											
Section: Admin											
Reported by: Mckinnon,Daniel Stephen (GM Public Works)											
Category: Customer											
Built Environment & Infrastructure	PublicWorksAdmin	Transit - Cancelled service	Number of hours cancelled service (39)	5,784	482	3192	5,784	62.25	●	↘	Transit Metric ID 1925
Health & Safe Communities	PublicWorksAdmin	Small drinking water systems/wells	Number of adverse conditions from 50 wells tested (1089)	0	0	0	0	5	●	↔	EFFM Metric ID 11
Health & Safe Communities	PublicWorksAdmin	Water - Safe drinking water	Maintain zero confirmed adverse water quality incidents (AWQIs) (1090)	0	0	1	0	3	●	↘	HW Metric ID 1677
Health & Safe Communities	PublicWorksAdmin	Waste - Missed collections	Number of missed collections per 10,000 pickups (no bulk) (1111)	48	4	2.69	48	42.81	●	↘	ES Metric ID 1390
Health & Safe Communities	PublicWorksAdmin	Total Water Quality Complaints	Number of Water Quality Complaints (3982)	0	0	27	0	468	●	↘	HW Metric ID 1706
Category: Financial											
Economic Prosperity & Growth	PublicWorksAdmin	Revenue Generation (Fees and General)	Revenue (% of Plan) (13)	100	100	9.5	100	96.32	●	↘	Data from P/W analytics/FMW
Economic Prosperity & Growth	PublicWorksAdmin	Budget Expense	Expenses (% of Plan) (14)	100	100	73.1	100	94.01	●	↘	
Economic Prosperity & Growth	PublicWorksAdmin	Overtime Spending (Salary)	\$ Overtime as a % of Gross Salary (15)	1.94	2.05	3.08	1.94	2.4	●	↘	
Economic Prosperity & Growth	PublicWorksAdmin	Overtime Spending (Wage)	\$ Overtime as a % of Gross Wages (16)	5.48	7.62	22.26	5.48	10.62	●	↘	
Economic Prosperity & Growth	PublicWorksAdmin	Standby Trouble Callout	% of Plan (17)	100	100	112.7	100	100.65	●	↘	
Economic Prosperity & Growth	PublicWorksAdmin	Overtime Bank Paid	% of Plan (18)	100	100	960.2	100	438.37	●	↘	
Category: Process & Compliance											
Our People & Performance	PublicWorksAdmin	Continuous Improvement: Initiatives	Number of completed Continuous Improvement Project/initiatives (76)	60	10	2	60	77	●	↘	P/W CI Folder
Our People & Performance	PublicWorksAdmin	Continuous Improvement: Shine Audit Scores	Average of Shine Audit scores where implemented (%) (77)	80.95	75	84	80.95	87.66	●	↘	Data source: Avg. of EFFM, Transit, HW & ES
Our People & Performance	PublicWorksAdmin	Resource Levels - Vacancy Fill Rate	Number of vacancies open > 16 wks from when position became vacant (78)	600	50		600		●	↘	2019 data is currently unavailable.
Our People & Performance	PublicWorksAdmin	Performance to Purchasing Policies	Total number of Policy 19 occurrences (79)	12	1		12	12	●	↘	Through Nancy
Built Environment & Infrastructure	PublicWorksAdmin	Emergency water response repairs	Repairs to watermain/water service complete < 2 days (%) (1091)	100	100	100	100	95.42	●	↘	HW Metric ID 2786
Built Environment & Infrastructure	PublicWorksAdmin	Emergency sewer lateral repair	Repairs complete < 4 days (%) (1092)	100	100	0	100	33.33	●	↘	HW Metric ID 1698
Clean & Green	PublicWorksAdmin	WWTP Regulatory Compliance	Number of instances effluent not compliant with regulatory standards (limit / daily loading) for Woodward	0	0	0	0	0	●	↘	HW Metric ID 2849
Clean & Green	PublicWorksAdmin	Spills response	% of spills responded on time (1094)	85	85		85	93.3	●	↘	HW Metric ID 94
Built Environment & Infrastructure	PublicWorksAdmin	Facilities Management	% Regulatory orders responded by due date (1101)	100	100		100	97.27	●	↘	EFFM Metric ID 63 & 2802
Built Environment & Infrastructure	PublicWorksAdmin	Fleet Services	% Regulatory orders responded by due date (1102)	100	100	100	100	100	●	↘	EFFM Metric ID 64
Clean & Green	PublicWorksAdmin	Forestry - Tree Canopy	Plant 7000 trees (Number) (1103)	6,400	0	0	6,400	7,259	●	↘	ES Metric ID 1466
Health & Safe Communities	PublicWorksAdmin	Waste - Glanbrook Landfill Waste to Soil ratio	Glanbrook Landfill Ratio of waste to soil to be 7:1 (1105)	5.63	5.5		5.63	6.06	●	↘	ES Metric ID 1580
Community Engagement & Participation	PublicWorksAdmin	Play structures safety inspections	Maintain 75% or greater for inspected play sites (1106)	75	75	100	75	100	●	↘	ES Metric ID 1377
Economic Prosperity & Growth	PublicWorksAdmin	Cemeteries - Pre-need sales	Amount of pre-need sales -Goal is to increase sales by 10% annually (1109)	1,320,000	190,000	212,674.22	1,320,000	1,154,659.76	●	↘	ES Metric ID 1530
Clean & Green	PublicWorksAdmin	Forestry - Tree trimming by gnd	Tree trimming per crew per day (cm/crew/day) (1110)	4,680	390	369	4,680	4,163	●	↘	ES Metric ID 1487
Clean & Green	PublicWorksAdmin	Parks - Trash can processing	4040 trash cans emptied per week in summer and 1399 trash cans emptied per week in winter (Number) (4066)	128,400	6,400	2,635	128,400	132,265	●	↘	ES (Metric ID 1393, 1439, 1361 & 1282)






# LOOK AHEAD METRICS

## Performance Metrics




- Enhancing web based performance monitoring tool
- Web-based analytics tool
- Review and optimize performance metrics
- Development of data trends and insights
- Ensure that customer and vendor management metrics are identified and monitored effectively



# METRICS – KEY PERFORMANCE INDICATORS

Objective	Metric	Target	YTD	Health
<b>Water - Safe drinking water</b>	Maintain zero confirmed adverse water quality incidents (AWQIs)	0	0	
<b>Greenhouse Gas Emissions</b>	% Greenhouse Gas emission reduction (from 2005 baseline)	-20%	-38%	
<b>Play Structure Safety Inspections</b>	Maintain >75% inspected play sites as per regulation	75%	100%	

# METRICS – KEY PERFORMANCE INDICATORS

Objective	Metric	Target	YTD	Health
<b>Water – Emergency Response</b>	Water main/water service repair within 2 days	100%	94%	
<b>Development Application Response</b>	# of applications processed within PED timeline	990	820	
<b>Waste Diverted from Landfill</b>	% Diversion	65%	40%	



# Trends & Issues 2020-2023

## Public Works





# TRENDS AND ISSUES 2020 – 2023

## Right-of-Way Capital Program Delivery

- Revised roads budget achieves re-investment rate of 1.1%
  - Below the recommended 2%-3% target
- Complete Streets – design & construction of multi-modal transportation systems
- Higher risk and complex projects (i.e. escarpment, tunneling, etc.)
- Road condition project to determine current Overall Condition Index and Level of Service – update in 2020



Escarpment Bin Wall damage



Multi-modal transportation

# OVERALL CONDITION INDEX (OCI) RESULTS



Chapple St. OCI = 17

Reconstruction



Aspen Ct. OCI = 38

Major Rehab.



Birchcliff Blvd OCI = 57

Minor Rehab.



Muir Ave OCI = 85

Good

**Overall network average OCI is 62 (Good)\***

\*From 2015 pavement condition assessment

### Overall Condition Index

0-30%	30-45%	45-60%	>60%
Reconstruction	Major Rehab.	Minor Rehab.	Good



# FACILITY CONDITION INDEX (FCI) RATINGS



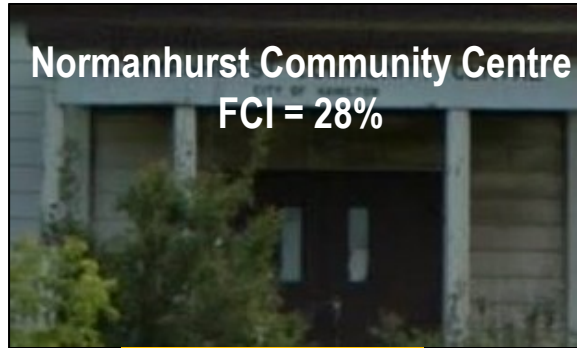
**Greensville Hall**  
FCI est. > 65%

**Critical**



**Tapleytown Yard**  
FCI = 41%

**Critical**



**Normanhurst Community Centre**  
FCI = 28%

**Poor**



**Hill Park Recreation Centre**  
FCI = 21%

**Poor**

**Overall FCI across 500+ facilities is 9.5% (Fair)**

**Facility Condition Index**

0-5%	5-10%	10-30%	>30%
Good	Fair	Poor	Critical

# TRENDS AND ISSUES 2020 – 2023

## Climate Change

- Building resiliency and taking action to mitigate and adapt to climate change
- Key areas: water quality, flood mitigation, greenhouse gas reduction, invasive species
- Public Works plays a major role in the City's Corporate Climate Change goals
- Prioritizing actions
  - Corporate Energy Policy and energy projects
  - Focus on green fleet/equipment
  - Support active and sustainable travel
  - Resiliency planning to promote climate focused approach



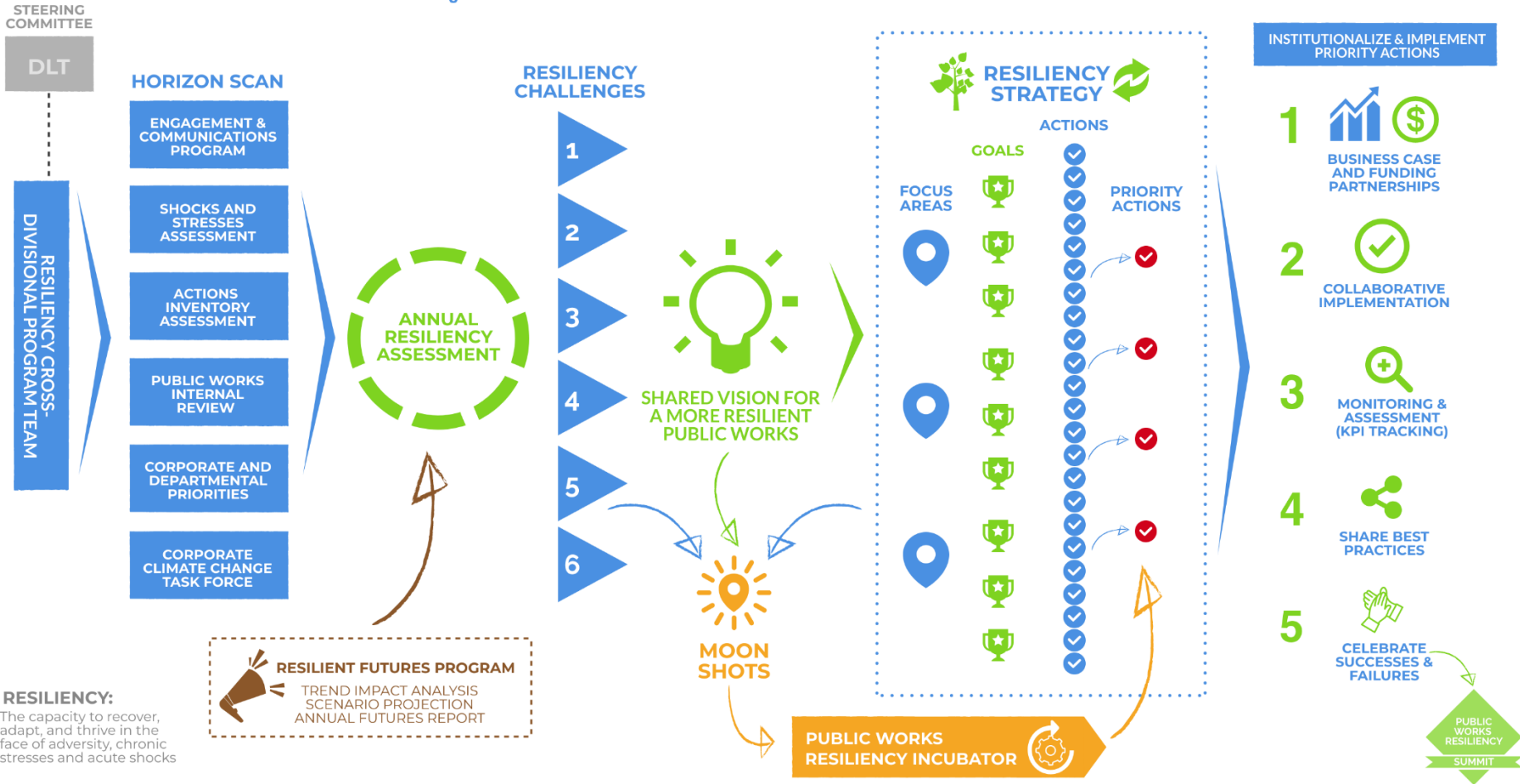
Solar panels-Wentworth Operations Centre



Compressed Natural Gas (CNG) Bus



# CLIMATE RESILIENCY PROGRAM >>> PUBLIC WORKS



**RESILIENCY:**  
The capacity to recover, adapt, and thrive in the face of adversity, chronic stresses and acute shocks

EXAMINE

ASSESS

ENVISION

ALIGN

IMPLEMENT

47



# TRENDS AND ISSUES 2020 – 2023

## Urgent Request/Emergency Response

- Public Works is highly reactive to urgent requests and emergencies
- This reduces capacity to manage planned activities.
- Response to extreme weather events can result in unexpected budget deficits.
- Examples:
  - Escarpment slope failures (Hwy 8, McNeilly)
  - Liquid asphalt spill on Red Hill Valley Parkway
  - Significant storm response (downed trees, flooding, etc.)



Hwy 8 Dundas Escarpment Failure



Storm Damage

# TRENDS AND ISSUES 2020 – 2023

## Forestry

- Extreme weather events and climate change affect tree health
- Urban intensification and urban sprawl reduce existing tree canopy and limit potential planting sites for new trees
- Capital Block Funding has been static or declining over the last 10 years
- Program Initiatives:
  - Pest and disease monitoring, risk assessment and mitigation
  - Process improvements to monitor and increase health/survival of new trees
  - Implement field based technology
- An estimated 80,000 trees need to be planted annually over 40 years to meet the 30% canopy coverage target (3.2 million trees)

**Current tree canopy is approx. 21.2%**

# TRENDS AND ISSUES 2020 – 2023

## Contract Renewals

Contract	Timing	Budget Impact
Transfer Station / Community Recycling Centres	March 2020	↓ \$1.39 M
Landfill / Leaf & Yard Processing	March 2020	↑ \$0.97 M
Materials Recycling Facility	April 2020	↑ \$1.55 M
Waste Collections	2021	↑ Expected
Central Composting Facility	2021	↑ Expected
Winter Control	Fall 2020	↑ \$250,000
Salt procurement	2020	↑ \$1.50 M



Salt Storage



Waste Collections



# TRENDS AND ISSUES 2020 – 2023

## Workforce Management

- Difficulty with filling skilled roles
- Creating a healthy, engaged and supportive workplace will attract and retain knowledgeable staff
- Plan for the departure of long standing and knowledgeable employees

## Technology

- Must leverage technology and innovation to improve the delivery of projects and services



LIDAR Technology  
(Hwy 8 & Brock Rd)

# TRENDS AND ISSUES 2020 – 2023

## Legislation

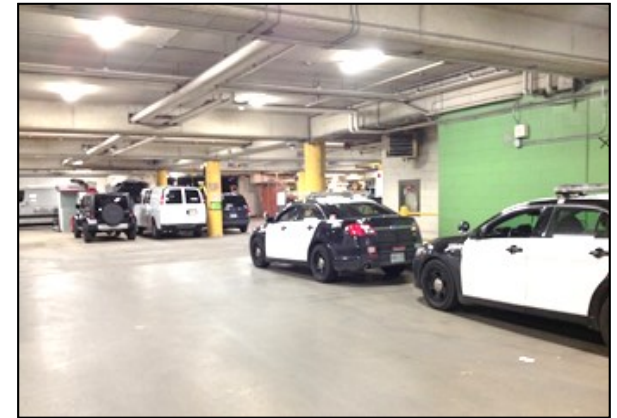
Changes to federal and provincial legislation have an associated impact on how the City delivers services:

- Bill 6      *Infrastructure for Jobs & Prosperity Act, 2015* – requirements for a strategic asset management plan
- Bill 47      *Making Ontario Open for Business Act, 2018* - impacts minimum wage standards, work scheduling, personal emergency leave
- Bill 66      *Restoring Ontario's Competitiveness Act, 2019* – declared municipalities as “non-construction employers”
- Bill 108     *More Homes, More Choice Act, 2019* - changed the structure of development charges and parkland acquisition
- Bill 142     *Construction Act, 2019* – liens, prompt payment, payment disputes
- Bill 151     *Waste-Free Ontario Act, 2016* – increasing waste diversion and building a circular economy

# TRENDS AND ISSUES 2020 – 2023

## Energy & Fuel Markets

- Electricity, diesel, gasoline and natural gas energy markets remain volatile and are impacted by factors such as global markets, supply and demand.
- Energy projects can lead to future savings
- Electricity incentives ending in 2020



LED Lighting Retrofit

## Lease Contracts & Accommodations

- Master Accommodation Plan to consider expiring leases for office accommodations between 2020 to 2021.



Leased Space



# TRENDS AND ISSUES 2020 – 2023

## Growth

- There is currently no mechanism to identify operating impacts from growth related activities in departmental budgets
- Budgetary constraints make it a challenge to accommodate these growth impacts
- Development application approvals
- Intensification challenges for Public Works



City Growth



Waterfront Servicing Project

# Major Initiatives 2020

## Public Works



# MAJOR INITIATIVES 2020

## Corporate Plan Initiatives



Climate change strategic plan

Enterprise Asset Management System (EAM)

Asset management strategic planning process

Continuous improvement priorities



Quality Management System



Standard project management practices



“Our People Survey” action plans



# MAJOR INITIATIVES 2020

## Right-of-Way projects

- Rymal Road
- Regional Road 56
- Neighbourhood resurfacing: Westdale, Homeside, Kentley

## Facility projects

- Beverley Community Centre (HWDSB) (Fall)
- Lister Annex Offices (Spring)
- First Ontario Centre vertical transportation system (Summer)
- Macassa & Wentworth Lodges – Roof Replacement (Fall/Winter)



Beverley Community Centre - Construction



Lister Annex

# MAJOR INITIATIVES 2020

## Transportation Operations & Maintenance:

- Development of the RHVP / LINC Operational Strategy
- Vision Zero Initiatives:
  - Neighbourhood Speed Reduction Program
  - Automated Speed Enforcement



Neighbourhood Speed Reductions

## Space management solutions

- Office leases
- New developments
- Yard rationalization

## Energy

- 5-Year review of the Corporate Energy Policy in 2020



Expiring Office Leases: City Centre

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# MAJOR INITIATIVES 2020

## Waste Programs

- Solid Waste Management Master Plan review
- Waste collection contract award
- Transition operating contracts for the waste management facilities including Transfer Stations, Community Recycling Centres, and Landfill



Mountain Community Recycling Centre

## Other Major Initiatives

- Biosolids
- Year 8 of the 10-Year Emerald Ash Borer Management Plan
- Year 5 of 10-Year Transit Strategy
- Our People Survey action implementation and launch of new OPS Survey (2020-2023)



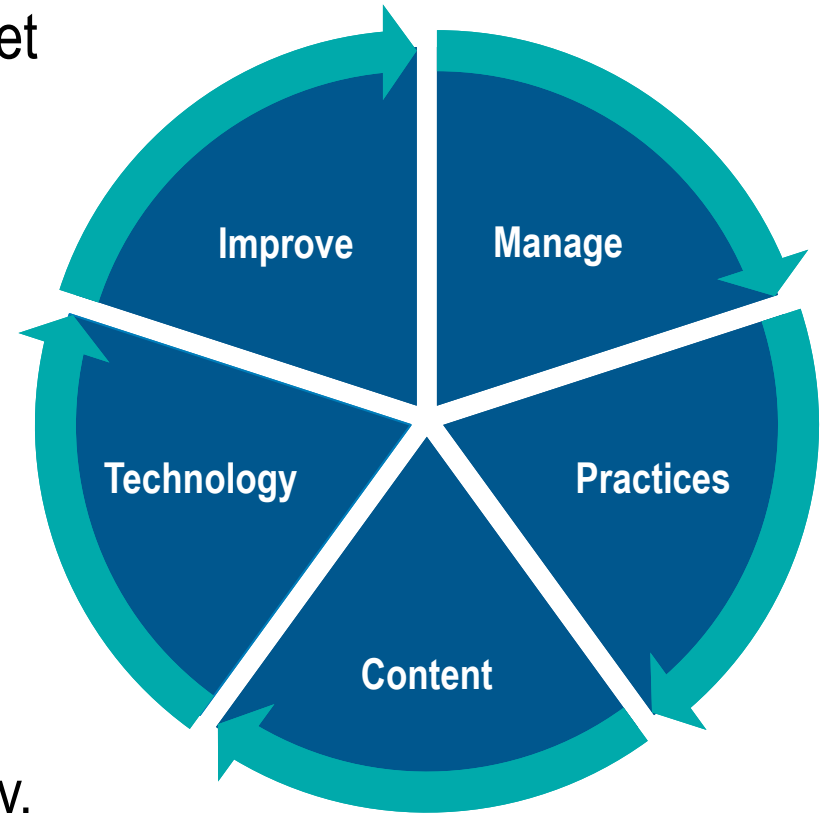
Emerald Ash Borer Tree Damage



# MAJOR INITIATIVES 2020

## Enterprise Asset Management (EAM)

- Significant opportunity for improved asset management and higher quality service delivery
- Business case focused on redesigning EAM practices and processes with associated system workflows
- 11+ software systems in Public Works cost \$1.06M annually
- Opportunity to reduce costs and align with IT strategy
- Goal to increase discipline and efficiency, enable mobility, promote engagement and community self-service and allow for open data



**Enterprise Asset  
Management**

# MAJOR INITIATIVES 2020

## Quality Management System (QMS)

- The PWQMS seeks to meet the minimum standards as prescribed by ISO 9001:2015
- The system will support delivering services according to detailed policies, procedures and methods
- Quality Resource Centre provides staff access to controlled policies and procedures
- Cross-functional collaboration in the review and development of a PWQMS Policy, Health & Safety and operational procedures
- Assessment of record control methodology to ensure compliance



# Major Initiatives 2021 – 2023

## Public Works





# MAJOR INITIATIVES 2021 – 2023

## Corporate Plan Initiatives

Climate change workplan

Implementation of EAM System

Asset Management Plan (O. Reg 588/17)

Investment in transportation systems

Project management best practices

Our People & Performance Plan

Corporate Energy Policy implementation



# MAJOR INITIATIVES 2021 – 2023

## Right-of-Way Infrastructure

- Explore technology applications to address the need for more cost effective road rehabilitation strategies
- Implementation of the strategic road safety strategy that focuses on Vision Zero and the Complete Livable Better Streets principles
- Identifying the reconstruction requirements for the LINC
- Investigate infrastructure requirements for autonomous vehicles



Road Rehabilitation



Cycling Infrastructure

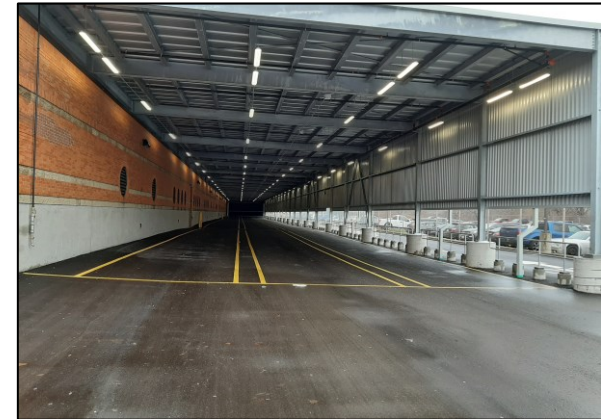
# MAJOR INITIATIVES 2021 – 2023

## Major Right-of-Way Projects

- Stone Church Road – feeder-main
- Rymal Road
- Nebo Road

## Transit

- Continue with the implementation of the 10-Year Transit Strategy with a focus on modal split and growth



New Bus Port at Mountain Transit Centre

## Waste

- Continue to monitor, participate in and prepare for the potential transition of the Blue Box Program to comply with the Waste-Free Ontario Act (Bill 151)



Waste Collection



# MAJOR INITIATIVES 2021 – 2023

## Facilities

- 2021 Grey Cup at Tim Hortons Field
- Collaboration with HWDSB on Greensville Library and Community Centre (2021)
- Ancaster Arts Centre (2022)
- Stadium Precinct Park Facilities (2022)
- Riverdale Community Hub (2023)
- Sir Wilfred Laurier Gymnasium Expansion (2023)
- Parkdale Pool (2021)
- Valley Park Community Centre (2021)
- Transit Maintenance and Storage Facility
- Woodward Wastewater Treatment Plant Upgrades



Future Ancaster Arts Centre



Future Riverdale Community Hub

# MAJOR INITIATIVES 2021 – 2023

- Develop asset management plans for core assets and green infrastructure to comply with the *Infrastructure for Jobs and Prosperity Act* (Bill 6)
- Undertake projects for parks Waterfront Trail redevelopment, shoreline protection and erosion control
- Participate in the evolution of the Hamilton Harbour Remedial Action Plan (HHRAP)
- Ongoing City projects related to the Waterfront Development



**Waterfront Shore Wall Construction**

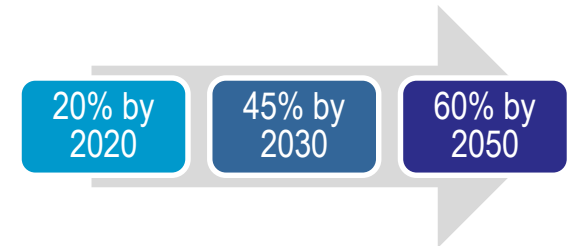


# MAJOR INITIATIVES 2021 – 2023

## Energy Initiatives

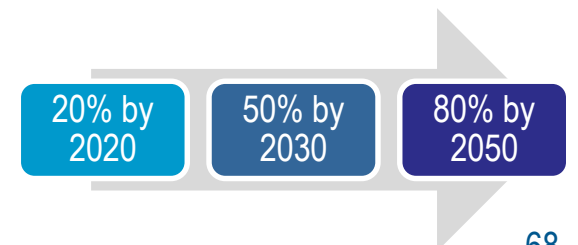
- Energy Policy last updated in 2014 – review ongoing in 2020
- Steps to advance toward our energy targets
  - 1) Improving efficiency
  - 2) Renewable energy
  - 3) Carbon credits
- Upcoming energy projects: Westmount Solar Thermal, Norman Pinky Lewis Passive Solar Wall, LED lighting upgrades at City Hall, various libraries and recreation centres

## Corporate Energy Reduction Targets



**25% Cumulative Energy Intensity Reduction as of 2018**

## Corporate Emissions Reduction Target (GHG)



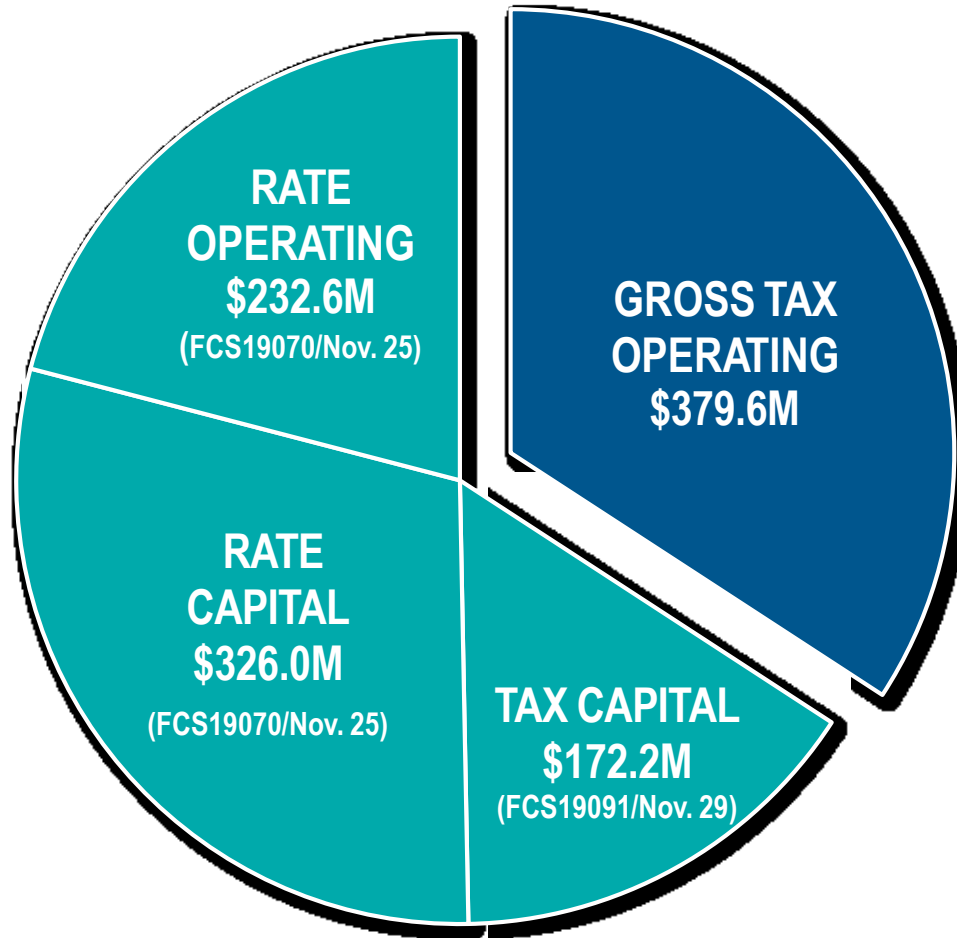


# 2020 PRELIMINARY TAX OPERATING BUDGET

## Public Works Department

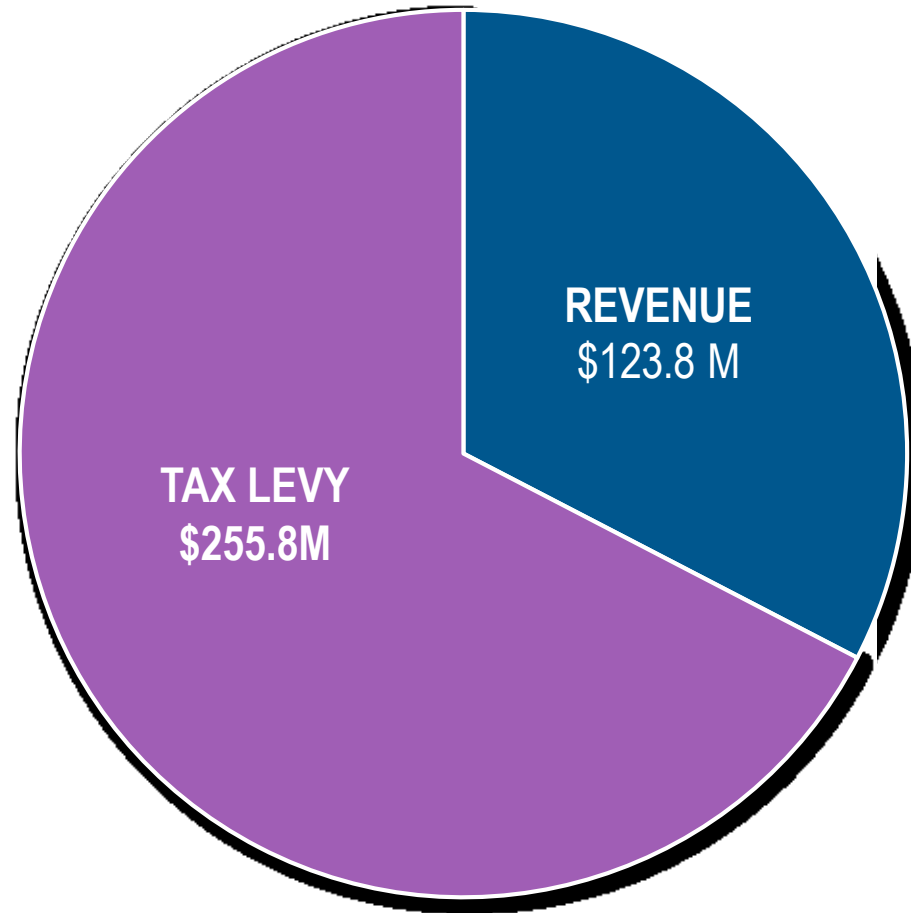
# 2020 GROSS BUDGET

2020 Gross Capital and Operating Budgets  
**\$1.110 billion**



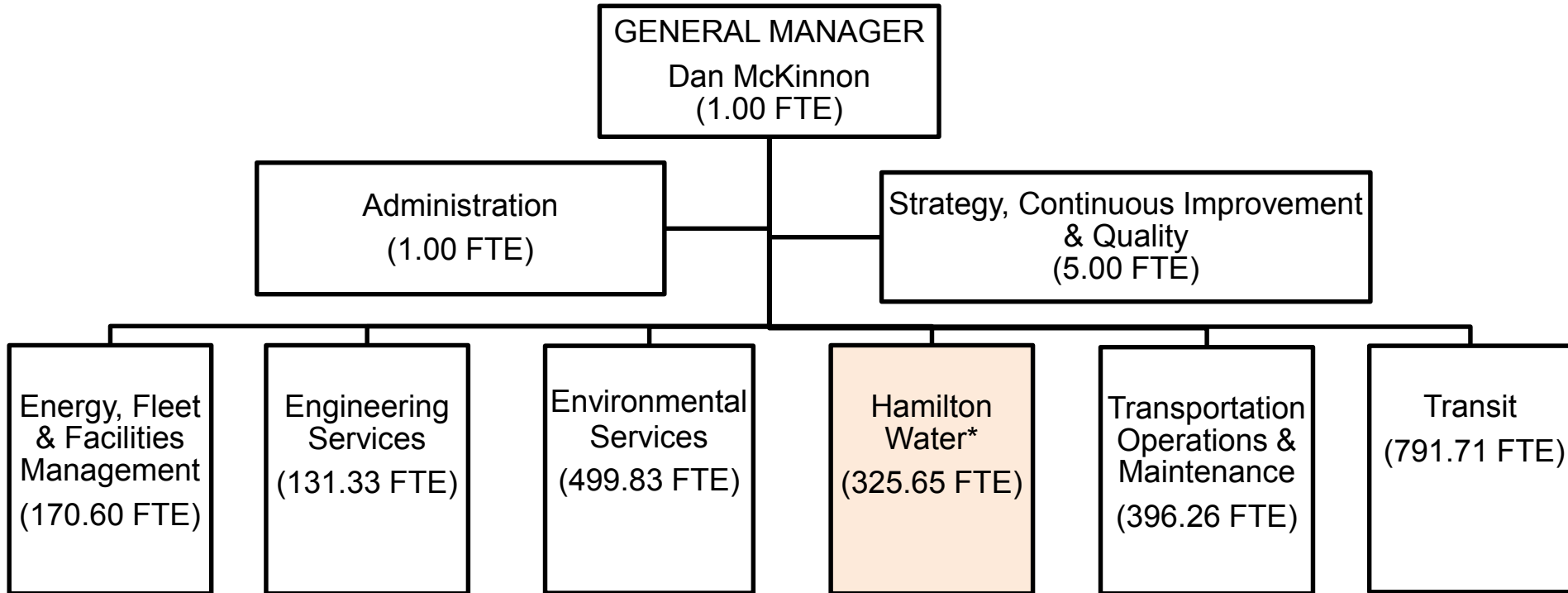
# GROSS TAX OPERATING BUDGET

Gross Expenditures  
**\$379.6 million**





# ORGANIZATIONAL CHART



Complement (FTE)	Management	Other	Total	Staff to Mgt. Ratio
<b>2019</b>	32.00	1929.73	1961.73	60.30:1
<b>2020</b>	32.00	1964.73	1996.73	61.40:1
<b>Change</b>	0.00	35.00	35.00	

\* Complement excludes Hamilton Water

# 2020 OPERATING BUDGET BY DIVISION

## Public Works - Tax

	2019 Restated Net	2020 Preliminary Gross	2020 Preliminary Net	-2020 vs 2019 Net Change-	
				\$	%
PW-General Administration	874,810	903,540	903,540	28,730	3.3%
Energy Fleet and Facilities	8,718,820	19,433,110	9,297,360	578,540	6.6%
Engineering Services	-	20,572,580	-	-	-
Environmental Services	79,243,370	104,040,500	82,794,430	3,551,060	4.5%
Transit	74,298,880	141,439,580	81,395,710	7,096,830	9.6%
Transportation Operations & Maintenance	78,920,680	93,190,760	81,440,570	2,519,890	3.2%
<b>Total Public Works - Tax</b>	<b>242,056,560</b>	<b>379,580,070</b>	<b>255,831,610</b>	<b>13,775,050</b>	<b>5.7%</b>
<b>Amendments - January 17, 2020 Budget GIC</b>				<b>(740,350)</b>	<b>(0.3%)</b>
<b>Total Public Works - Tax Less Amendments</b>				<b>13,034,700</b>	<b>5.4%</b>

- Note: Recycling revenues has a \$2.4 M pressure as a result of a world-wide collapse of mixed fiber commodities
- This risk has been mitigated in 2020 by a budgeted transfer from reserve

# EFFORTS TO REDUCE BUDGET IMPACT

## HIGHLIGHTS

Transfer Station / Community Recycling Centres – New Contract	\$ 1,392,730
Reduced Energy Costs LED Streetlighting	\$426,000
Continued Conversion Diesel Transit Fleet to Natural Gas	\$390,000
Right Sizing Budget	\$ 1,109,400

### Amendments – January 17, 2020 Budget GIC:

PW Portion: Fuel rate update (diesel & unleaded)	\$ 195,350
Environmental Services: Contractual savings at landfill	\$75,000
Environmental Services: Contractual savings from diversion	\$370,000
Environmental Services: Increased minimum vehicle fee to \$10 at Transfer Station / Community Recycling Centres (APPROVED)	\$ 100,000



# 2020 KEY COST DRIVERS

## TOTAL 2020 PRELIMINARY NET LEVY INCREASE

5.4%

### Departmental Key Drivers

TRANSIT	10 Year Strategy (Net) Year 5 of 10	\$688,220	0.3%
	PRESTO Operating Agreement	\$875,000	0.4%
	Transit Fleet Reserve Year 8 of 8	\$628,000	0.3%
	DARTS Ridership Growth	\$2,664,130	1.1%
<b>Without Key Transit Drivers</b>			<b>3.4%</b>
TOM	Road Salt Contract (New Contract)	\$1,500,000	0.6%
ENVIRO	Materials Recycling Facility (New Contract)	\$1,551,570	0.6%
	Waste Collection (Change in Leaf & Yard Program)	\$316,000	0.1%
	Leaf & Yard Disposal (New Contract)	\$506,970	0.2%
	Glanbrook Site Operations (New Contract)	\$458,620	0.2%
<b>Without Key Transit Drivers + New Contracts</b>			<b>1.6%</b>
EFFM	New Vacant School Properties	\$240,440	0.1%
	Security (PW17083)	\$134,530	0.1%
	Insurance Premiums (Direct Charges)	\$1,130,350	0.5%
<b>NET LEVY EXCLUDE ALL KEY COST DRIVERS</b>			<b>1.0%</b>

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# HISTORICAL BUDGET INCREASES

2017 Approved		2018 Approved		2019 Approved	
\$ Change from 2016	% Change from 2016	\$ Change from 2017	% Change from 2017	\$ Change from 2018	% Change from 2018

<b>Total Net Levy Increase</b>	<b>5,002,510</b>	<b>2.2%</b>	<b>8,486,320</b>	<b>3.8%</b>	<b>11,163,190</b>	<b>4.8%</b>
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## Key Drivers:

	2017 Approved	% Change from 2016	2018 Approved	% Change from 2017	2019 Approved	% Change from 2018	
TRANSIT	10 Year Strategy (Net)	361,000	0.2%	2,188,000	1.0%	1,784,000	0.8%
	PRESTO Operating Agreement			356,000	0.2%	642,000	0.3%
	Transit Fleet Reserve	577,000	0.3%			616,000	0.3%
	DARTS Ridership Growth			1,680,000	0.8%	4,284,000	1.9%
EFFM	Tim Hortons Field	1,593,000	0.7%				
	<b>Levy Exclude Key Drivers</b>	<b>2,471,510</b>	<b>1.1%</b>	<b>4,262,320</b>	<b>1.9%</b>	<b>3,837,190</b>	<b>1.6%</b>

<b>Guideline</b>	<b>2.00%</b>	<b>1.50%</b>	<b>1.50%</b>
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# 2020 BUSINESS CASES

Service/ Program	Description	Gross \$(000's)	Net \$(000's)	FTE Impact
Transportation Operations & Maintenance	Bring Inspectors In-House (savings to contractual services)	\$285	(\$89)	4.4
Tim Hortons Field	Assistant Stadium Technicians needed to handle addition of Forge FC Soccer games (fully offset by additional revenue)	\$140	\$0	2.3
<b>DEPARTMENT TOTAL</b>		<b>\$425</b>	<b>(\$89)</b>	<b>6.7</b>

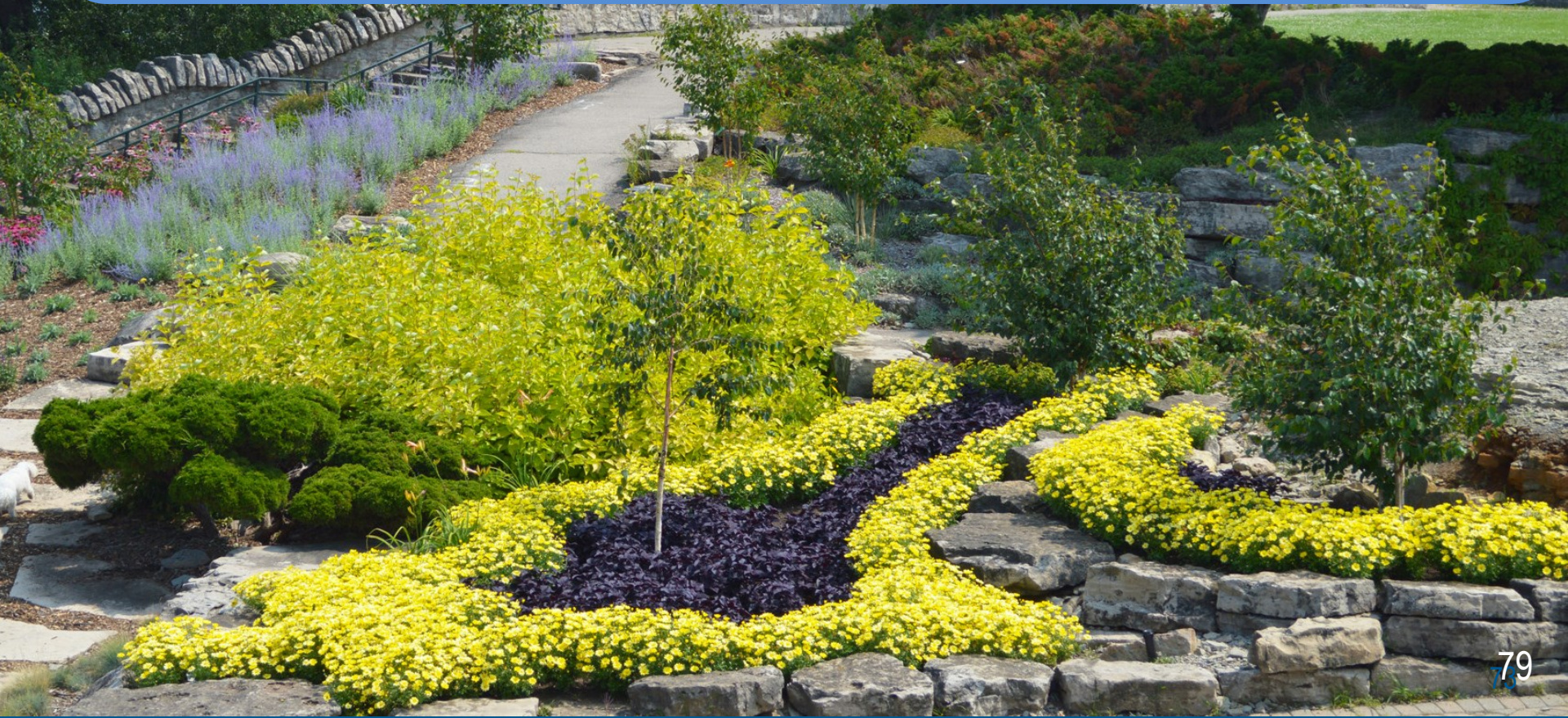


# MULTI-YEAR OUTLOOK

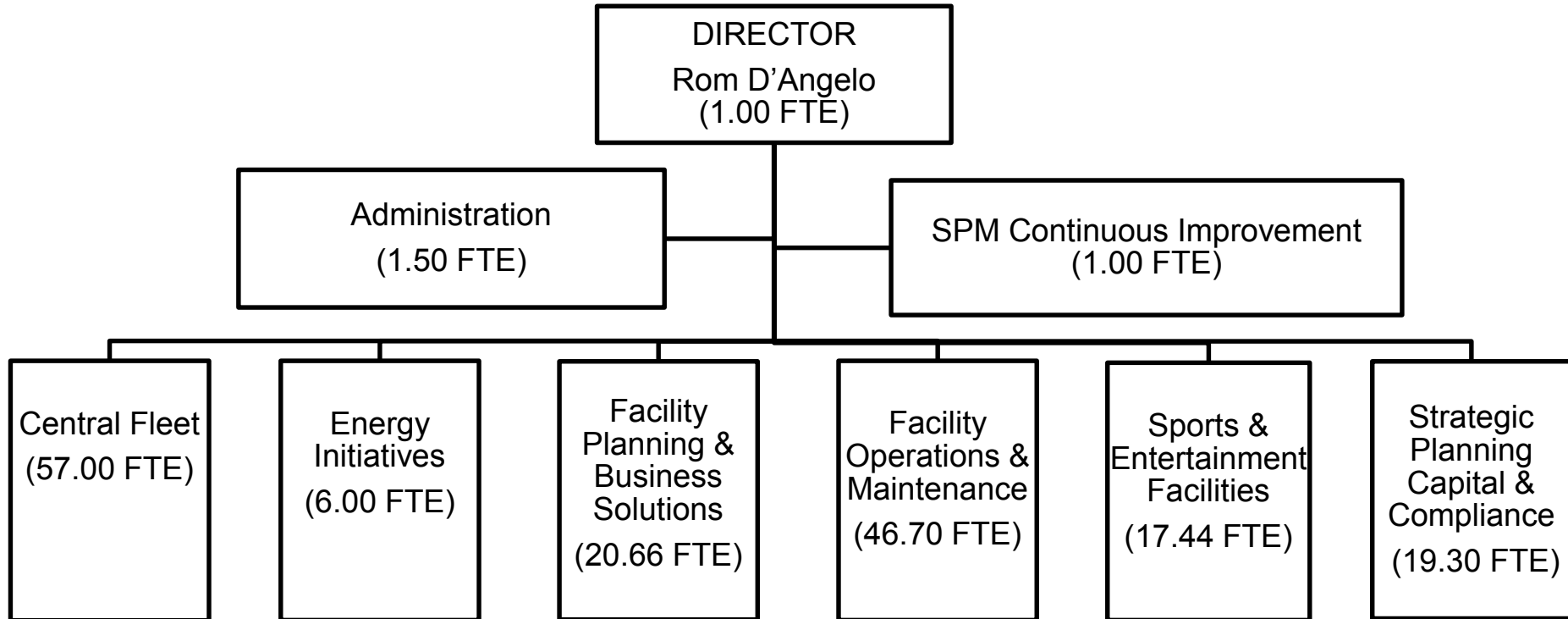
Preliminary	Multi-Year Outlook					
2020	2021		2022		2023	
Budget \$	Budget \$	% Change from 2020	Budget \$	% Change from 2021	Budget \$	% Change from 2022

<b>Public Works (Excludes Key Transit Drivers)</b>	<b>250,976,260</b>	<b>262,387,710</b>	<b>2.6%</b>	<b>273,587,151</b>	<b>1.6%</b>	<b>283,074,463</b>	<b>1.4%</b>
<b>Key Transit Drivers:</b>							
DARTS Ridership Growth	2,664,130	1,720,000		1,820,000		1,950,000	
Annual 10 Year Strategy (Net)	688,220	3,154,000		3,315,000		3,085,000	
PRESTO Maintenance Agreement	875,000	1,722,000		189,000		208,000	
Transit Fleet Reserve	628,000	207,000		230,000		253,000	
<b>Total Public Works - Tax</b>	<b>255,831,610</b>	<b>269,190,710</b>	<b>5.2%</b>	<b>279,141,151</b>	<b>3.7%</b>	<b>288,570,463</b>	<b>3.4%</b>

# 2020 PRELIMINARY TAX OPERATING BUDGET- Divisions



# ENERGY, FLEET & FACILITIES MANAGEMENT



Complement (FTE)	Management	Other	Total	Staff to Mgt. Ratio
<b>2019</b>	7.00	163.60	170.60	23.37:1
<b>2020</b>	7.00	163.60	170.60	23.37:1
<b>Change</b>	0.00	0.00	0.00	



# 2020 OPERATING BUDGET

## ENERGY FLEET & FACILITIES

### Energy Fleet and Facilities

	2019 Restated Net	2020 Preliminary Gross	2020 Preliminary Net	-2020 vs 2019 Net Change-	
				\$	%
Fleet Services	170,550	2,024,220	25,530	(145,020)	(85.0%)
Corporate Facility Ops & Tech	1,359,670	3,312,360	1,905,120	545,450	40.1%
Facilities Planning and Business Solutions	681,610	1,651,190	895,470	213,860	31.4%
Community Facility Ops & Tech Serv	3,164,410	3,258,090	3,258,090	93,680	3.0%
Sports & Entertainment Facilities	3,002,660	5,979,730	2,907,610	(95,050)	(3.2%)
Director EFF	305,310	327,550	305,750	440	0.1%
Energy Initiatives	36,120	818,550	-	(36,120)	(100.0%)
Strategic Plan & Capital Compliance	(1,510)	2,061,420	(210)	1,300	(86.1%)
<b>Total Energy Fleet and Facilities</b>	<b>8,718,820</b>	<b>19,433,110</b>	<b>9,297,360</b>	<b>578,540</b>	<b>6.6%</b>

### Amendments - January 17, 2020 Budget GIC:

Reduction to Fuel Assumptions (diesel & unleaded) (14,450)

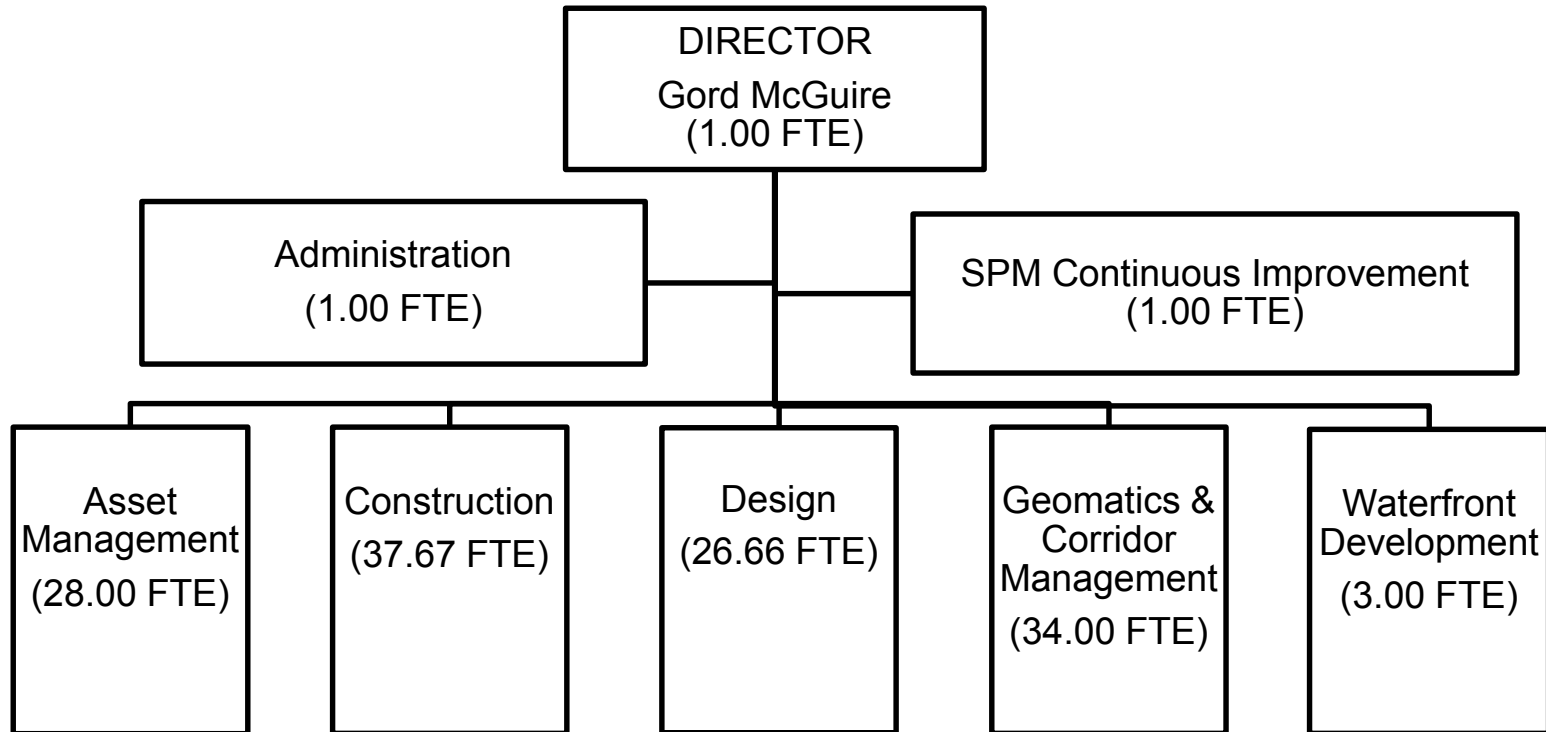
<b>Total Energy Fleet and Facilities Less Amendments</b>	<b>564,090</b>	<b>6.5%</b>
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# 2020 BUDGET DRIVERS

## ENERGY, FLEET & FACILITIES

Item	Cost (\$000)
Hold Vacant Properties (Mainly due to King George & Mountain Schools)	\$240
Increase in Security costs (PW17083)	\$135
Employee Related Costs	\$203

# ENGINEERING SERVICES



Complement (FTE)	Management	Other	Total	Staff to Mgt. Ratio
<b>2019</b>	6.00	125.33	131.33	20.89:1
<b>2020</b>	6.00	125.33	131.33	20.89:1
<b>Change</b>	0.00	0.00	0.00	



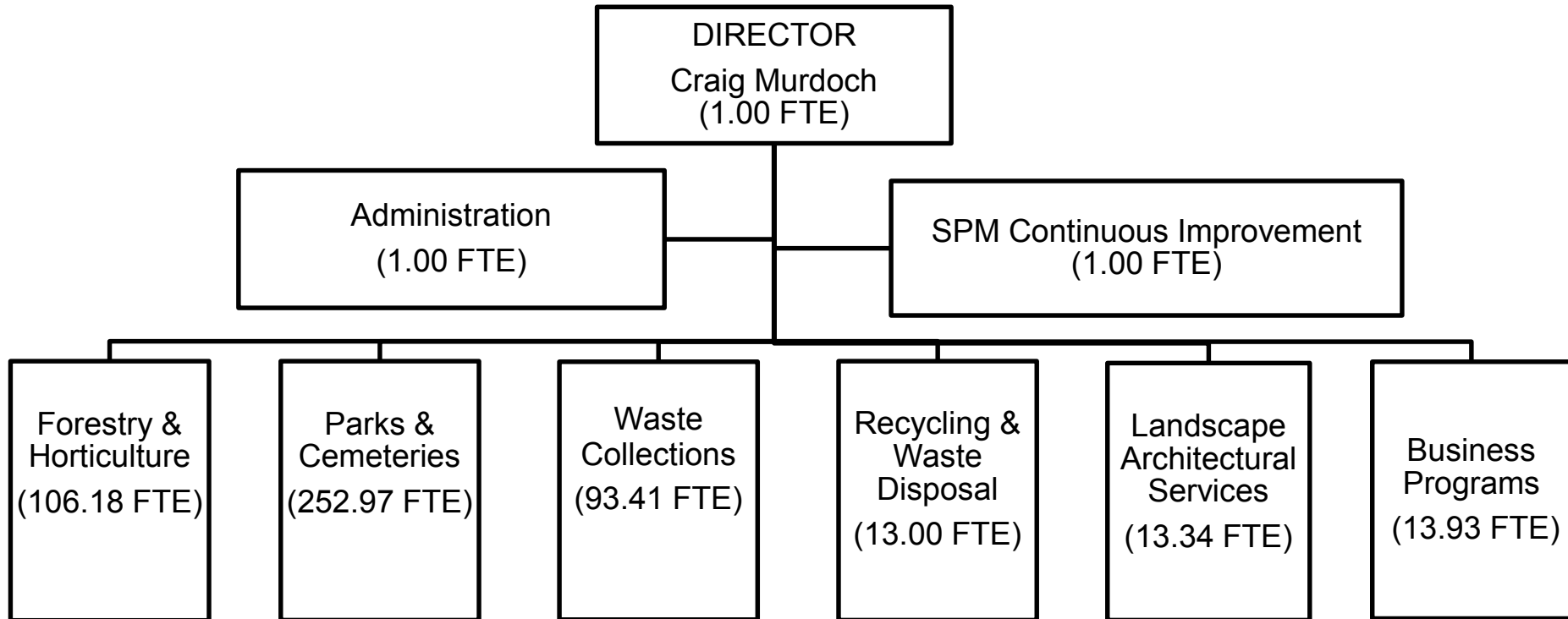
# 2020 OPERATING BUDGET ENGINEERING SERVICES

## Engineering Services

	-2020 vs 2019 Net Change-				
	2019 Restated Net	2020 Preliminary Gross	2020 Preliminary Net	\$	%
Asset Management	-	3,474,180	-	-	0.0%
Construction	-	4,690,090	-	-	0.0%
Design Services	-	3,001,480	-	-	0.0%
Director of Engineering Services	-	1,681,310	-	-	0.0%
Geomatics and Corridor Management	-	6,992,680	-	-	0.0%
Waterfront Development	-	732,840	-	-	0.0%
<b>Total Engineering Services</b>	-	20,572,580	-	-	-

- Costs are mainly recovered from Capital

# ENVIRONMENTAL SERVICES



Complement (FTE)	Management	Other	Total	Staff to Mgt. Ratio
<b>2019</b>	7.00	492.83	499.83	70.40:1
<b>2020</b>	7.00	492.83	499.83	70.40:1
<b>Change</b>	0.00	0.00	0.00	

# 2020 OPERATING BUDGET SERVICES

## Environmental Services

	-2020 vs 2019 Net Change-				
	2019	2020	2020	\$	%
	Restated Net	Preliminary Gross	Preliminary Net		
Recycling & Waste Disposal	6,906,870	22,961,590	7,816,720	909,850	13.2%
Waste Collections	31,889,180	32,866,100	32,823,100	933,920	2.9%
Business Programs	2,076,090	2,281,510	2,166,850	90,760	4.4%
Director Environmental Services *	(701,070)	(701,070)	(701,070)	-	-
Forestry & Horticulture	12,941,860	14,609,580	13,221,460	279,600	2.2%
Landscape & Architectural Services	98,710	2,004,300	102,630	3,920	4.0%
Parks & Cemeteries	26,031,730	30,018,490	27,364,740	1,333,010	5.1%
<b>Total Environmental Services</b>	<b>79,243,370</b>	<b>104,040,500</b>	<b>82,794,430</b>	<b>3,551,060</b>	<b>4.5%</b>

### Amendments - January 17, 2020 Budget GIC:

Fuel rate update (diesel & unleaded)	(28,700)
Contractual savings at landfill	(75,000)
Contractual savings from diversion	(370,000)
Increased minimum vehicle fee to \$10 at Transfer Station/Community Recycling Centres (APPROVED)	(100,000)
<b>Total Environmental Services Less Amendments</b>	<b>2,977,360 3.8%</b>

### Exclude Key Drivers:

New Contract Pressures	(2,517,160)
	<b>460,200 0.6%</b>

- Note: Recycling revenues has a \$2.4 M pressure as a result of a world-wide collapse of mixed fiber commodities
- This risk has been mitigated in 2020 by a budgeted transfer from reserve

\* Includes divisional gapping target of \$701 K



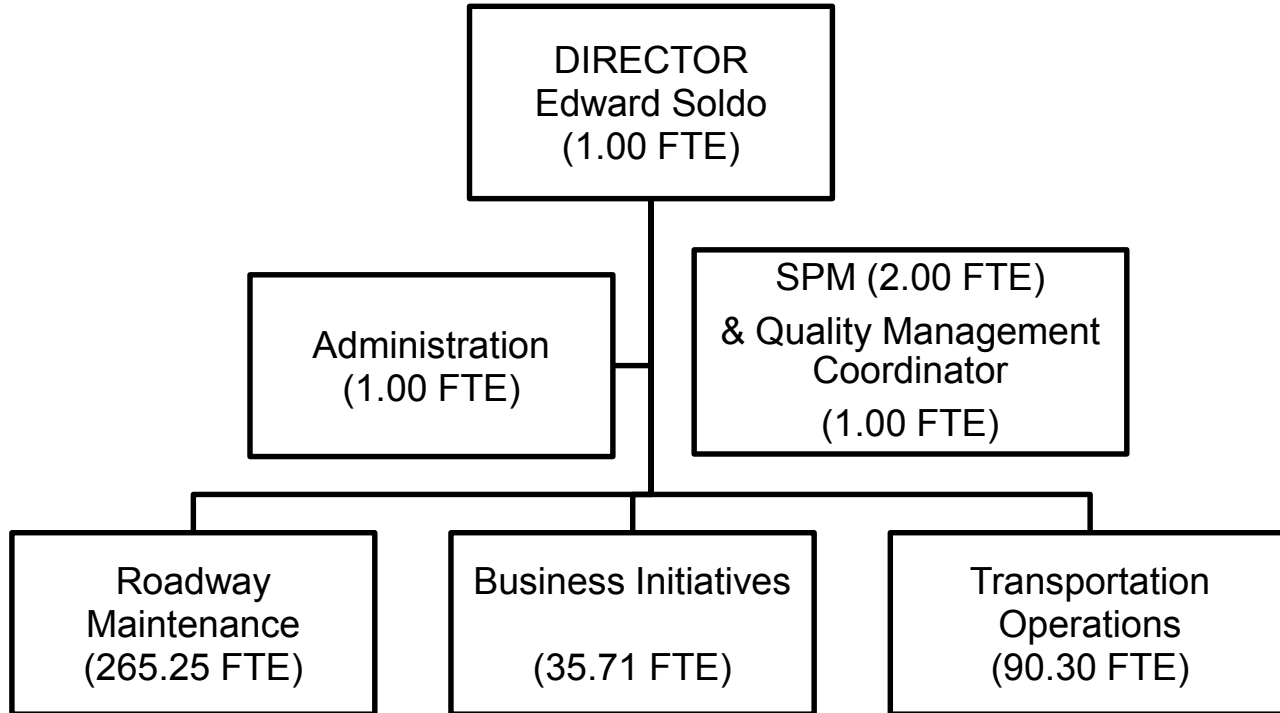
# 2020 BUDGET DRIVERS

## ENVIRONMENTAL SERVICES

Item	Cost (\$000)
New Contract - Pressures	\$2,517
New Contract – Savings (Transfer Station and Community Recycling Centers)	(\$1,393)
Waste Collection (Change in Leaf & Yard program)	\$316
Central Composting Facility (Change in Leaf & Yard program)	(\$259)
Employee Related Costs	\$767
Water Utility	\$507
Blue Box Recycling Collection	\$247
Fleet Reserve Contribution	\$340
In Year Approval	\$126

- Note: Recycling revenues has a \$2.4 M pressure as a result of a world-wide collapse of mixed fiber commodities
- This risk has been mitigated in 2020 by a budgeted transfer from reserve

# TRANSPORTATION OPERATIONS & MAINTENANCE



<b>Complement (FTE)</b>	<b>Management</b>	<b>Other</b>	<b>Total</b>	<b>Staff to Mgt Ratio</b>
<b>2019</b>	4.00	392.26	396.26	98.07:1
<b>2020</b>	4.00	392.26	396.26	98.07:1
<b>Change</b>	0.00	0.00	0.00	

# 2020 OPERATING BUDGET

## TRANSPORTATION OPERATIONS & MAINTENANCE

### Transportation Operations & Maintenance

	2019 Restated Net	2020 Preliminary Gross	2020 Preliminary Net	-2020 vs 2019 Net Change-	
				\$	%
Roadway Maintenance	62,229,330	65,724,580	63,936,340	1,707,010	2.7%
Director – Trans Ops & Mtce *	(629,950)	(629,950)	(629,950)	-	-
Transportation Operations	13,753,490	24,235,020	14,372,510	619,020	4.5%
Business Initiatives	3,567,810	3,861,110	3,761,670	193,860	5.4%
<b>Total Transportation Operations &amp; Maintenance</b>	<b>78,920,680</b>	<b>93,190,760</b>	<b>81,440,570</b>	<b>2,519,890</b>	<b>3.2%</b>

#### Amendments - January 17, 2020 Budget GIC:

Reduction to Fuel Assumptions (diesel & unleaded) (37,000)

<b>Total Transportation Operations &amp; Maintenance Less Amendments</b>	<b>2,482,890</b>	<b>3.1%</b>
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#### Exclude Key Drivers:

Road Salt Contract (New) (1,500,000)

Insurance Premiums (Direct Charges) (576,000)

	<b>406,890</b>	<b>0.5%</b>
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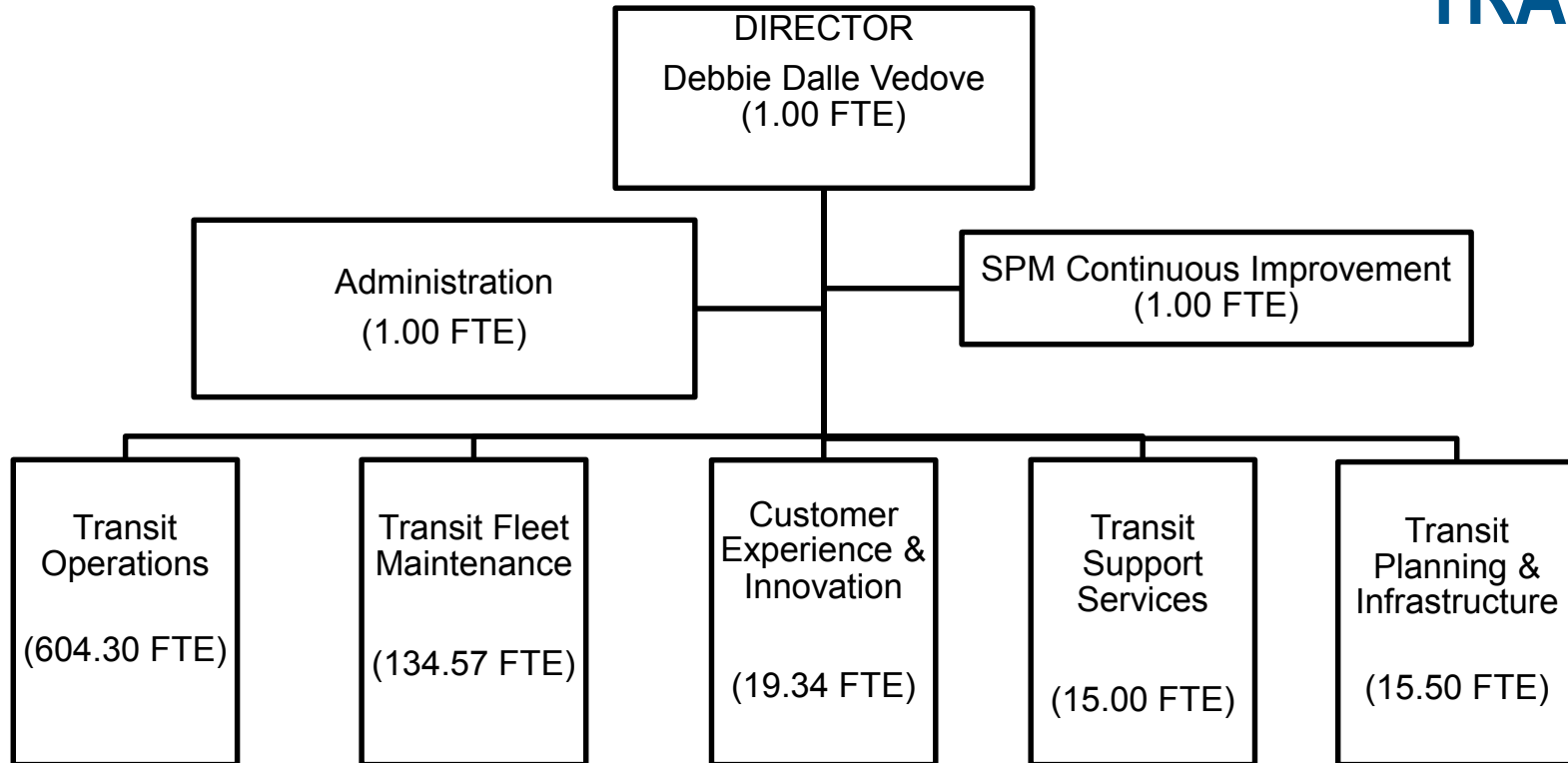
\* Includes divisional gapping target of \$630 K



# 2020 BUDGET DRIVERS

## TRANSPORTATION OPERATIONS & MAINTENANCE

Item	Cost (\$000)
Road Salt – New Contract	\$1,500
Fleet Reserve Contribution	\$668
Insurance Premiums (Direct Charges)	\$576
Fuel	\$379
Employee Related Expenses	\$180
Right Sizing Budget	(\$531)
Savings in Energy / Streetlighting Costs	(\$426)



Complement (FTE)	Management	Other	Total	Staff to Mgt Ratio
2019	6.00	750.71	756.71	125.12:1
2020	6.00	785.71	791.71	130.95:1
Change	0.00	35.00	35.00	

# 2020 OPERATING BUDGET

## ANSIT

### Transit

	-2020 vs 2019 Net Change-				
	2019	2020	2020	\$	%
	Restated Net	Preliminary Gross	Preliminary Net		
Customer Experience and Innovation	3,541,660	5,537,410	4,187,210	645,550	18.2%
Transit Planning and Infrastructure	23,490,180	27,536,190	26,190,090	2,699,910	11.5%
Support Services	2,105,120	2,130,050	2,129,050	23,930	1.1%
Director of Transit	124,890	134,200	134,200	9,310	7.5%
Financial Charges & General Revenue	(33,597,270)	15,708,680	(34,527,690)	(930,420)	2.8%
Operations HSR	46,980,520	57,671,540	50,771,180	3,790,660	8.1%
Transit Fleet	31,653,780	32,721,510	32,511,670	857,890	2.7%
<b>Total Transit</b>	<b>74,298,880</b>	<b>141,439,580</b>	<b>81,395,710</b>	<b>7,096,830</b>	<b>9.6%</b>

#### Amendments - January 17, 2020 Budget GIC:

Reduction to Fuel Assumptions (diesel & unleaded)	(115,200)
<b>Total Transit Less Amendments</b>	<b>6,981,630 9.4%</b>

#### Exclude Key Drivers:

DARTS Ridership Growth	(2,664,130)
Annual 10 Year Strategy (Net) Year 5	(688,000)
PRESTO Maintenance Agreement	(875,000)
Transit Fleet Reserve Year 8 of 8	(628,450)
Insurance Premiums (Direct Charge)	(424,000)
	<b>1,702,050 2.3%</b>

# 2020 BUDGET DRIVERS

## TRANSIT

Item	Cost (\$000)
DARTS Ridership Growth	\$2,664
Employee Related Costs	\$1,396
PRESTO Operating Agreement	\$875
Year 5 of 10 Year Strategy (Net)	\$688
Fleet Reserve Contribution: Year 8 of 8 loss of OBRP Funding	\$628
Insurance Premiums (Direct Charges)	\$424
Conversion Diesel Transit Fleet to Natural Gas	(\$390)





THANK YOU

## APPENDIX "A" to REPORT PW19022(a)

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## Municipal Service Level Comparison

Municipality	Features	Service Level	Completion Time	Comments
Mississauga	<p>Priority sidewalks on major routes, bus stops and pedestrian crossings</p> <p>Residents are responsible for clearing non-priority sidewalks which is any road/sidewalk not on a major route, transit route of school</p>	<p>Less than 8 cm - Salt only</p> <p>8 -15 cm plow and salt</p> <p>15 -30 cm plow and salt</p> <p>30 cm or more plowing and salting</p>	<p>24 hours from the end of the event</p> <p>36 hours from the end of the event</p> <p>More than 36 hours after the event</p>	<p>Damaged equipment and damage to City infrastructure i.e. curb and sidewalk as a result of uneven surfaces</p>
St. Catharines	<p>Sidewalks cleared on City owned property only</p> <p>Downtown walkways plowed when road plowing operations are started on secondary routes</p> <p>Property owners are responsible for all sidewalks adjacent to their property</p>	<p>After any accumulation</p>	<p>Within 24 hours of snow falling</p>	<p>Present cost \$2,100/lane km</p>

## APPENDIX "A" to REPORT PW19022(a)

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Municipality	Features	Service Level	Completion Time	Comments
<b>Burlington</b>	<p>City plows all sidewalks on Arterial, Collectors and residential roads</p> <p>Only after the adjacent road has been plowed</p>	Plowing starts at a minimum 5 cm accumulation	<p>Within 24 hours from the end of snow falling</p> <p>Larger events 12- 30 cm of snow – 36 hours from the end of the snow</p>	<p>Spring cleanup costs associated with sod replacement</p> <p>Balancing the workforce between road plowing and sidewalk plowing</p>
<b>Oakville</b>	<p>Primary and secondary sidewalks</p> <p>Residential sidewalks</p>	<p>Plowing starts after 5 cm of accumulation and once roads are cleared</p> <p>Plowing starts at 8 cm of accumulation and once roads are cleared</p>	Material application is only placed on primary and secondary sidewalks	
<b>London</b>	City plows all sidewalks on arterials, collectors and residential roads	Plowing starts at 8 cm accumulation and plowed to a snow packed service level	City must clear within 48 hours after a snow event	Present cost \$1350/lane km
<b>Toronto</b>	<p>Clear all sidewalks where it is mechanically possible to do so</p> <p>No service on local streets downtown. All arterials downtown receive mechanical clearing</p>	<p>Plowing starts at 2 cm accumulation on high volume sidewalks i.e. arterials, bus routes</p> <p>8 cm on low volume sidewalks</p>	Toronto has developed a sliding scale based upon accumulation and road classification	Toronto offers a program to seniors and the disabled in the Downtown area where they do not provide the mechanical sidewalk plowing service. Staff will report to Council later this year to formally change the activation of sidewalk snow clearing equipment to 2 cm accumulation for all sidewalks



**CITY OF HAMILTON**  
**PUBLIC WORKS DEPARTMENT**  
**Transportation Operations and Maintenance Division**

<b>TO:</b>	Mayor and Members General Issues Committee
<b>COMMITTEE DATE:</b>	January 28, 2020
<b>SUBJECT/REPORT NO:</b>	Sidewalk Snow Removal (PW19022(a)) (City Wide) <b>(Outstanding Business List Item)</b>
<b>WARD(S) AFFECTED:</b>	City Wide
<b>PREPARED BY:</b>	Bob Paul (905) 546-2424 Ext. 7641
<b>SUBMITTED BY:</b>	Edward Soldo Director, Transportation Operations & Maintenance Public Works Department
<b>SIGNATURE:</b>	

### RECOMMENDATIONS

- (a) That staff expand existing communications initiatives regarding winter storm activities to include additional information about By-law No. 03-296 and on-street parking during snow events; and
- (b) That the Sidewalk Clearing Program, Snow Angels Program, Pro-Active Sidewalk Snow Removal Enforcement and Regular Maintenance of Canada Post Community Mailbox Locations, be removed from the General Issues Committee Outstanding Business List.

### EXECUTIVE SUMMARY

At the March 27, 2019 Council Meeting, staff were asked to prepare a report that integrated an Equity, Diversity and Inclusion (EDI) framework into the development of a new service standard related to snow removal from sidewalks during the winter. Three scenarios were identified, ranging from \$3.06 to \$5.36 million. It should be noted that any enhancements could not be implemented prior to the 2020/2021 winter season.

Should Council wish to further consider the development of a municipal winter sidewalk maintenance program, as per the EDI framework, staff recommend the engagement of consulting services to prepare a detailed program based on an assessment of the

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existing inventory, routing and staffing needs, with recommendations for service levels and a delivery model. This information would be used to develop a request for proposal which would provide more definitive costing and implementation timing.

To enhance existing sidewalk snow removal compliance, staff recommend expanding the existing winter storm communications activities to focus more heavily on residents' responsibilities regarding removing snow from sidewalks adjacent to their property, and to request they avoid parking on the road during snow events.

**Alternatives for Consideration – N/A****FINANCIAL – STAFFING – LEGAL IMPLICATIONS**

**Financial:** To enhance this service level to include priority 1 and 2A roadways would result in an additional 783 km of sidewalks cleared at a cost in the range of \$1.48 to \$1.78 million, bringing the total budget to between \$3.06 and \$3.36 million. If the service level enhancement was expanded further to include all 2,445 km of sidewalks on city roadways, it would require an increase in the range of \$3.53 to \$3.78 million, bringing the total budget to between \$5.11 and \$5.36 million.

**Staffing:** N/A

**Legal:** N/A

**HISTORICAL BACKGROUND**

At the March 27, 2019 Council meeting, the following directions were approved:

## (iv) Sidewalk Clearing Program (Item 6.8)

That staff be directed to prepare a report for consideration during the 2020 budget that would include, but not be limited to, integrating an Equity, Diversity and Inclusion (EDI) framework of removing snow on sidewalks in high pedestrian areas, around parks, day care and childcare facilities, senior housing and eldercare facilities and provide connectivity to transit routes.

## (v) Snow Angels Program, Pro-Active Sidewalk Snow Removal Enforcement and Regular Maintenance of Canada Post Community Mailbox Locations (Item 6.8)

That staff be directed to report back to either before or to the General Issues Committee during the 2020 Operating Budget process respecting the following:

## (a) The feasibility of ways and means to enhance the Snow Angel program;

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- (b) The feasibility of greater proactive sidewalk snow removal enforcement; and
- (c) Communications with Canada Post for regular maintenance (snow and ice removal) of the Community Mailbox locations.

At the February 28, 2019 General Issues Committee (GIC) meeting, staff provided through Report PW19022, a consolidated summary and financial update regarding previous reports related to winter sidewalk maintenance in the City.

The City maintains Municipal roadways as per Ontario Regulation 239/02 - Minimum Maintenance Standards for Municipal Highways - made under the Municipal Act, 2001 (MMS).

The City has a 24/7 winter response team equipped with; over 500 total pieces of winter equipment (in-house and contracted), which includes 161 road plow salt/sanders and 22 sidewalk plows. The response team maintains the City's 6,478 lane-kilometres of roadway, approximately 1,100 cul-de-sacs, and over 2,300 bus stops.

The City currently provides partial snow clearing winter control for sidewalks using City staff in conjunction with contracted services to clear 397 km of the approximate 2,445 km of sidewalks across Hamilton. The response standard for snow clearing is within 24 hours of the end of a winter event.

By-law No. 03-296 requires that every occupant or owner shall, within 24 hours of the cessation of a winter storm event, or within 24 hours of the cessation of a series of consecutive winter storm events, remove and clear all snow and ice from sidewalks abutting the highways in front of, or alongside, or at the rear of any occupied or unoccupied lot or vacant lot.

The City does not offer individual snow removal services for seniors or individuals with disabilities. In 2005, the City approved the development of the Snow Angels Program that is coordinated through the Healthy & Safe Communities Department. This program involves the recruitment of volunteers to clear snow on sidewalks, walkways and driveway entrances left by snow plows for eligible seniors and individuals with disabilities in the Hamilton area.

**RELEVANT CONSULTATION**

The following City of Hamilton Departments/Divisions have been consulted in the development of this report:

- Healthy & Safe Communities: Children's Services and Neighbourhood Development;

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- Planning & Economic Development: Licensing & By-law Enforcement
- Public Works: Transportation Operations & Maintenance: Business Initiatives;
- Corporate Services: Finance; and
- City Manager's Office: Corporate Communications.

The following external parties have been consulted for this report:

- Canada Post

**ANALYSIS AND RATIONALE FOR RECOMMENDATIONS****Alternative Sidewalk Winter Maintenance Service Levels**

The integration of an Equity, Diversity and Inclusion (EDI) framework into decisions related to transportation can be challenging as there are many potential impacts to consider, different ways to measure impacts and multiple ways to categorize users of the system.

Transportation affordability, housing affordability, impacts on low income communities, transit availability and service quality, AODA design, mobility needs, parking and service quality for non-vehicle drivers are all considerations that need to be taken into account when reviewing service delivery levels related to transportation infrastructure.

The integration of the EDI framework into transportation service levels will promote fairness that ensures residents of all identities are treated fairly by removing barriers and creating equal opportunities, promoting diversity through the understanding of different user group experiences and being inclusive by creating an environment in which all people are respected through the identification and removal of barriers.

To integrate an EDI framework for removing snow on sidewalks a review of alternative sidewalk winter service level scenarios was undertaken.

The target areas are located throughout the community. Developing sidewalk clearing routes that encompass every location that meets the criteria was not possible. Staff were able to analyse the known locations of the areas of interest and overlay their locations onto the present Hamilton Street Railway transit routes. It was determined that most of the relevant sidewalks are located on the City's priority 1 and 2A winter control snow clearing roadways. Based upon this analysis it is estimated that an additional 783 km of sidewalk would need to be incorporate into the City of Hamilton's sidewalk snow clearing program.

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Using this approach, three scenarios were developed for analysis:

Scenario 1 – Base Case (existing Service) – Maintaining sidewalks on municipally-owned property, along reverse frontage lots, formerly Ward 12 in its entirety, and sidewalks adjacent to school property, owned by either the Public or Separate School Board, in conjunction with By-law No. 03-296 on a charge-back basis.

Scenario 2 – Priority 1 and 2A Roadways – Maintaining sidewalks in the base case plus the addition of an estimated 783 km of sidewalk.

Scenario 3 – City Wide Roadways – Maintaining all sidewalks in the city.

The estimated costs for scenario 2 and 3 are based on the approach identified in Report PW19022 Winter Sidewalk Maintenance which used the former Ancaster Ward 12 service delivery model and is an average of the past five (5) winter seasons. These costs include standby contractual sidewalk plowing units, in-house manpower and material costs.

**Winter Control Program – Sidewalk Snow Clearing**

Scenario	Sidewalk (km)	Percentage of Inventory (%)	Activation Trigger	Service Level	Estimated Costs (million)
1	397	16.2	Snow covered	Clear and application of salt	\$1.58* *Budgeted
2	1,180	48.2	5.0 cm accumulation on City sidewalks on priority 1 and 2A roadways plus the existing inventory	Snow packed condition with de-icing material application	\$3.06 - \$3.36
3	2,445	100	5.0cm accumulation on all City sidewalks	Snow packed condition with de-icing material application	\$5.11 - \$5.36

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Not included in the above-mentioned cost estimate are the restoration costs to damaged property as a result of the program. These include costs relate to items within the road allowance such as parked cars, fences, posts, hedges, plantings, in-ground lawn sprinklers, driveway curbs or other obstructions within the right-of-way as a result of the plowing or blowing operations. Sod damage is a significant source of concern in other municipalities and a budget for sod repair following the winter control season would be required. In conversation with municipalities that provide a similar service, the costs of restoration for a typical winter season may run between \$75,000 to \$100,000 per season.

To provide the level of service in Scenario 2 or 3 based on current in-house staffing levels, the City of Hamilton will need to contract the additional service out to the private sector. Additional supervisory staff will be required to oversee the program and those requirements will be identified in a future budget. The enhancements would not be implemented prior to the 2020/2021 winter season as the appropriate sidewalk snow clearing resources are currently not available within the marketplace.

Council should be aware that bare pavement condition can only be achieved through the application of de-icing material. The use of de-icing material will increase the costs associated with manpower, equipment time and materials, which will increase the overall program costs.

As mentioned in Report PW19022, the City of Hamilton has a Salt Management Plan which was approved in 2003. Under the Canadian Environmental Protection Act, 1999, the Government of Canada published a Code of Practice for the Environmental Management of Road Salts on April 3, 2004. The Code is designed to help municipalities and other road authorities better manage their use of road salt in a way that reduces their impacts on the environment while maintaining road safety. The use of road salt, in sufficient concentrations, poses a risk to plants, animals and the aquatic environment.

The use of road salt on sidewalks is not recommended from an environmental perspective and may also damage the concrete sidewalks contributing to the deterioration of other assets, and damage sod adjacent to the sidewalk.

#### Municipal Service Comparison

Sidewalk plowing is typically triggered for most municipalities at the 5 cm threshold, with target pavement conditions varying from bare pavement to the more typical snow packed condition. A comparison is attached to Report PW19022(a) as Appendix "A".

Completion time for the sidewalk snow clearing program for most municipalities is 24 hours from the end of the event, to 72 hours after commencement of the sidewalk snow clearing operations (Toronto), to five working days from commencement of the

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residential sidewalk clearing operations (Winnipeg). In most cases, municipalities that do service their entire sidewalk network do so only after the adjacent street or all of the roads within the city or town have been maintained.

### Snow Angels

Snow Angels is a volunteer supported initiative where residents are geographically matched with low income seniors or those with disability who require assistance to shovel their own properties within 24 hours of a snowfall. Since resuming oversight of the program in 2015, the Healthy and Safe Communities Department have been able to match between 80% to 95% of the residents on the list with a Snow Angel volunteer.

However, given that matches are made geographically in their neighbourhoods, some residents go without a Snow Angel as recruitment within certain neighbourhoods is not as successful. For the 2018/2019 season, approximately 9 residents went without a match.

As a volunteer-based program, success is based on the numbers and geographical location where recruitment can match the needs. The number of volunteers can fluctuate on a daily, monthly and yearly basis based on desire, injuries, other commitments, reliability and the working conditions. Given the environmental working conditions, cold and physical work, throughout the year there is turnover of volunteers affecting the number of residents matched as well as the continued desire to take on this role - compassion fatigue does set in with the volunteers in harsher winters. Snow clearing occurs when over 3 cm of snow has fallen, which historically has resulted in shovelling events varying from 5 to 20 times per winter season.

Every year, calls are received from residents who would like to receive a Snow Angel, and in some cases offer to pay for snow clearing but cannot find willing and affordable help. Not all residents that request a Snow Angel may be qualified under the eligibility review.

Given that the Snow Angels program is volunteer based, enhancing it is entirely tied to how many residents can be recruited.

### Pro-Active Sidewalk Snow Removal Enforcement

As referenced in the Information Update to Council on March 26, 2019, “Snow and Ice By-law Enforcement Update – 2019”:

From January 1 to March 15, 2019, Licensing & By-law received 2,786 complaints of By-law infractions for failing to remove snow from sidewalks. Of these complaints 55% were found to be infractions and 1,240 Orders to Comply were issued to property owners. There was a 94% compliance rate once the order was issued with 1,163

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residents clearing their snow. Licensing and By-law Services found 77 non-compliant properties that were sent to contractors for clearing. Sidewalk snow clearing is the top priority of Municipal Law Enforcement when a winter snow or ice event occurs.

It should be noted that Licensing & By-law Services does not proactively enforce sidewalk snow removal, but enforcement is based on a reactive model that responds to public complaints. During snow events, all other service levels are suspended so the team can focus on responding to calls for service in relation to sidewalk snow removal.

#### Regular Maintenance of Canada Post Community Mailbox Locations

Snow clearing activities will begin at CMB (Community Mailbox) sites once snow accumulation reaches 5 cm and should be completed within 24 hours:

- Snow clearing activities will take place during the hours of 6:00 a.m. to 8:00 p.m.;
- Snowdrift or plough back areas will be cleared within 24 hours of it being reported to Canada Post;
- Canada Post is responsible for clearing the area immediately in front of the CMB and paved access ways across boulevards that lead to the site;
- Canada Post will not clear snow from a grass boulevard to avoid damaging sod within the City's boulevard; and
- Should a resident have a concern about snow or ice at a particular CMB site, they are asked to call 1-866-607-6301 or submit a snow clearance request at <https://www.canadapost.ca/web/en/pages/support/default.page> (under Community Mailbox click on Request Snow Clearance).

It is important that customers contact Canada Post through their customer contact number or via their website as this will launch a service ticket and allows Canada Post to track the response.

Any residents who feel snow or ice may inhibit their ability to safely retrieve their mail should contact Canada Post as described above and retrieve their mail after the site is cleared and conditions have improved.

#### Winter Storm Communications

Public Works and Corporate Communications already have a robust communications protocol during winter storm events, with regular updates to Council, posts on [www.hamilton.ca](http://www.hamilton.ca) and at @cityofhamilton on Twitter. During large storm events updates are shared with our local media partners, radio, print, online ads are published to provide residents with information about the City's response to the storm, tips on clearing their snow from their property, and more.

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For the coming season, staff recommend expanding the existing winter storm communications activities even further to focus more heavily on residents' responsibilities regarding removing snow from sidewalks adjacent to their property, and to request they avoid parking on the road during snow events to allow space for plows to safely clear the snow.

**ALTERNATIVES FOR CONSIDERATION**

N/A

**ALIGNMENT TO THE 2016 – 2025 STRATEGIC PLAN****Economic Prosperity and Growth**

*Hamilton has a prosperous and diverse local economy where people have opportunities to grow and develop.*

**Healthy and Safe Communities**

*Hamilton is a safe and supportive city where people are active, healthy, and have a high quality of life.*

**Built Environment and Infrastructure**

*Hamilton is supported by state of the art infrastructure, transportation options, buildings and public spaces that create a dynamic City.*

**APPENDICES AND SCHEDULES ATTACHED**

Appendix "A" to Report PW19022 (a) – Municipal Service Level Comparison