



The Regional Municipality of Durham

Works Committee Agenda

Wednesday, March 8, 2023, 9:30 a.m.

Regional Council Chambers

Regional Headquarters Building

605 Rossland Road East, Whitby

If this information is required in an accessible format, please contact 1-800-372-1102 ext. 2097.

Note: This meeting will be held in a hybrid meeting format with electronic and in-person participation. Committee meetings may be [viewed via live streaming](#).

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There are no statutory public meetings	
5. Presentations	
5.1 Gioseph Anello, Director of Waste Management Services, Jenni Demanuele, Director of Corporate Infrastructure and Strategic Business Services, and Ramesh Jagannathan, Director of Transportation and Field Services Re: 2023 Works Department Business Plans and Budget (2023-W-13) [Item 8.2 d.)]	15
6. Delegations	
There are no delegations	
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There are no Waste Reports to be considered	
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	The Regional Municipality of Durham's Drinking Water Systems 2022 Summary Report	
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	d. Report #2023-W-13	132
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9. Advisory Committee Resolutions

10. Confidential Matters

There are no confidential matters to be considered

11. Other Business

11.1 Durham Vision Zero Taskforce Update

12. Date of Next Meeting

Wednesday, April 5, 2023 at 9:30 AM

13. Adjournment

Notice regarding collection, use and disclosure of personal information:

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The Regional Municipality of Durham

MINUTES

WORKS COMMITTEE

Wednesday, February 8, 2023

A regular meeting of the Works Committee was held on Wednesday, February 8, 2023 in Council Chambers, Regional Headquarters Building, 605 Rossland Road East, Whitby, Ontario at 9:30 AM. Electronic participation was offered for this meeting.

1. Roll Call

Present: Councillor Barton, Chair
Councillor Marimpietri, Vice-Chair left the meeting at 10:45 AM
Councillor Crawford
Councillor Mulcahy
Councillor Nicholson*
Councillor Yamada*
Regional Chair Henry
***denotes Councillors participating electronically**

Also

Present: Councillor Foster*
Councillor McDougall*
Councillor Wotten attended the meeting at 10:23 AM

Absent: Councillor Cook

Staff

Present: G. Anello, Director of Waste Management
E. Baxter-Trahair, Chief Administrative Officer
J. Demanuele, Director of Corporate Infrastructure and Strategic Business Services, Works Department
B. Dobson, Acting Director of Environmental Services
A. Evans, Manager of Waste Services
J. Garland, Senior Project Manager, Transportation Design
B. Goodwin, Commissioner of Corporate Services
J. Hunt, Regional Solicitor/Director of Legal Services, Chief Administrative Office – Legal Services
R. Inacio, Systems Support Specialist, Corporate Services – IT
R. Jagannathan, Director of Transportation and Field Services
J. Paquette, Manager of Communications, Works Department
J. Presta, Commissioner of Works
N. Taylor, Commissioner of Finance
P. Veiga, Manager of Waste Management Operations
L. Soto Maya, Committee Clerk, Corporate Services – Legislative Services

S. Ciani, Committee Clerk, Corporate Services – Legislative Services

2. Declarations of Interest

There were no declarations of interest.

3. Adoption of Minutes

Moved by Councillor Mulcahy, Seconded by Councillor Crawford,
(14) That the minutes of the regular Works Committee meeting held on
Wednesday, January 11, 2023, be adopted.

CARRIED

4. Statutory Public Meetings

There were no statutory public meetings.

Moved by Councillor Marimpietri, Seconded by Councillor Mulcahy,
(15) That the order of the agenda be altered to consider Items 7.2 A) to 7.2 C)
and Items 8.2 A) and 8.2 B), inclusive, next.

CARRIED

7. Waste

7.2 Reports

A) Update on the Proposed Clear Garbage Bag Pilot in the Municipality of Clarington
(2023-WR-1)

Report #2023-WR-1 from J. Presta, Commissioner of Works, was received.

Detailed discussion ensued regarding terminating the proposed clear garbage bag pilot in the Municipality of Clarington as opposed to deferring the pilot until 2025 due to the significant waste management programming changes occurring in 2024; the lack of support from the residents of Durham for a clear garbage bag pilot; concerns that clear garbage bags would increase the amount of illegal dumping, and bags being left behind by the garbage collectors; and the significant cost to implement the pilot.

Moved by Councillor Marimpietri, Seconded by Councillor Crawford,
(16) That we recommend to Council:

That the implementation of a clear garbage bag pilot program in the Municipality of Clarington be terminated.

CARRIED ON THE FOLLOWING
RECORDED VOTE:

Yes

No

Councillor Crawford
Councillor Marimpietri
Councillor Mulcahy
Councillor Nicholson
Councillor Yamada
Councillor Barton, Chair

Regional Chair Henry

Members Absent: Councillor Cook

Declarations of Interest: None

B) Energy from Waste – Waste Management Advisory Committee (Host Community Agreement Committee) Membership Appointments (2023-WR-2)

Report #2023-WR-2 from J. Presta, Commissioner of Works, was received.

Moved by Councillor Marimpietri, Seconded by Councillor Mulcahy,
(17) That we recommend to Council:

A) That the following five applicants selected by members of the Works Committee be appointed for membership on the Energy from Waste-Waste Management Advisory Committee for a two-year term (2023-2024):

- Ginette Best
- Greg Gordon
- Karissa Palinka
- Matthew Cannon
- Rochelle Fleming; and

B) That a copy of Report #2023-WR-2 of the Commissioner of Works be forwarded to the Municipality of Clarington for information.

CARRIED

C) Organics Management Plan – Next Steps (2023-WR-3)

Report #2023-WR-3 from J. Presta, Commissioner of Works, was received.

Detailed discussion ensued regarding what the justification was of recommending a reduction of the garbage bag limit from 4 bags to 3 bags; the possibility of delaying the reduction of garbage bags until after the enhanced green big program has been established or the ability to re-visit this matter in the future; the increased materials that will be accepted in the green bin; and the details of the development of a green bin program for multi-residential buildings.

Moved by Councillor Marimpietri, Seconded by Councillor Mulcahy,
(18) That we recommend to Council:

- A) That Regional Council approve the following requirements to implement the proposed organics management program:
 - i) Launch an Enhanced Green Bin that adds diapers, personal sanitary products, adult incontinence products, pet waste, pet litter, and any other material deemed processible by the Regional Municipality of Durham to the list of acceptable materials in the Regional Municipality of Durham's Green Bin program;
 - ii) With the reduction in garbage generation associated with Recommendation i) reduce the curbside garbage limit for the set out of garbage bags/cans from four (4) bags/cans every two weeks to three (3) bags/cans every two weeks with a communication and compliance plan providing appropriate resident education and support; and
 - iii) To accommodate the requirements of the Food and Organic Waste Policy Statement, Regional Council approve, in principle, the development of a Green Bin program for multi-residential buildings receiving Regional waste collection services;
- B) That Regional Council direct staff to amend By-Law #46-2011, A By-Law to Regulate the Provision of Waste Management Services Under the Jurisdiction of the Regional Municipality of Durham, effective July 1, 2024 to reflect the above program changes; and
- C) That a copy of Report #2023-WR-3 of the Commissioner of Works be distributed to Local Area Municipalities and the Ontario Ministry of the Environment, Conservation and Parks York-Durham District Office for their information.

CARRIED AS AMENDED LATER IN THE
MEETING ON A RECORDED VOTE
(See Following Motions)

Moved by Councillor Marimpietri, Seconded by Councillor Mulcahy,
(19) That the foregoing main motion (18) of Councillors Marimpietri and Mulcahy be amended by deleting Section A) ii) in its entirety.

CARRIED ON THE FOLLOWING
RECORDED VOTE:

Yes

Councillor Marimpietri
Councillor Nicholson
Councillor Yamada
Councillor Barton, Chair

No

Councillor Crawford
Regional Chair Henry
Councillor Mulcahy

Members Absent: Councillor Cook

Declarations of Interest: None

The main motion (18) of Councillors Marimpietri and Mulcahy was then put to a vote and CARRIED AS AMENDED ON THE FOLLOWING RECORDED VOTE:

Yes

Councillor Crawford
Regional Chair Henry
Councillor Marimpietri
Councillor Mulcahy
Councillor Nicholson
Councillor Yamada
Councillor Barton, Chair

No

None

Members Absent: Councillor Cook

Declarations of Interest: None

8. Works

8.2 Reports

A) Outline of Noise Attenuation Guidelines and Policies for Regional Road Corridors (2023-W-8)

Report #2023-W-8 from J. Presta, Commissioner of Works, was received.

Discussion ensued regarding what the cost would be to retrofit all of the rear lot properties and what the process would look like for staff and the affected homeowners.

J. Presta advised that Report #2023-W-8 identifies what the cost to replace these fences would be (roughly \$100 million). J. Presta also advised that staff have researched other municipalities that have a noise attenuation retrofit policy in place and that includes a cost-sharing agreement between the municipality and the benefiting property owner(s). He noted that the cost-shared programs have had very limited success due to various factors.

Moved by Councillor Mulcahy, Seconded by Councillor Marimpietri,
(20) That we recommend to Council:

That Report #2023-W-8 of the Commissioner of Works be received for information.

MOTION TABLED TO LATER IN THE
MEETING
(See Following Motions)

Moved by Councillor Yamada, Seconded by Councillor Mulcahy,
(21) That the foregoing main motion (20) of Councillors Mulcahy and Marimpietri be amended by adding the following as a new Part B):

B) That staff report back on what it would cost to retrofit all of the rear lot properties and on what the process would look like.

MOTION TABLED TO LATER IN THE
MEETING
(See Following Motion)

Moved by Regional Chair Henry, Seconded by Councillor Crawford,
(22) That the main motion (20) of Councillors Mulcahy and Marimpietri and the foregoing amending motion (21) of Councillors Yamada and Mulcahy, be tabled until after Item 5.2: Presentation by James Garland, Senior Project Manager, Transportation Design, re: Outline of Noise Attenuation Guidelines and Policies for Regional Road Corridors (2023-W-8) [Item 8.2 A)] is heard.

CARRIED

B) Sole Source Approval to Award Maintenance Service and Parts Supply Agreement for Ultraviolet Light Disinfection Equipment Installed at Various Water Supply and Wastewater Treatment Facilities (2023-W-9)

Report #2023-W-9 from J. Presta, Commissioner of Works, was received.

Moved by Councillor Crawford, Seconded by Councillor Mulcahy,
(23) That we recommend to Council:

A) That staff be authorized to enter into a sole source maintenance service and parts supply agreement with Trojan Technologies at an upset limit of \$275,000* per annum with a term not to exceed five (5) years; and

B) That financing for the sole source maintenance service and/or parts supply agreement be provided from the approved and future annual Water Supply System and Sanitary Sewerage System Business Plans and Budgets.
(* before applicable taxes

CARRIED

5. Presentations

5.1 Gioseph Anello, Director of Waste Management Services, re: Organics Management Plan – Next Steps (2023-WR-4) [Item 7.2 C]

Gioseph Anello, Director of Waste Management Services, provided a PowerPoint presentation regarding the Organics Management Plan – Next Steps.

Highlights from the presentation included:

- Short-term Organics Management Solution
- Enhanced Green Bin
- Garbage Bag Limit Reduction
- Multi-Residential Organics Program
- Potential Financial Implications
- Long-Term Organics Management Solution
- Timing

G. Anello responded to questions from the Committee regarding whether the removal of organic waste from the garbage bag, and the weekly pick-up of the green bin would decrease the level of odour and animal activity around the garbage bags; and whether residents can use plastic bags or compostable bags in their green bins.

5.2 James Garland, Senior Project Manager, Transportation Design, re: Outline of Noise Attenuation Guidelines and Policies for Regional Road Corridors (2023-W-8) [Item 8.2 A]

James Garland, Senior Project Manager, Transportation Design, provided a PowerPoint presentation regarding the Outline of Noise Attenuation Guidelines and Policies for Regional Road Corridors.

Highlights from the presentation included:

- Outline
- How Loud are Things?
- How do we Calculate Noise Levels from Traffic?
- How does a Noise Attenuation Barrier Work?
- Noise Mitigation and Related Regional Policy and Guidelines
- New Residential Development
- Regional Road Expansion
- Retrofit of Privacy Fences to Noise Walls
- Replacement of Private Noise Walls
- Typical Costs
- Summary

J. Garland responded to questions from the Committee regarding whether new homeowners that are adjacent to regional roads are notified of their responsibility to erect and maintain their noise wall; whether there has been consideration of natural noise barriers such as trees or shrubs that would self-generate; the effectiveness of noise walls against modified mufflers and truck engine brakes being utilized on large trucks; the use of cedar with encased metal post versus concrete noise barriers; and the electrification of trucks and cars plus the Durham Region Transit bus fleet, and whether that would have the benefit of decreasing noise levels in the Region.

8. Works

8.2 Reports

A) Outline of Noise Attenuations Guidelines and Policies for Regional Road Corridors (2023-W-8)

Moved by Regional Chair Henry, Seconded by Councillor Crawford,
(24) That the main motion (20) of Councillors Mulcahy and Marimpietri and the amending motion (21) of Councillors Yamada and Mulcahy be lifted from the table.

CARRIED

Further discussion ensued regarding the retrofitting of privacy fences to noise attenuation walls and what more could be done for residents.

Moved by Councillor Mulcahy, Seconded by Councillor Marimpietri,
(20) That we recommend to Council:

That Report #2023-W-8 of the Commissioner of Works be received for information.

CARRIED ON A RECORDED VOTE LATER
IN THE MEETING
(See Following Motion)

Moved by Councillor Yamada, Seconded by Councillor Mulcahy,
(21) That the foregoing main motion (20) of Councillors Mulcahy and Marimpietri be amended by adding the following as a new Part B):

B) That staff report back on what it would cost to retrofit all of the rear lot properties and on what the process would look like.

MOTION DEFEATED ON THE FOLLOWING
RECORDED VOTE (TIE VOTE DEEMED IN
THE NEGATIVE):

Yes

Councillor Crawford
Councillor Mulcahy
Councillor Yamada

No

Regional Chair Henry
Councillor Nicholson
Councillor Barton, Chair

Members Absent: Councillor Cook
Councillor Marimpietri

Declarations of Interest: None

The main motion (20) of Councillors Mulcahy and Marimpietri was then put to a vote and then CARRIED ON THE FOLLOWING RECORDED VOTE:

Yes

Councillor Crawford
Regional Chair Henry
Councillor Mulcahy
Councillor Nicholson
Councillor Barton, Chair

No

Councillor Yamada

Members Absent: Councillor Cook
Councillor Marimpietri

Declarations of Interest: None

Moved by Regional Chair Henry, Seconded by Councillor Mulcahy,
(25) That the Committee recess for 5 minutes.
CARRIED

The Committee recessed at 11:41 AM and reconvened at 11:51 AM.

The Committee Clerk conducted a roll call following the recess and all members of Committee were present with the exceptions of Councillors Cook and Marimpietri.

6. Delegations

Moved by Regional Chair Henry, Seconded by Councillor Crawford,
(26) That due to technical difficulties Items 6.1 to 6.4 inclusive be referred to the March 1, 2023, Regional Council meeting.
CARRIED

- 6.1 Linda Gasser, Whitby Resident, re: Update on the Proposed Clear Garbage Bag Pilot in the Municipality of Clarington (2023-WR-1) [Item 7.2 A]

Due to technical difficulties this item was referred to the March 1, 2023, Regional Council meeting. [See motion (26) on page 9 of these minutes]

- 6.2 Linda Gasser, Whitby Resident, re: Organics Management Plan – Next Steps (2023-WR-3) [Item 7.2 C]

Due to technical difficulties this item was referred to the March 1, 2023, Regional Council meeting. [See motion (26) on page 9 of these minutes]

- 6.3 Wendy Bracken, Whitby Resident, re: Update on the Proposed Clear Garbage Bag Pilot in the Municipality of Clarington (2023-WR-1) [Item 7.2 A]

Due to technical difficulties this item was referred to the March 1, 2023, Regional Council meeting. [See motion (26) on page 9 of these minutes]

- 6.4 Wendy Bracken, Whitby Resident, re: Organics Management Plan – Next Steps (2023-WR-3) [Item 7.2 C]

Due to technical difficulties this item was referred to the March 1, 2023, Regional Council meeting. [See motion (26) on page 9 of these minutes]

7. **Waste**

7.1 Correspondence

There were no communication items considered.

7.2 Reports

- A) Update on the Proposed Clear Garbage Bag Pilot in the Municipality of Clarington (2023-WR-1)

This item was considered earlier in the meeting. [See pages 2 and 3 of these minutes]

- B) Energy from Waste – Waste Management Advisory Committee (Host Community Agreement Committee) Membership Appointments (2023-WR-2)

This item was considered earlier in the meeting. [See page 3 of these minutes]

- C) Organics Management Plan – Next Steps (2023-WR-3)

This item was considered earlier in the meeting. [See pages 3 to 5 of these minutes]

8. Works

8.1 Correspondence

There were no communication items considered.

8.2 Reports

A) Outline of Noise Attenuations Guidelines and Policies for Regional Road Corridors (2023-W-8)

This item was considered earlier in the meeting. [See pages 5 and 6 and pages 8 and 9 of these minutes]

B) Sole Source Approval to Award Maintenance Service and Parts Supply Agreement for Ultraviolet Light Disinfection Equipment Installed at Various Water Supply and Wastewater Treatment Facilities (2023-W-9)

This item was considered earlier in the meeting. [See pages 6 of these minutes]

9. Advisory Committee Resolutions

There were no advisory committee resolutions to be considered.

10. Confidential Matters

There were no confidential matters to be considered.

11. Other Business

11.1 Durham Vision Zero Taskforce Update

Councillor Crawford provided a brief update regarding Vision Zero. She advised that 2,505 tickets have been issued through the Red Light Camera (RLC) program in 2022 with an overall total of 5,726 tickets issued since 2020. She further advised that 43,487 tickets have been issued through the Automated Speed Enforcement (ASE) program in 2022 with an overall total of 104,910 tickets issued since 2020.

Councillor Crawford also advised that the number of fatal collisions has dropped significantly since 2022, and that injury collisions has increased 13% in 2022 most likely as a result of traffic volumes recovering post-COVID.

In response to a question from the Committee regarding whether there is an opportunity to advocate for more RLC and/or ASE cameras throughout the Region of Durham, Councillor Crawford advised that a report will be brought to a future Committee of the Whole meeting to consider additional locations for RLC and ASE cameras.

12. Date of Next Meeting

The next regularly scheduled Works Committee meeting will be held on Wednesday, March 8, 2023 at 9:30 AM in Council Chambers, Regional Headquarters Building, 605 Rossland Road East, Whitby.

13. Adjournment

Moved by Regional Chair Henry, Seconded by Councillor Mulcahy,
(27) That the meeting be adjourned.

CARRIED

The meeting adjourned at 11:57 AM

Respectfully submitted,

D. Barton, Chair

S. Ciani, Committee Clerk



Durham Budget

2023

2023 Business Plans and Budget


Works Department

Works Committee

March 8, 2023

Achieves the Regional Council approved 2023 Business Plans and Budget Guideline

Supports the Region's **Strategic Plan**



Responds to the significant **inflationary pressures** and **capital cost escalations**

Finance & Administration Committee:



March 21, 2023

Regional Council:

March 29, 2023



Durham Budget

2023

Budget Overview – Solid Waste Management

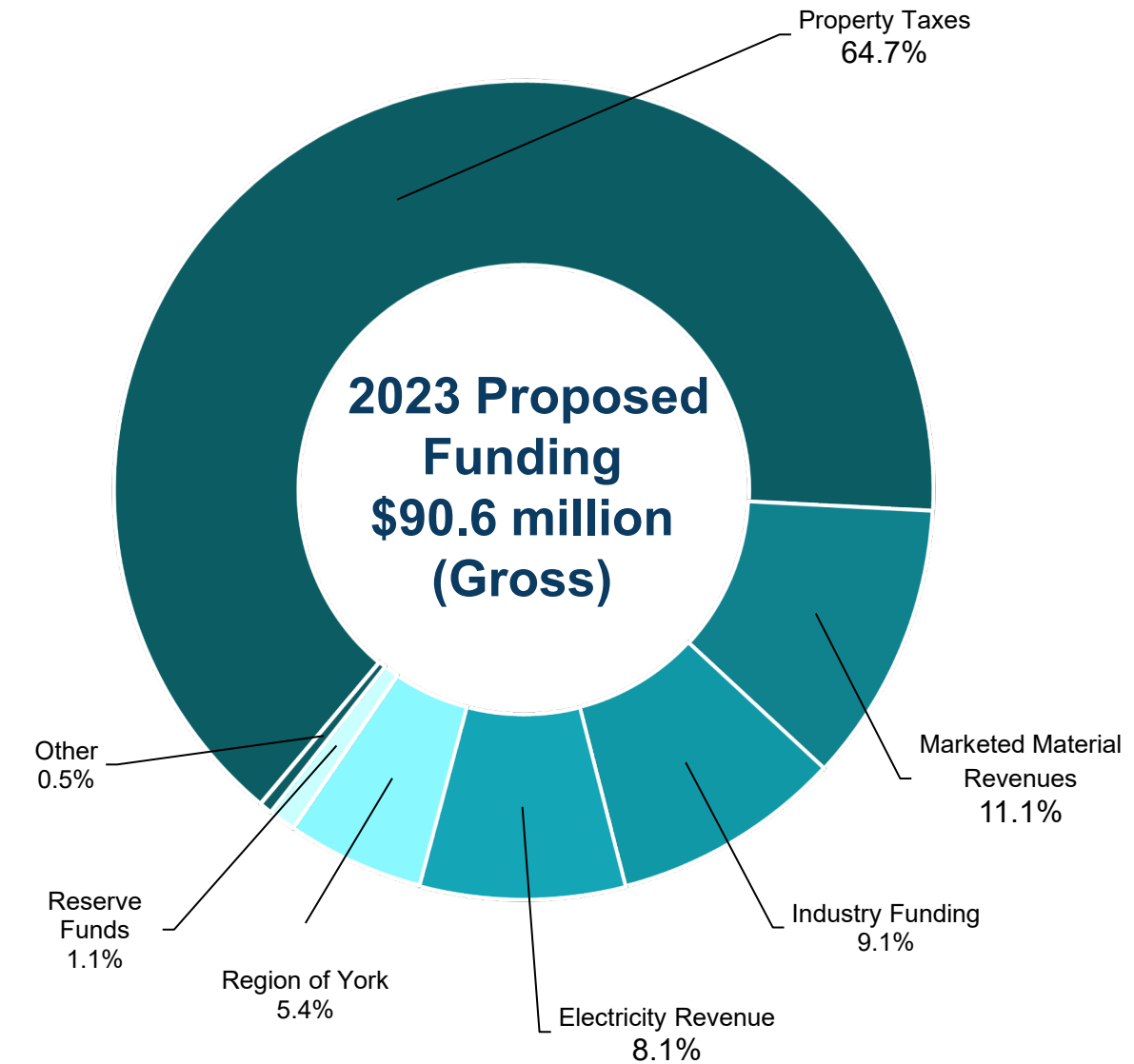
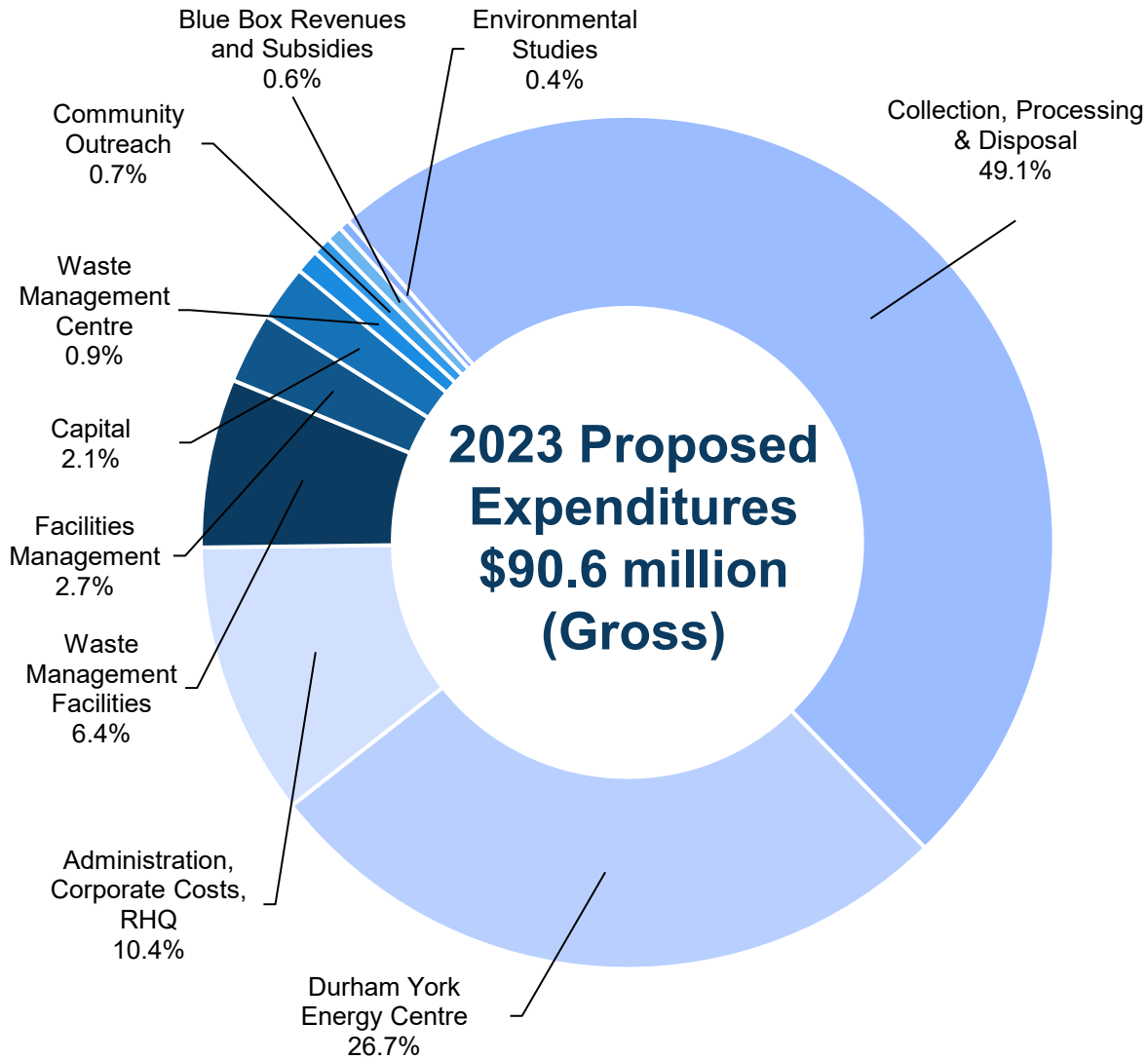
Service Improvements

- Awarded contract for the collection of solid waste in the Town of Ajax and the City of Pickering, specifying the use of renewable natural gas fuelled collection vehicles and options for servicing developments that do not meet the Region's traditional design standards for municipal waste collection services.
- Initiated the Biocover Feasibility Project at the Oshawa Landfill to determine if passive methane oxidation biosystems are an effective methane reduction method for closed landfills in the Region.
- Launched updated waste management education programs to elementary and high schools.

Customer Service

- Provided service to more than 330,000 customers at the Region's Waste Management facilities, including offering extended hours following the May storm event.
- Completed the transition of the Waste Management customer service portfolio to MyDurham311.
- Responded to over 100,000 inquiries from residents and businesses.
- Safely managed over 240,000 tonnes of materials within diversion and disposal programs.

2023 Proposed Expenditures & Financing



Proposed budget includes base budget increases of \$9.125 M

- Primary driver is inflation with majority of the increase being escalation on collection, disposal and processing contracts – \$8.699 million
- Contract values influenced by
 - Payroll costs increased necessary to attract and retain staff
 - Fuel costs
 - Other inflationary pressures
- **Contract price increases range from 15% to 50% depending on the agreement**

\$1.00M

Investment to redesign the Oshawa Waste Management Facility and optimize the site to ensure it is utilized to its full extent and achieves the goals outlined in the Region's Long Term Management Plan, 2022-2040.

\$1.27 M

Increase in operating cost at the DYEC.



Durham Budget

2023

Budget Overview Roads & Infrastructure

Service Improvements

- Completed the rehabilitation of 22 kilometres of Regional roads including installation of wider paved shoulders on rural roads to provide safer cycling environment.
- Completed road widenings for several major growth-related projects including Simcoe Street (Regional Road 2) from north of Conlin Road to south of Winchester Road (Regional Road 3), Westney from Rossland to Taunton, and Brock Street from Manning to Rossland.
- Supported the implementation of the Regional Cycling Plan to provide residents with a safe and accessible network through the addition of 21 kilometres of new cycling facilities.
- Completed the rehabilitation of Regional Road 18, including a pilot project that used recycled glass and plastics for road reconstruction.
- Fully implemented the Enterprise Maintenance Management System (EMMS), Maximo. Facilities Maintenance, Traffic Operations, and Maintenance Operations are now utilizing this comprehensive work management system to manage activities, capture life cycle cost data and provide real time maintenance information.

Service Improvements Cont'd

- Acquired lands for several growth and road rehabilitation projects to advance the transportation objectives outlined in the Region of Durham Official Plan.
- Acquired several properties for the Highway 2 Bus Rapid Transit (BRT) project to advance higher order Transit infrastructure.
- Commenced construction of Phase 1 of the Workplace Modernization project at Regional Headquarters with occupancy of the 5th floor scheduled to commence in the spring of 2023.
- Commenced the installation of 36 charging stations at Regional facilities.

Community Capacity and Safety

- Completed construction of the Oshawa Micro-homes Pilot. The development consisted of 10 modular housing units and 2 service units, with tenants occupying the units in early 2022.
- Commenced construction of several facilities including:
 - Beaverton Supportive Housing in fall of 2022, with occupancy expected in 2023;
 - Region of Durham Paramedic Services (RDPS) Station and Training facility in Seaton; and
 - Durham Regional Police Service (DRPS) Clarington Phase 2 project.

Customer Service

- Acquired properties to support the advancement of several Regional strategic initiatives and projects.
- Negotiated and renewed leases for space to support program delivery, including:
 - 27 Station Street in the Town of Ajax for the operation of an emergency warming centre and shelter for residents experiencing homelessness; and
 - Leased 3 spaces to replace Durham Regional Police Service's fleet, quartermaster and property facility in Clarington that was destroyed by fire.
- Completed various state of good repair projects to support the goals of the Region's Asset Management plan.
- Operated and maintained over 650 traffic signals across the Region, with Accessible Pedestrian Signals installed at about 200 locations.
- Responded to 57 winter storms including 7 significant winter storms events.

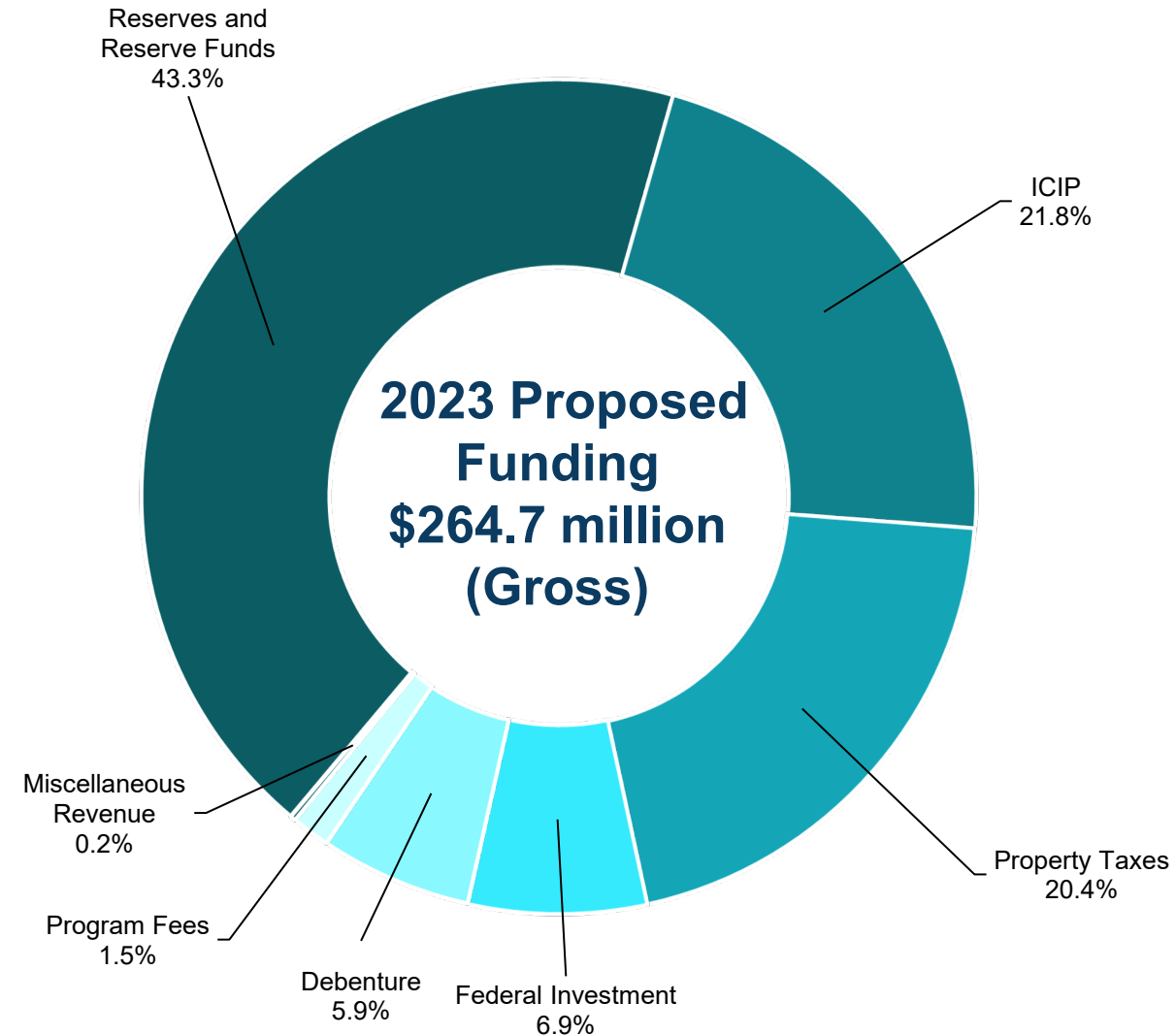
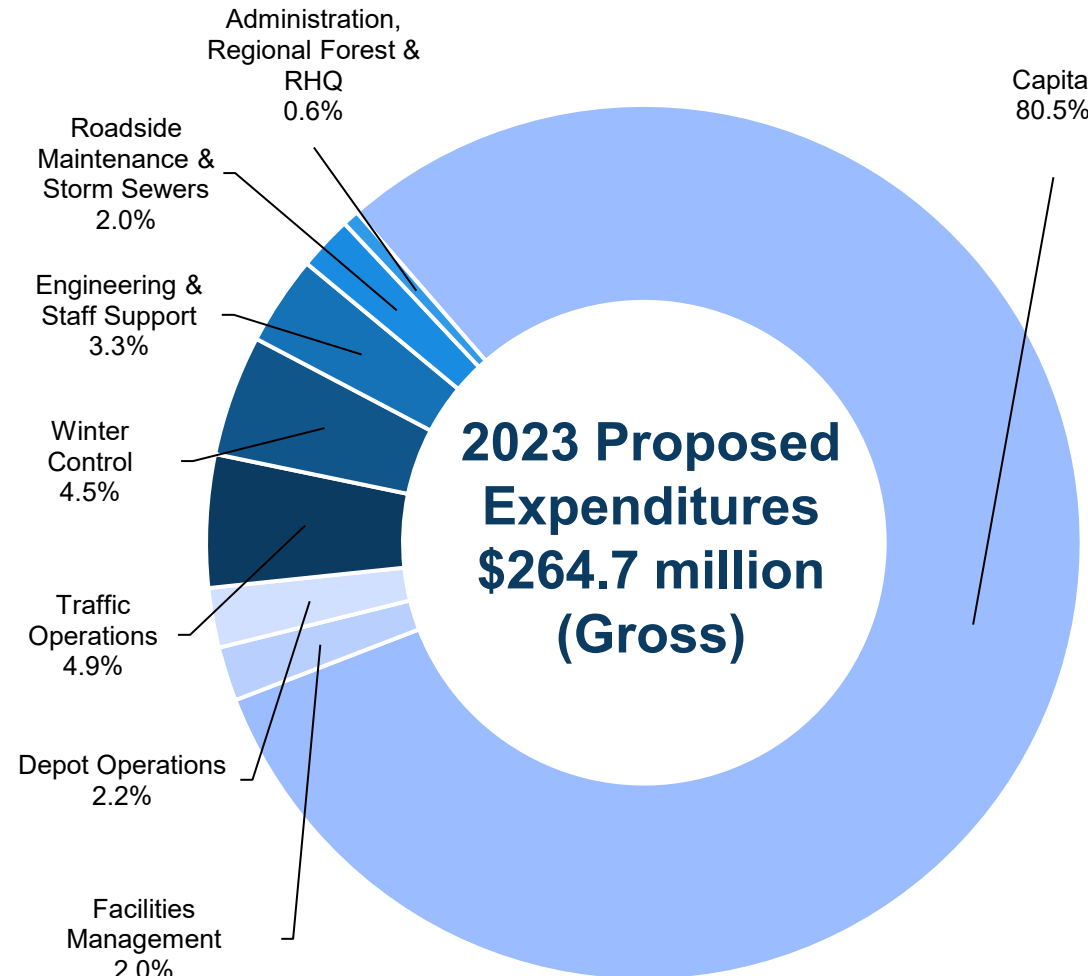
Vision Zero (Works Measures)

- Engineering: intersection measures, pedestrian improvements, guiderail expansion/replacement, safety reviews and implementation, county curves (skewed intersections), roundabouts, policy updates.
- Enforcement:
 - ASE – 8 fixed cameras (including 4 deployed in late 2022) and 4 mobile cameras across Community Safety Zones and School Zones on Regional Roads; over 1,900 camera-days; estimated 43,000 fines issued; notable increase in speed limit compliance.
 - RLC - 12 fixed locations; over 4,380 camera-days; estimated 2,500 fines issued; more time required to assess benefits.
- Education: Cross ride education, single lane roundabouts, pedestrian crossovers, ASE, RLC, and aggressive driving countermeasures in partnership with DRPS, Health, Corporate Communications and community partners.
- Collision outcomes: fatal collisions decreased 33% compared to 2021; injury collisions increased by 13% over 2021, down 12% compared to 2019.

Awards and Achievements

- Received two awards for the Beaverton Supportive Housing Project:
 - Canadian Architect Award of Excellence; and
 - World Architecture News Gold Award in the category of Future Residential Projects.
- The Smart 50 Award and Transportation Association of Canada Technology Achievement Award for the deployment of the ROVER Artificial Intelligence (AI) tool in detecting and managing potholes.
- The Transportation Association of Canada Achievement Award and the Ontario Public Works Association Award for the Victoria Street Reconstruction and Widening project.

2023 Proposed Expenditures & Financing



Proposed budget includes base budget increases of \$2.19 M

- \$0.987 million for the annualized cost of 2022 positions and Vision Zero program
- \$1.184 million inflationary increases for fuel, utilities, materials and services

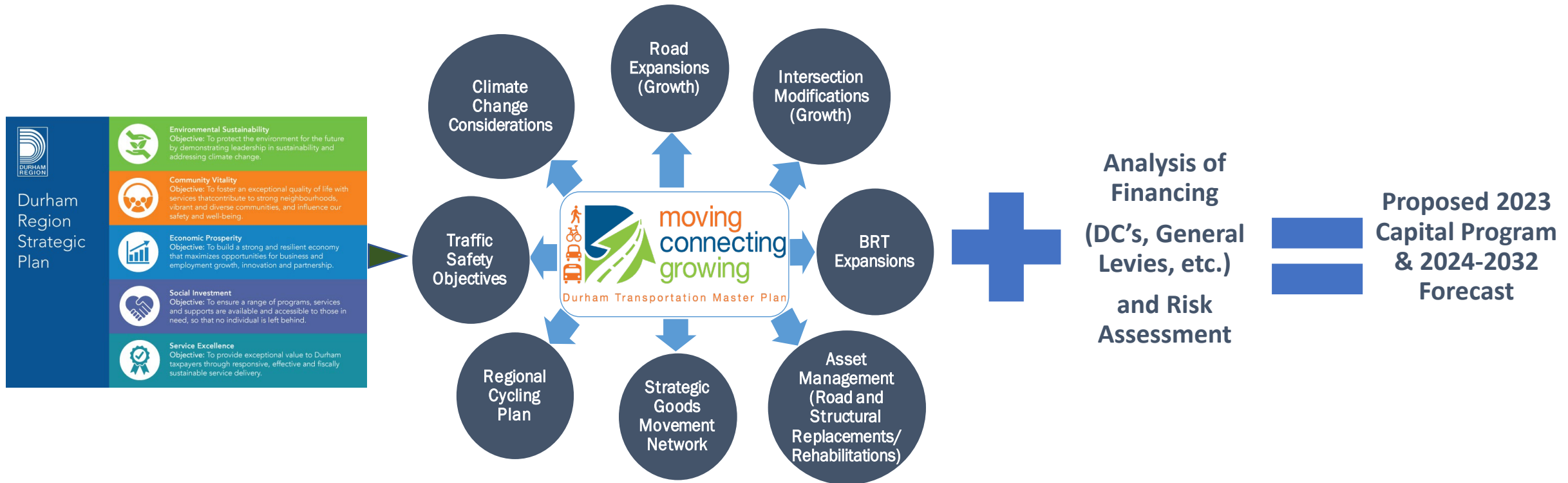
Capital

\$189.8 M Capital regional roads and infrastructure projects, including Regional transportation projects funded under the Investing in Canada Infrastructure Program (ICIP).

\$15.67 M Capital investments for property acquisition and design work for the expansion and modernization of the Ajax, Oshawa and Sunderland maintenance depots.

\$5.85 M Additional investment for the energy retrofit and modernization of Regional facility at 101 Consumers Drive, Whitby, to optimize space, reduce greenhouse gas emissions and provide energy efficient lighting.

\$1.68 M Ongoing implementation of Durham Vision Zero countermeasures, including red light camera technology and automated speed enforcement, including \$0.68 M funded from the Vision Zero Reserve Fund.



* Durham Region Strategic Plan was updated in 2020 after the completion of the TMP.

Brock Rd. (Reg. Rd. 1) from 200m north of Uxbridge/Pickering Townline Rd to 1.2km north of Webb Rd., Uxbridge Road Rehabilitation

Prior Budget Approval:	N/A
2023 Budget Request:	\$3,500,000
Total Estimated Project Cost:	\$3,500,000
On Regional Cycling Plan?	No
Project Driver:	Rehabilitation
Existing Segment Description:	PCI Poor, 2 Lane Rural, on SGMN
Status:	Tendered in Q1 2023
Anticipated Construction Year(s):	2023
Coordination with adjacent projects:	N/A

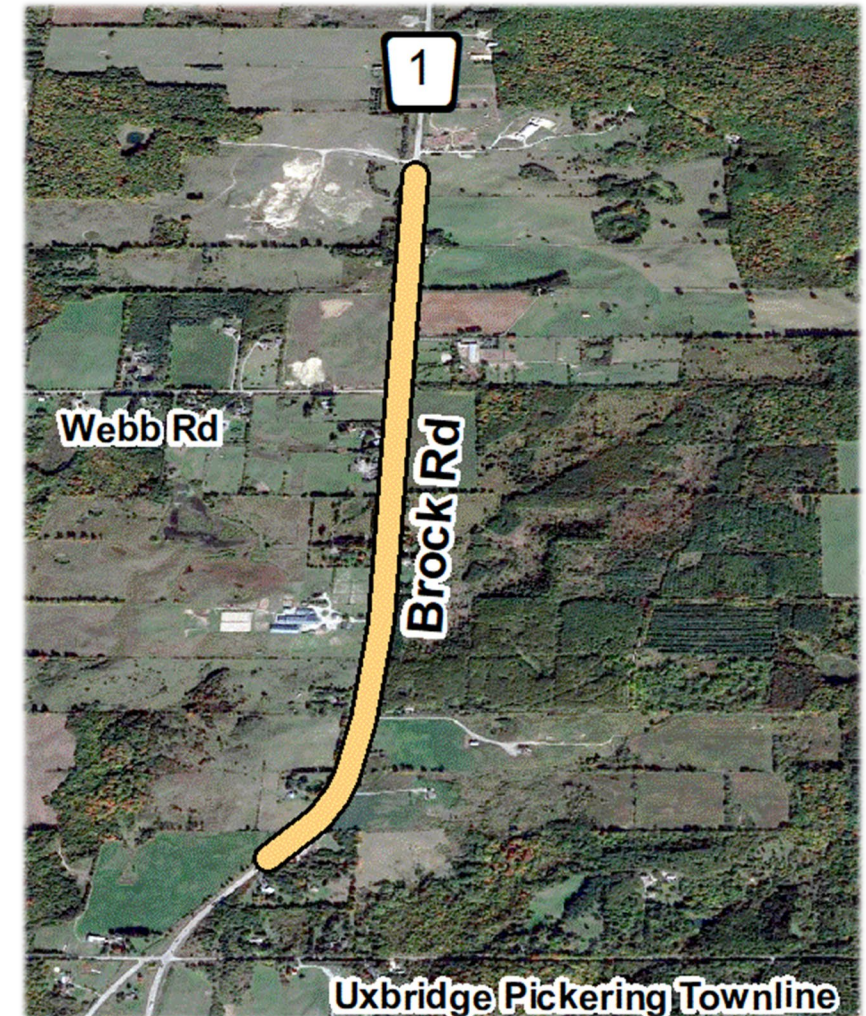


Image not to scale

Reg. Hwy 2/Newtonville Rd Intersection, Clarington Intersection Modifications

Prior Budget Approval:	N/A
2023 Budget Request:	\$450,000
Total Estimated Project Cost:	\$450,000
On Regional Cycling Plan?	Yes; Paved Shoulder
Project Driver:	Safety
Existing Segment Description:	PCI Poor, 2 Lane Urban, Sidewalk on both sides
Status:	Detail Design – Completion Q1 2023 Property - Complete Utility Relocations - Completion Q1 2023 Permitting – Complete
Anticipated Construction Year(s):	2023
Coordination with adjacent projects:	Hill Street Rehabilitation – Clarington Project



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Simcoe St. (Reg. Rd. 2) from Olive Ave. to north of John St., Oshawa

Road Rehabilitation in conjunction with water/sewer project

Prior Budget Approval:	\$1,575,000
2023 Budget Request:	\$1,250,000
Total Estimated Project Cost:	\$2,825,000
On Regional Cycling Plan?	No
Project Driver:	Rehabilitation, watermain and sanitary sewer
Existing Segment Description:	PCI Fair, 4 Lane Urban (one-way), Sidewalk on both sides
Status:	Detail Design – Completion Q1 2023 Property – N/A Utility Relocations - N/A Permitting – Complete
Anticipated Construction Year(s):	2023 - 2024
Coordination with adjacent projects:	MTO Simcoe St. and Albert St. bridge replacements over Hwy 401, Metrolinx GO Bowmanville Expansion, City of Oshawa Pedestrian Bridge Replacement over Oshawa Creek south of Bloor Street, Olive Ave. (Reg. Rd. 59) from Simcoe St. to Drew St., Centre St. (Reg. Rd. 2A) from Kipling St. to Olive Ave



Image not to scale

Reg. Rd. 13 from Lake Ridge Rd. (Reg. Rd. 23) to 1.5 km west of Highway 7/12, Brock Road Rehabilitation

Prior Budget Approval:	\$20,970,000
2023 Budget Request:	\$2,810,000
Total Estimated Project Cost:	\$29,310,000
On Regional Cycling Plan?	No
Project Driver:	Rehabilitation
Existing Segment Description:	PCI Very Poor - Fair, 2 Lane Rural, on SGMN
Status:	<p><i>Phase 1A: Construction Completed at Reg. Rd. 13/23</i></p> <p>Phase 1B: 100% design</p> <p>Phase 2A: 60% design</p> <p>Phase 2B: 30% to 60% design</p>
Anticipated Construction Year(s):	<p>Phase 1B: 2023 - 2024</p> <p>Phase 2A: 2024 - 2025</p> <p>Phase 2B: 2025 - 2026</p>
Coordination with adjacent projects:	N/A

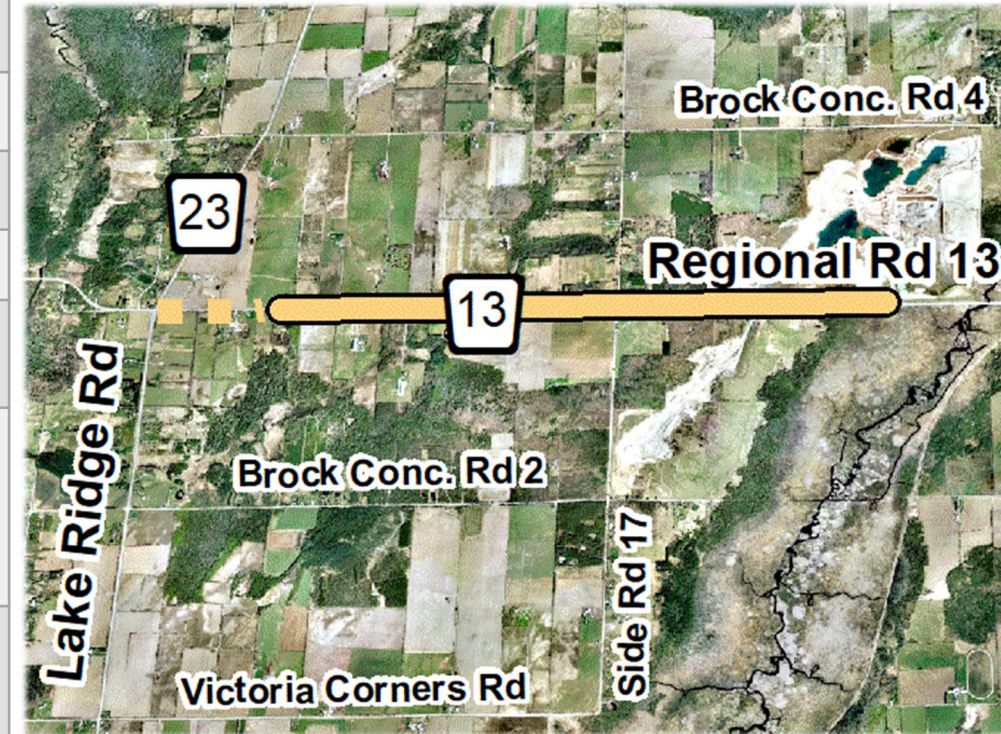


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Thickson Rd. (Reg. Rd. 26) from Wentworth St. to C.N. Rail Kingston, Whitby Reconstruct and widen road to 4 lanes

Prior Budget Approval:	\$5,900,000
2023 Budget Request:	\$1,400,000
Total Estimated Project Cost:	\$7,300,000
On Regional Cycling Plan?	Yes; MUP on west side
Project Driver:	Growth-related
Existing Segment Description:	PCI Very Poor, 2 Lane Rural
Status:	Detail Design – Completion Q2 2023 Property – Completed Utility Relocations - Completed Permitting – Completion Q2 2023
Anticipated Construction Year(s):	Late 2023 - 2024
Coordination with adjacent projects:	MTO Thickson Bridge Rehab over Hwy 401, Victoria St - Thickson to Stevenson Widening, Victoria St – South Blair to west of Thickson Realignment and Widening



Image not to scale

Conc. Rd. 7 (Reg. Rd. 1) from Reg. Rd. 11 to 0.4 km north of Ashworth Rd., Uxbridge Road Rehabilitation

Prior Budget Approval:	\$9,560,000
2023 Budget Request:	\$3,100,000
Total Estimated Project Cost:	\$12,660,000
On Regional Cycling Plan?	Yes; Paved Shoulder
Project Driver:	Rehabilitation
Existing Segment Description:	PCI Very Poor, 2 Lane Rural
Status:	Detail Design – Completion Q2 2023 Property - Complete Utility Relocations - Completion Q3 2023 Permitting – Completion Q2 2023
Anticipated Construction Year(s):	Late 2023 - 2024
Coordination with adjacent projects:	Conc. Rd. 7 (Reg. Rd. 1) from Foster Dr. to south limit of Leaskdale, Zephyr Rd. (Reg. Rd. 13) from Scott Conc. 3 (Reg. Rd. 39) to Conc. 4.



Image not to scale

Conc. Rd. 7 (Reg. Rd. 1) from Foster Dr. to south limit of Leaskdale, Uxbridge Road Rehabilitation

Prior Budget Approval:	\$7,980,000
2023 Budget Request:	\$1,250,000
Total Estimated Project Cost:	\$9,230,000
On Regional Cycling Plan?	Yes; Paved Shoulder
Project Driver:	Rehabilitation
Existing Segment Description:	PCI Very Poor, 2 Lane Rural
Status:	Detail Design – Completion Q2 2023 Property - Complete Utility Relocations - Completion Q3 2023 Permitting – Completion Q2 2023
Anticipated Construction Year(s):	Late 2023 - 2024
Coordination with adjacent projects:	Conc. Rd. 7 (Reg. Rd. 1) from Reg. Rd. 11 to 0.4 km north of Ashworth Rd., Zephyr Rd. (Reg. Rd. 13) from Scott Conc. 3 (Reg. Rd. 39) to Conc. 4.

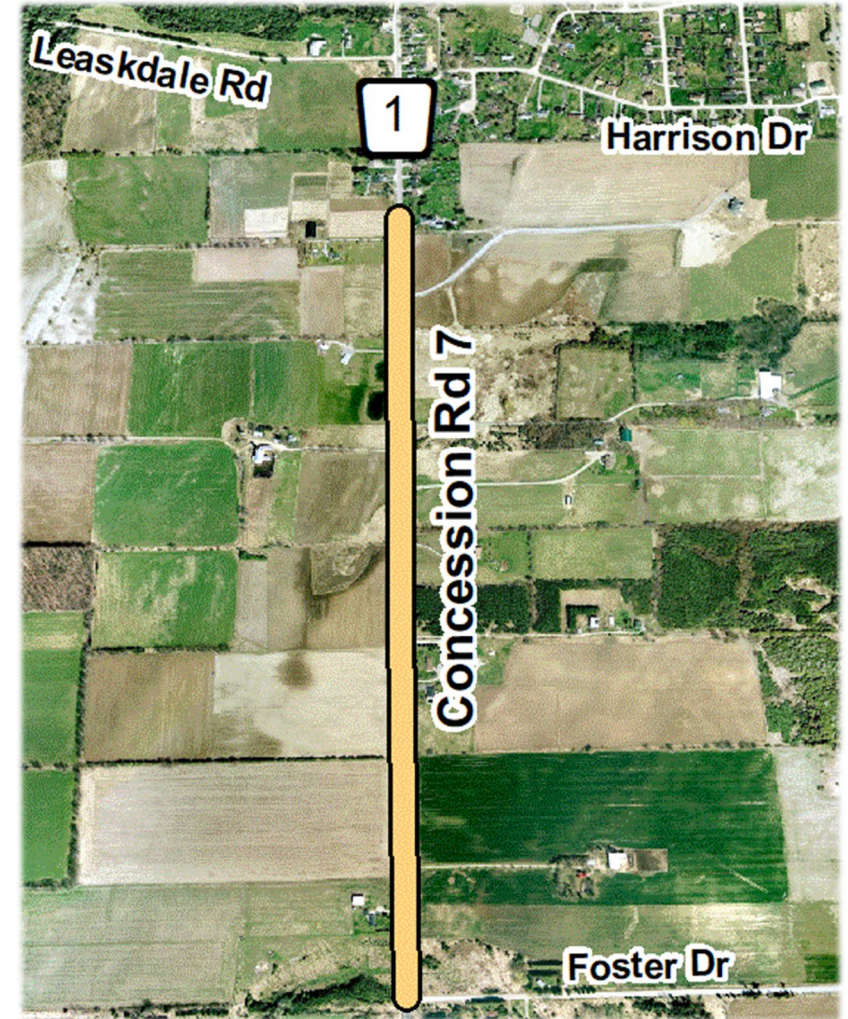


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Taunton Rd. (Reg. Rd. 4) from east of Townline Rd. to west of Enfield Rd., Clarington Road Rehabilitation

Prior Budget Approval:	\$6,573,000
2023 Budget Request:	\$5,100,000
Total Estimated Project Cost:	\$11,673,000
On Regional Cycling Plan?	No
Project Driver:	Rehabilitation
Existing Segment Description:	PCI Very Poor, 2 Lane Rural, on SGMN
Status:	Detail Design – Completion Q2 2023 Property - Complete Utility Relocations - Completion Q2 2023 Permitting – Completion Q2 2023
Anticipated Construction Year(s):	Late 2023 - 2024
Coordination with adjacent projects:	Townline Trunk Sanitary Sewer Construction, Grandview St. N. (Reg. Rd. 3) from Hwy 407 to Columbus Rd. E. and Columbus Rd. E. from Grandview St. N. to Townline Rd. N.

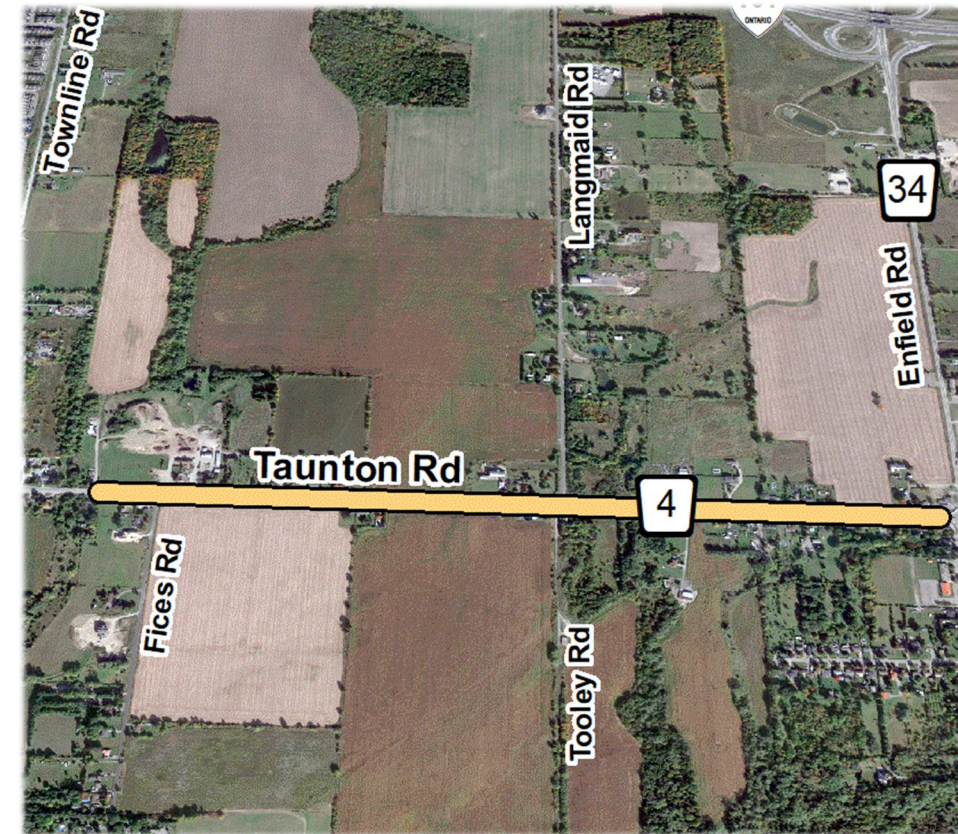


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Grandview St. N. (Reg. Rd. 3) from Hwy 407 to Columbus Rd. E. and Columbus Rd. E. from Grandview St. N. to Townline Rd. N., Oshawa Road Rehabilitation

Prior Budget Approval:	\$6,707,000
2023 Budget Request:	\$293,000
Total Estimated Project Cost:	\$7,000,000
On Regional Cycling Plan?	No
Project Driver:	Rehabilitation
Existing Segment Description:	PCI Very Poor, 2 Lane Rural
Status:	Detail Design – Completion Q2 2023 Property - Complete Utility Relocations - Complete Permitting – Completion Q2 2023
Anticipated Construction Year(s):	2024
Coordination with adjacent projects:	Townline Trunk Sanitary Sewer Construction, Taunton Rd. (Reg. Rd. 4) from east of Townline Rd. to west of Enfield Rd.



Image not to scale

Taunton Road (Reg. Rd. 4) / Anderson St. Intersection, Whitby Intersection Modifications

Prior Budget Approval:	\$3,120,000
2023 Budget Request:	\$1,500,000
Total Estimated Project Cost:	\$4,620,000
On Regional Cycling Plan?	Yes; MUP on north side of Taunton and Cycling lanes on Anderson Street
Project Driver:	Growth-related
Existing Segment Description:	Taunton Road - PCI Fair, 4 Lane Urban, Sidewalk (south side) & MUP (north side), Taunton on SGMN
Status:	Detail Design – Completion Q4 2023 Property - Complete Utility Relocations - Completion Q4 2023 Permitting – Completion Q4 2023
Anticipated Construction Year(s):	2024
Coordination with adjacent projects:	Winchester Road (Reg. Rd. 3) from Baldwin St. to Anderson St.



Image not to scale

Farewell St. (Reg. Rd. 56) from Harbour Rd. to Bloor St., Oshawa Road Rehabilitation

Prior Budget Approval:	\$6,350,000
2023 Budget Request:	\$2,000,000
Total Estimated Project Cost:	\$8,350,000
On Regional Cycling Plan?	Yes; MUP
Project Driver:	Rehabilitation
Existing Segment Description:	PCI Very Poor, 2 to 4 Lane Urban, Sidewalk on west side north of Wentworth, on SGMN
Status:	Detail Design – Completion Q4 2023 Property – Complete Utility Relocations - Completion Q4 2023 Permitting – Completion Q4 2023
Anticipated Construction Year(s):	2024
Coordination with adjacent projects:	MTO Hwy 401/Harmony Rd./Bloor St. Interchange, Wentworth St. (Reg. Rd. 60) Rehab from Cedar St. to Farewell St.



Image not to scale

Olive Ave. (Reg. Rd. 59) from Simcoe St. to Drew St., Oshawa

Road Rehabilitation in conjunction with water/sewer project

Prior Budget Approval:	\$700,000
2023 Budget Request:	\$125,000
Total Estimated Project Cost:	\$825,000
On Regional Cycling Plan?	No
Project Driver:	Rehabilitation, watermain and sanitary sewer replacement
Existing Segment Description:	PCI Very Poor – Good, 2 Lane Urban, Sidewalk on both sides
Status:	Detail Design – Complete Property - Complete Utility Relocations - Complete Permitting – Complete
Anticipated Construction Year(s):	2024 - 2025
Coordination with adjacent projects:	MTO Simcoe St. and Albert St. bridge replacements over 401, Metrolinx GO Bowmanville Expansion, Simcoe St. (Reg. Rd. 2) from Olive Ave. to north of John St., Centre St. (Reg. Rd. 2A) from King St. to Adelaide Ave



Image not to scale

Winchester Road (Reg. Rd. 3) from Baldwin St. to Anderson St., Whitby

Widen road to 3/4 lanes including structure widening



Image not to scale

Prior Budget Approval:	\$15,935,000
2023 Budget Request:	\$1,100,000
Total Estimated Project Cost:	\$17,035,000
On Regional Cycling Plan?	Yes; MUP on south side
Project Driver:	Growth-related
Existing Segment Description:	PCI Poor & Fair, 2 Lane Semi-Urban, Sidewalk (north side) & Paved Shoulder / Sidewalk (south side), on the Strategic Goods Movement Network (SGMN)
Status:	Detail Design – Completion Q3 2023 Property - Complete Utility Relocations - Completion Q1 2023 Permitting – Completion Q3 2023
Anticipated Construction Year(s):	2024 – 2025
Coordination with adjacent projects:	Taunton Road (Reg. Rd. 4) / Anderson St. Intersection

Taunton Road (Reg. Rd. 4) / Bowmanville Ave. Intersection, Clarington Roundabout and replace/widen bridge on west leg

Prior Budget Approval:	\$12,830,000
2023 Budget Request:	\$4,500,000
Total Estimated Project Cost:	\$17,330,000
On Regional Cycling Plan?	No
Project Driver:	Growth-related
Existing Segment Description:	PCI Very Poor, 2 Lane Rural on both roads, both roads on SGMN
Status:	Detail Design – Completion Q4 2023 Property - Complete Utility Relocations - Completion Q4 2023 Permitting – Completion Q2 2023
Anticipated Construction Year(s):	2024 - 2025
Coordination with adjacent projects:	Reg. Rd. 3/Bowmanville Ave. Roundabout, Reconstruction and Burketon Bridge Replacement on Bowmanville Ave.



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Zephyr Rd. (Reg. Rd. 13) from Conc. 3 (Reg. Rd. 39) to Conc. 4., Uxbridge Road Rehabilitation

Prior Budget Approval:	\$7,350,000
2023 Budget Request:	\$1,700,000
Total Estimated Project Cost:	\$9,050,000
On Regional Cycling Plan?	Yes; Paved Shoulder
Project Driver:	Rehabilitation
Existing Segment Description:	PCI Very Poor, 2 Lane Rural, Sidewalk on south side through the hamlet
Status:	Detail Design – Completion Q3 2023 Property - Complete Utility Relocations - Completion Q4 2023 Permitting – Complete
Anticipated Construction Year(s):	2024 - 2025
Coordination with adjacent projects:	Replacement of Timber Bridge on Zephyr between Conc. 5 and Conc 6., Reconstruction of Bridge on Sandford Rd. Between Conc. 2 and Conc. 3, Conc. Rd. 7 (Reg. Rd. 1) from Reg. Rd. 11 to 0.4 km north of Ashworth Rd. and from Foster Dr. to south limit of Leaskdale



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Liberty Street (Reg. Rd. 14) from Longworth Ave. to Concession Rd. 3, Clarington

Road rehabilitation including roundabout at Concession Rd. 3 intersection, signalization and modifications at Freeland Ave - Bons Ave intersection

Prior Budget Approval:	\$4,800,000
2023 Budget Request:	\$6,520,000
Total Estimated Project Cost:	\$11,320,000
On Regional Cycling Plan?	No; MUP/cycle track is proposed on west side
Project Driver:	Growth-related, rehabilitation
Existing Segment Description:	PCI Very Poor, 2 Lane Rural, partial sidewalk at the south end
Status:	Detail Design – Completion Q4 2023 Property - Completion Q2 2023 Utility Relocations - Completion Q1 2024 Permitting – Completion Q4 2023
Anticipated Construction Year(s):	2024 - 2025
Coordination with adjacent projects:	N/A

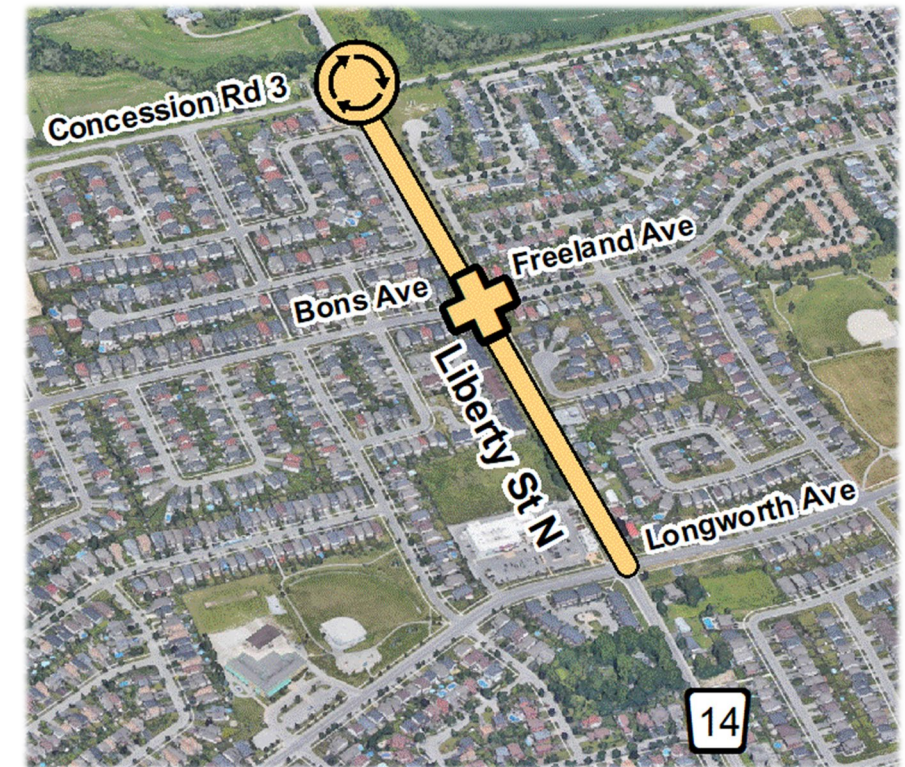


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Victoria St. (Reg. Rd. 22) from South Blair St. to west of Thickson Rd., Whitby Construct new alignment and widen road to 5 lanes

Prior Budget Approval:	\$17,011,000
2023 Budget Request:	\$2,400,000
Total Estimated Project Cost:	\$19,411,000
On Regional Cycling Plan?	Yes; MUP on south side
Project Driver:	Growth-related
Existing Segment Description:	PCI Very Poor, 2 Lane Rural, on SGMN
Status:	Detail Design – Completion Q2 2024 Property - Completion Q1 2024 Utility Relocations - Completion Q2 2024 Permitting – Completion Q2 2024
Anticipated Construction Year(s):	Late 2024 - 2025
Coordination with adjacent projects:	MTO Thickson Road Bridge Rehab over 401, Victoria St. – Thickson Road to Stevenson Road Widening, Thickson Road – Wentworth St. to CNR Widening



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Proposed 2023 Structures Replacement / Rehabilitation Projects



Project	Municipality	Proposed 2023
Replacement		
Reg. Rd. 8 Over Pefferlaw Brook Bridge	Uxbridge	\$1,600,000
Reg. Rd. 8, Nonquon Bridge	Scugog	\$150,000
Reg. Rd. 11, Sandford Rd. Bridge	Uxbridge	\$1,500,000
Reg. Rd. 13, Zephyr Rd. Bridge	Uxbridge	\$3,000,000
Reg. Rd. 57, Burketon CPR Bridge	Clarington	\$2,575,000
Rehabilitations		
Reg. Rd. 2 Simcoe St Over Oshawa Creek Bridge	Oshawa	\$2,050,000
Reg. Rd. 23 Beaverton Bridge	Brock	\$600,000
Other Minor Improvements/Repairs/Rehabs	Various	\$510,000
Various Preparatory and Coordination Activities	Various	\$1,740,000
Total		\$13,725,000



Nonquon Bridge



Burketon / CPR Bridge



Beaverton Bridge

Proposed 2023 Traffic Programs



Traffic Program	Proposed 2023
Signal Installation Program	\$2,725,000
Signal Modernization Program	\$1,640,000
Accessible Pedestrian Signal (APS) Installation Program	\$1,000,000
Road Safety Program	\$1,000,000
Durham Vision Zero Program	\$675,000
Intelligent Transportation System (ITS) Projects	\$655,000
Uninterruptible Power Supply (UPS) Installation Program	\$500,000
Advance Traffic Management Systems (ATMS) Upgrades	\$100,000
Total	\$8,295,000



Traffic Signal Design and Construction – Various

Signal installations planned in 2023 include:

Altona Road at Pinegrove Avenue, Baldwin Street at Canary Street, Simcoe Street at SJ Philips School, Main Street at Fields of Uxbridge, Stevenson at Ridgeway, Taunton Road at Darlington-Clarke Townline, Simcoe Street at Osborne (Beaverton)

2023 Budget Provision: \$2,725,000



Vision Zero – Traffic Safety Initiatives

Eight emphasis areas: Intersections, Aggressive Driving, Distracted Driving, Young Drivers, Pedestrians, Impaired Drivers, Cyclists, Commercial Vehicle Operations

Highlights: Automated Speed Enforcement, Red Light Cameras, Pedestrian Crossing Improvements, New Cycling Infrastructure, Enforcement Programs, Outreach and Education

Goal: 10% reduction in fatal and injury over 5 years

2023 Budget Provision: \$3,287,118



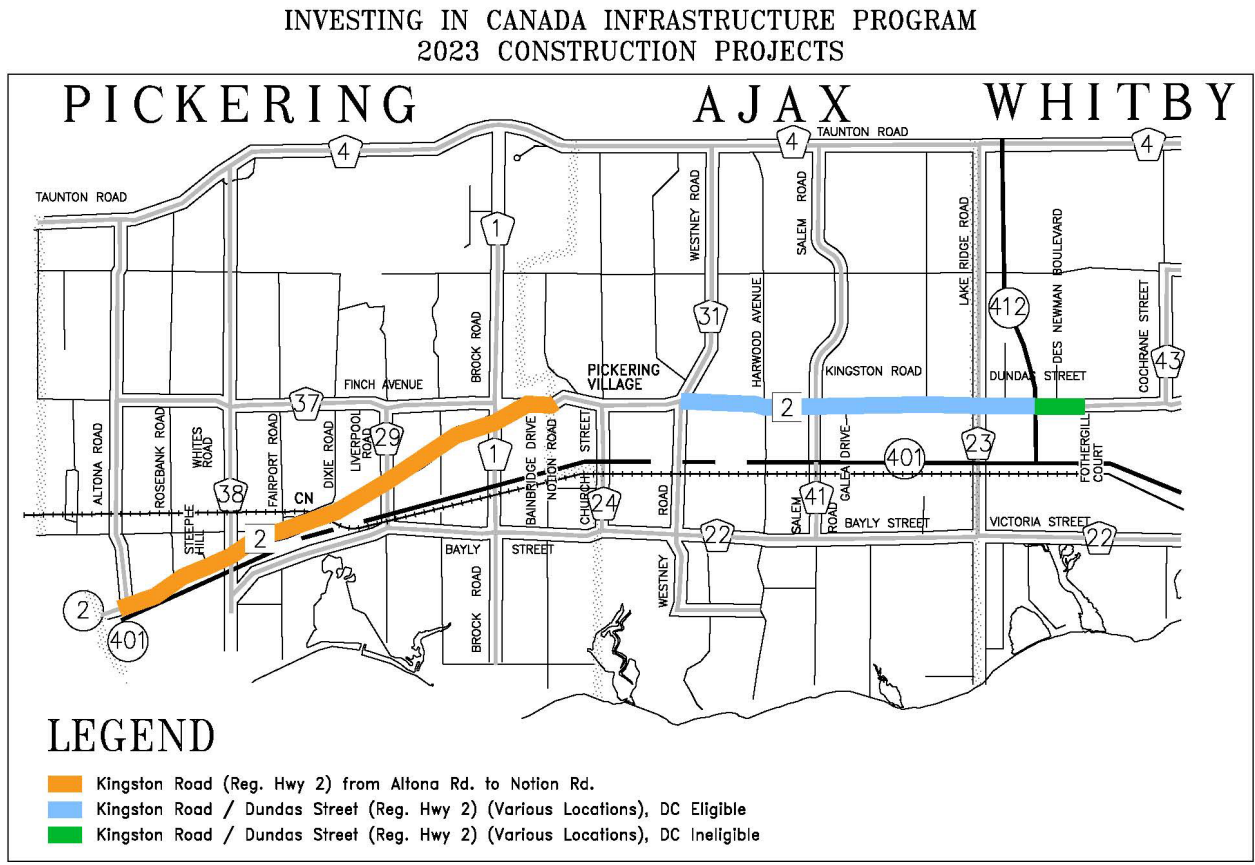
Automated Speed Camera – Claremont Public School (Pickering)

Proposed 2023 ICIP BRT Projects



Bus Rapid Transit Project	Municipality	Proposed 2023*
Kingston Rd. (Reg. Hwy. 2) from Altona Rd. to Notion Rd.	Pickering	\$59,465,000
Kingston Road / Dundas Street (Reg. Hwy 2) (Various Locations), DC Eligible	Ajax, Whitby	\$10,773,000
Kingston Road / Dundas Street (Reg. Hwy 2) (Various Locations), DC Ineligible	Whitby	\$8,400,000
Total		\$78,638,000

* Total includes \$57.7 million in external funding





Durham Budget

2023

Staffing, Risks & Uncertainties and Future Budget Pressures

2023 Proposed Staffing

- 21.954 new FTEs are proposed in the 2023 General Tax and Solid Waste Management budget.
 - 17.611 new full-time equivalent employees (FTEs) to support the delivery of capital projects, operating activities and broader strategic initiatives:
 - 14.701 FTEs – Service Improvements
 - 2.910 FTEs – Strategic Priorities
 - Conversion of 4.343 temporary FTEs to support capital projects and operating activities
 - 4.343 FTEs – Service Improvements

2023 Proposed Staffing (Cont'd)

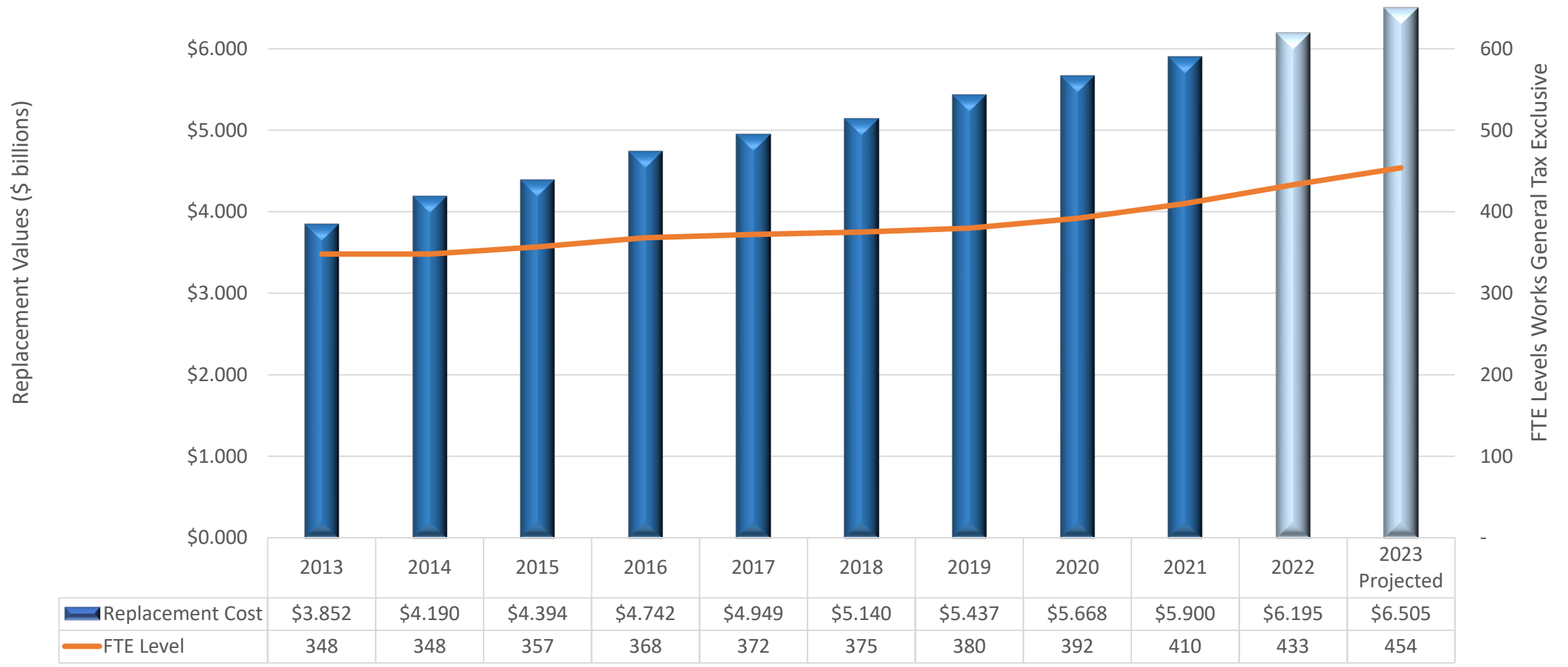
Service Improvement – 19.044 FTEs

- 10 FTEs to support the Underground Locates program to ensure the Region meets the requirements of Ontario Infrastructure Notification System Act, 2012/Ontario One call program.
- 4 FTEs (labourers) converted from temporary to permanent positions to meet continuing service demands.
- 5.044 FTEs to support growth related projects, state of good repair and capital projects. There has been a significant increase in the construction of Infrastructure and Facilities and our resources have not kept pace with growth.

Strategic Priorities - 2.91 FTEs

- 2 FTEs for the Rapid Transit Office to support the implementation of higher order transit infrastructure.
- 0.5 FTE to address emergency preparedness and Business Continuity Planning in Works.
- 0.41 FTE to support the Region's enterprise maintenance management system, Maximo.

Staffing Trend vs Asset Values 2013-2023



Risks and Uncertainties

- Uncertainty around availability of Development Charge revenues to fund major projects with the passage of Provincial Bill 23.
- Impacts of increasing costs due to unprecedented inflation on materials and supplies, including contractual increases, on service provision and capital project delivery.
- Recruiting and retaining qualified staff, especially in a very competitive job market.
- Unpredictable weather events leading to higher than anticipated costs for winter maintenance, and increased costs for road repairs.
- Managing the pressures from growth and increased demand for services to support residents and businesses as well as operational and maintenance requirements for expanding Regional infrastructure and Waste Management operations.
- Uncertainty regarding blue box material commodity pricing and industry funding.

Forecasted Pressures – Impacts on 2024 Budget

- Annualization of new positions - \$1.1 million (estimated \$0.218 million net of recoveries).
- Uncertainty regarding the impact of recyclable commodity prices on revenues and 2024 Blue Box transition.
- Continued uncertainty in relation to inflationary impacts on contracted services.

Growth

- Increased demands for waste services, road maintenance and traffic signal maintenance.
- Increased fleet and equipment requirements to service and maintain growing infrastructure.
- Increased capital infrastructure including new, expanded, and modernized facilities to accommodate service growth and development.

Forecasted Pressures (cont'd)

Asset Management and Infrastructure

- Reconstruction, modernization and expansion of existing Maintenance Operations Depots.
- Increased resources to support Durham Regional Local Housing Corporation initiatives and expansion of Long-Term Care, Region of Durham Paramedic Services, Durham Regional Police Services and Durham Region Transit facilities.
- Replacement of the fuel management system and related infrastructure.
- Capital for roads and bridge expansion and rehabilitation needs.
- Optimization of the Region's Waste Management Facilities to increase efficiency and productivity.
- Ongoing requirement for collection contractors to utilize renewable natural gas fueled collection vehicles.

Forecasted Pressures (cont'd)

Legislative and Regulatory Requirements

- Bill 23-Supporting Growth and Housing in York and Durham Regions Act, 2022 will impact the amount of development charges available to fund new and expanded infrastructure to service growth. Without development charge revenues, financing for infrastructure will need to be provided from property taxes.
- The provincial direction to develop 1.5 million homes in an expedited manner and allowing the development of Greenbelt lands with restricted timelines is an additional and unplanned development pressure competing for Regional infrastructure funds and resources.
- Expansion of Vision Zero countermeasures.
- On-going environmental protection, compliance and rehabilitation requirements for closed landfills.
- Continued assessment of a long-term organics management strategy that addresses legislative mandates, growth, service requirements and environmental sustainability.



Durham Budget

2023

Questions?

If this information is required in an accessible format, please contact 1-800-372-1102 ext. 3540.



The Regional Municipality of Durham Report

To: The Works Committee
From: Commissioner of Works
Report: #2023-W-10
Date: March 8, 2023

Subject:

The Regional Municipality of Durham’s Drinking Water Systems 2022 Summary Report

Recommendations:

That the Committee of the Whole recommends to Regional Council:

- A) That the 2022 Summary Report for the Regional Municipality of Durham Drinking Water Systems be received for information;
 - B) That receipt of this report be confirmed by resolution of Regional Council; and
 - C) That a copy of this resolution be forwarded to the Ontario Ministry of the Environment, Conservation and Parks’ York-Durham District Office to indicate that the conditions of Schedule 22 of Ontario Regulation 170/03 have been fulfilled.
-

Report:

1. Purpose

1.1 The Regional Municipality of Durham (Region) is required to prepare a Summary Report for each of the municipal drinking water systems under Ontario Regulation (O. Reg.) 170/03 of the Safe Drinking Water Act (SDWA). The Summary Report is to be completed and submitted to Regional Council prior to March 31 of each year.

2. Summary Report

2.1 Schedule 22 of O. Reg. 170/03 requires that a Summary Report provide the following information:

22-2. (1) The owner of a drinking water system shall ensure that, not later than March 31 of each year after 2003, a report is prepared in accordance with subsections (2) and (3) for the preceding calendar year and is given to,

- (a) In the case of a drinking water system owned by a municipality, the members of the municipal council;
- (b) In the case of a drinking water system owned by a municipal service board established under section 195 of the *Municipal Act 2001*, the members of the municipal service board; or
- (c) In the case of a drinking water system owned by a corporation, the board of directors of the corporation.

22-2. (2) The report must,

- (a) List the requirements of the Act, the regulations, the system's approval, drinking water works permit, municipal drinking water licence, and any orders applicable to the system that were not met at any time during the period covered by the report; and
- (b) For each requirement referred to in clause (a) that was not met, specify the duration of the failure and the measures that were taken to correct the failure.

22-2. (3) The report must also include the following information for the purpose of enabling the owner of the system to assess the capability of the system to meet existing and planned uses of the system:

1. A summary of the quantities and flow rates of the water supplied during the period covered by the report, including monthly average and maximum daily flows.
2. A comparison of the summary referred to in paragraph 1 to the rated capacity and flow rates approved in the system's approval, drinking water works permit or municipal drinking water license, or if the system is receiving all of its water from another system under an agreement pursuant to subsection 5 (4), to the flow rates specified in the written agreement.

22-2. (4) If a report is prepared under subsection (1) for a system that supplies water to a municipality under the terms of a contract, the owner of the system shall give a copy of the report to the municipality by March 31.

2.2 Table 1 below provides a list of all Drinking Water Systems (DWS) and their Municipal Drinking Water Licences for the period from January 1, 2022, to December 31, 2022.

Table 1 – Municipal Drinking Water License Summary

Drinking Water System	Municipal Drinking Water License #	Issue Number	Issue Date
Oshawa *	003-111	7	September 23, 2020
Whitby *	003-111	7	September 23, 2020
Ajax *	003-111	7	September 23, 2020
Beaverton	003-107	4	November 15, 2019
Blackstock	003-101	4	November 15, 2019
Bowmanville	003-103	5	September 23, 2020
Cannington	003-106	4	November 15, 2019
Greenbank	003-104	4	November 15, 2019
Newcastle	003-109	7	September 23, 2020
Orono	003-108	5	November 15, 2019
Port Perry	003-102	4	November 15, 2019
Sunderland	003-110	4	November 15, 2019
Uxbridge	003-105	7	November 15, 2019

*Oshawa, Whitby and Ajax are licenced as one system but listed individually for this report.

2.3 Table 2 below provides a summary of compliance for each DWS with the prescribed conditions of Schedule 22 of O. Reg. 170/03.

Table 2 – Compliance Summary

Drinking Water System	Compliance Requirements	Water Taking Conditions
Oshawa *	Not Compliant	Did Not Exceed
Whitby *	Not Compliant	Did Not Exceed
Ajax *	Not Compliant	Did Not Exceed
Beaverton	Compliant	Did Not Exceed
Blackstock	Compliant	Did Not Exceed
Bowmanville	Compliant	Did Not Exceed
Cannington	Compliant	Did Not Exceed
Greenbank	Compliant	Did Not Exceed
Newcastle	Not Compliant	Did Not Exceed
Orono	Compliant	Did Not Exceed
Port Perry	Compliant	Did Not Exceed
Sunderland	Compliant	Did Not Exceed
Uxbridge	Compliant	Did Not Exceed

*Oshawa, Whitby, and Ajax are licenced as one system but listed individually for this report.

2.4 The DWS supplying water to the Uxbridge Industrial Park (Uxville) is not required to be covered by this report as it is regulated by the Ministry of Health, under O. Reg. 319/08.

3. General Overview of Compliance Status

3.1 The Summary Report requires a review of each DWS with respect to the SDWA, Permit to Take Water (PTTW), Municipal Drinking Water Licence (MDWL), Drinking Water Works Permit (DWWP), Ministry of the Environment, Conservation and Parks (MECP) inspections and orders including to provide an

explanation of any non-compliance issues that were identified during the reporting period.

- 3.2 Water quality monitoring data is available on the [Region of Durham's website](http://www.durham.ca) at www.durham.ca.
- 3.3 A requirement of the Drinking Water Quality Management Standard (DWQMS) Element 20 is that the results of the annual management review meeting, the identified deficiencies, decisions, and action items are reported to the Owner. The annual DWQMS Management Review meeting was held on June 14, 2022. Attending the meeting were staff that are identified in the Operational Plan as being part of the top management team. The meeting reviewed the agenda items that are listed in the DWQMS 2.0, Element 20. There was one action item identified during the meeting to ensure better tracking of the Groundwater Summary Reports recommendations. There was one internal audit completed from September 26 to 29, 2022. The results were satisfactory with no non-conformances to the DWQMS and nine opportunities for improvement recommended for evaluation.
- 3.4 Durham Region is also required, as part of accreditation to the DWQMS, to have an external audit of the management system conducted by an approved registrar. The 2022 accreditation audit was completed on December 22, 2022. The audit found no non-conformances to the DWQMS and one opportunity for improvement which is being responded to by the DWS staff.
- 3.5 The minutes of the management review meeting and the final audit reports for the internal and external audits are available from the Region.

4. Specific Compliance Items

- 4.1 A review indicated that all the DWS met the compliance requirements of O. Reg. 170/03 with the following exceptions:

(a) O. Reg. 170/03 Schedule 16 Section 16-9 Reporting of Adverse Test Results and Other problems – Notice of Issue Resolution

Ajax DWS

- On April 21, 2022, Notification for Adverse Water Quality Incident (AWQI) 158243 was reported to the Region of Durham Health Department and the MECP through the Spills Action Centre. The issue was resolved on the same day.

- The Notice of Issue Resolution was submitted to the Region of Durham Health Department and MECP on May 2, 2022.
- The Notice of Issue Resolution did not meet the requirements of Schedule 16 Section 16-9 of O. Reg. 170/03 to provide a written notice summarizing the action taken to the Medical Officer of Health (MOH) and the MECP through the Spills Action Centre, within seven (7) days.

Remedial Action:

- Training has been provided to all required staff on the regulatory requirements of AWQI reporting to ensure administrative processes are completed and compliant.

(b) O. Reg. 170/03 Schedule 16 Section 16-6 – Reporting Adverse Test Results and Other Problems: Manner of making immediate report**Ajax DWS**

- On July 5, 2022, several low-pressure incidents were listed on the same Notification of AWQI 159011 and were not reported to the MOH or MECP. These instances are required to be reported immediately under Schedule 16 Section 16-6 of O. Reg. 170/03 as observations of inadequately disinfected water being directed to users.
- The Region sought clarification from the MECP regarding reporting low pressure in the distribution system as an adverse. The MECP does not deem these short duration low pressure events as adverse unless they continue past five minutes or meet other existing conditions for reporting.
- The MECP informed the Region of Durham Health Department of their interpretation moving forward.

Remedial Action:

- Training has been provided to all required staff on what constitutes a reportable AWQI for pressure in the distribution system to ensure administrative processes are completed and compliant.

Ajax DWS

- On July 5, 2022, AWQI 159011 was reported to the MECP through the Spills Action Centre, but not reported to the Region of Durham Health

Department immediately after observation. Verbal and written notifications of AWQI 159011 were provided to the Region of Durham Health department on July 6, 2022.

- The AWQI reported to the Region of Durham Health Department on July 6, 2022, did not meet the requirements of Schedule 16 Section 16-6 of O. Reg. 170/03, which requires that an immediate verbal report be given to a staff member of the MOH, and MECP Spills Action Centre. Staff were unable to establish contact with the Region of Durham Health Department on July 5, 2022, despite several attempts. The MECP Spills Action Centre was notified of the unsuccessful attempts to contact the Region of Durham Health Department on July 5, 2022. Staff were able to contact Region of Durham Health inspectors on the following morning of July 6, 2022.

Remedial Action:

- To assist in communications, staff have been provided with the contact information for the Region of Durham Health Department Supervisor and Manager to be used in the event the on-call Health Inspector is not available.

(c) O. Reg. 128/04 Section 27. (4) Record-keeping re operation of a subsystem

Oshawa/Whitby DWS

- All entries made in the logbook at the Oshawa/Whitby Depot did not permit
- All entries made in the logbook at the Oshawa/Whitby Depot did not permit the person to be unambiguously identified as the maker of the entry as required.

Remedial Action

- Training has been reinforced with all required staff on the regulatory requirements of logbook entries to ensure administrative processes are completed and compliant.

Newcastle DWS

- All entries made in the Orono Depot logbook did not permit the person to be unambiguously identified as the maker of the entry.

Remedial Action:

- Orono Depot staff responsible for making logbook entries shall receive training by March 31, 2023, to ensure they understand the record-keeping policies and requirements. The training shall include, but is not limited to, the requirement for a person making logbook entries to be unambiguously identified as required.
- The Region will provide MECP Inspector, Connie Height via email at connie.height@ontario.ca, by March 31, 2023, with confirmation that the training has been completed.

(d) Drinking Water Works Permit No. 003-209, Schedule B, Condition 4.6.1 – Minor Modifications to the Drinking Water System**Newcastle DWS**

- On October 28, 2022, it was discovered that booster pump #2 at the Newtonville Pumping Station was modified to a Variable Frequency Drive (VFD) without a Form 2 – Record of Minor Modifications or Replacements to the Drinking Water System completed prior to the component being placed into service as required by Schedule B, condition 4.6.1 of the Newcastle Drinking Water Works Permit.
- A Form 2 was subsequently completed on November 14, 2022.

Remedial Action:

- Training on Schedule B of the DWWP and the associated forms is being scheduled for staff to ensure administrative processes are completed and compliant.

(e) Best Management Practices**Ajax DWS**

- All entries made in the logbook at the Ajax Depot did not permit the person to be unambiguously identified as the maker of the entry as required.

Remedial Action:

- Refresher training has been provided to all required staff on the regulatory requirements of logbook entries to ensure administrative processes are completed and compliant.

5. Summary of Water Quantity and Flow Rates

- 5.1 DWS Capacity and Water Flow Data are provided in Attachment #1 – Drinking Water System Capacity and Water Flow Data, as summary charts. Each summary chart provides the monthly average and maximum daily flow for the reporting period. Some of the flow data in Attachment #1 has been pro-rated. Pro-rating is used to determine the volume of water pumped over a 24-hour period. Pro-rated data will be indicated in the chart headings.

6. Public Notification and Information

- 6.1 The Summary Report is available on the [Region of Durham's website](http://www.durham.ca) at www.durham.ca.

7. Relationship to Strategic Plan

- 7.1 This report aligns with the following strategic goals and priorities in the Durham Region Strategic Plan:
- a. Goal 1 Environmental Sustainability - To protect the environment for the future by demonstrating leadership in sustainability and addressing climate change.
 - Protect, preserve and restore the natural environment, including greenspaces, waterways, parks, trails and farmland
 - b. Goal 2 Community Vitality - To foster an exceptional quality of life with services that contribute to strong neighbourhoods, vibrant and diverse communities, and influence our safety and well-being.
 - Enhance community safety and well-being
 - c. Goal 5 Service Excellence - To provide exceptional value to Durham taxpayers through responsive, effective and fiscally sustainable service delivery.
 - Demonstrate commitment to continuous quality improvement and communicating results

8. Conclusion

- 8.1 As required under Ontario Regulation 170/03, this Summary Report for the Regional Municipality of Durham's Drinking Water System is provided to Regional Council. It is recommended that receipt of this report be confirmed by resolution of Regional Council to meet this condition and that a copy of the resolution is forwarded to the Ministry of the Environment, Conservation and Parks.
- 8.2 For additional information, contact: Tavis Nimmo, Acting Manager, Technical Support Division, at 905-668-7711 extension 3737.

9. Attachment

Attachment #1: Drinking Water System Capacity and Water Flow Data

Respectfully submitted,

Original signed by:

John Presta, P.Eng., MPA
Commissioner of Works

Recommended for Presentation to Committee

Original signed by:

Elaine C. Baxter-Trahair
Chief Administrative Officer

The Regional Municipality of Durham
 Ajax Drinking Water System
 2022 Flow Summary Report

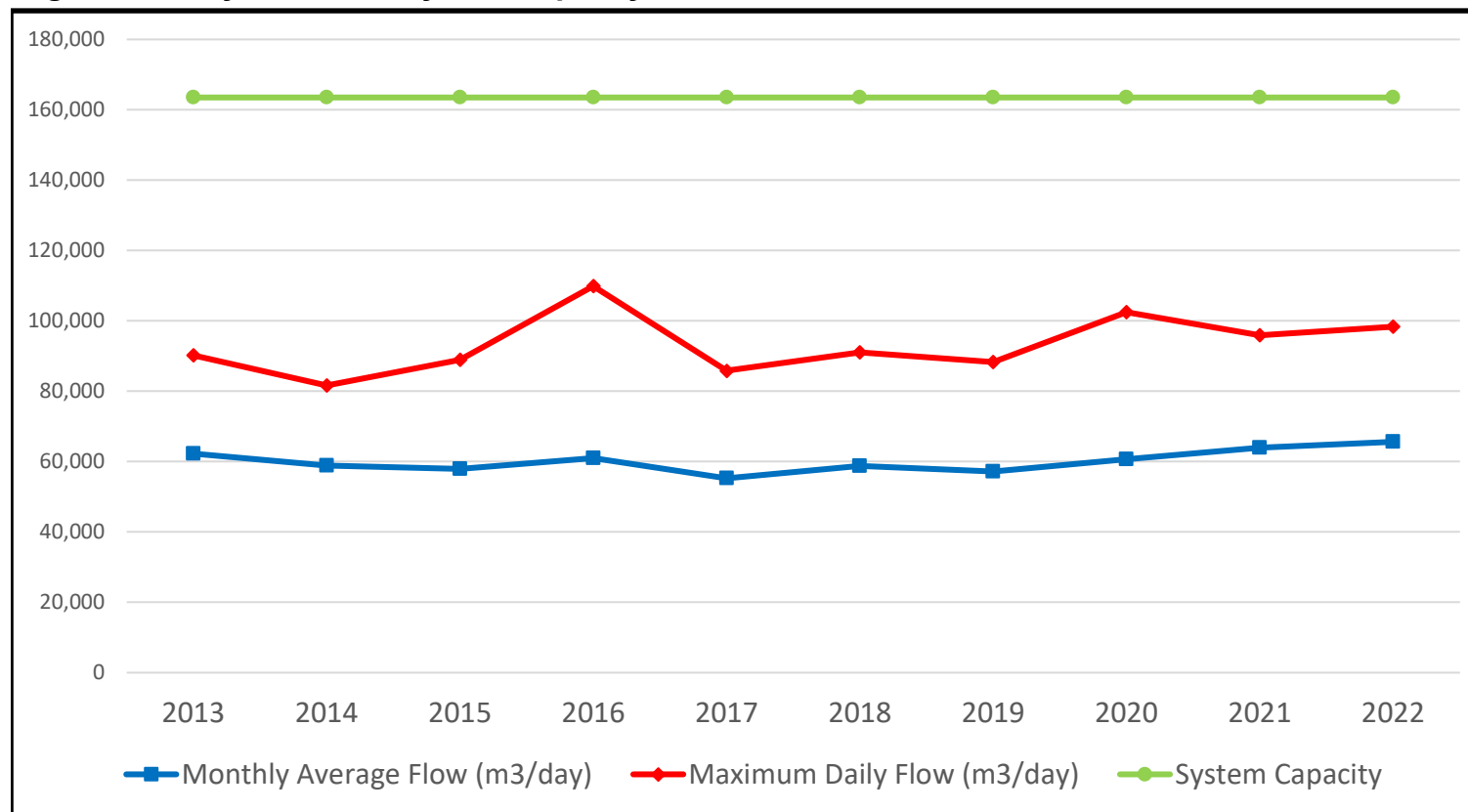
Month	Raw Water Monthly Average Flow Cubic metres per day (m ³ /day)	Raw Water Maximum Daily Flow (m ³ /day)	Total Raw Water Flow (m ³)	Treated Water Monthly Average Flow (m ³ /day)	Treated Water Maximum Daily Flow (m ³ /day)	Total Treated Water Flow (m ³)
January	65,403	78,500	2,027,506	63,697	78,911	1,974,611
February	66,395	81,376	1,859,048	63,352	78,532	1,773,858
March	64,697	77,499	2,005,619	61,923	76,892	1,919,605
April	63,675	70,732	1,910,258	60,535	68,023	1,816,057
May	68,386	82,465	2,119,960	64,679	80,461	2,005,047
June	72,035	96,662	2,161,056	67,738	89,498	2,032,130
July	79,776	102,802	2,473,041	75,010	98,337	2,325,316
August	74,720	88,750	2,316,321	70,926	84,026	2,198,695
September	69,172	85,826	2,075,161	66,703	83,857	2,001,083
October	66,783	82,710	2,070,272	64,379	81,405	1,995,741
November	65,111	76,214	1,953,319	62,944	74,931	1,888,331
December	67,609	83,042	2,095,881	65,497	81,079	2,030,420
Annual Total			25,067,443			23,960,892
Maximum		102,802			98,337	
Average	68,647			65,615		
% Capacity		60			60	
Permit to Take Water Limit		170,000				
Municipal Drinking Water Licence Limit					163,500	

**The Regional Municipality of Durham
 Ajax Drinking Water System
 2022 Flow Summary Report**

Table 1: Ten year annual system capacity and treated water flow data.

Year	Monthly Average Flow (m ³ /day)	Maximum Daily Flow (m ³ /day)	System Capacity (m ³ /day)
2013	62,300	90,229	163,500
2014	58,867	81,640	163,500
2015	57,883	88,945	163,500
2016	60,997	109,869	163,500
2017	55,247	85,808	163,500
2018	58,808	91,039	163,500
2019	57,175	88,253	163,500
2020	60,682	102,507	163,500
2021	63,940	95,933	163,500
2022	65,615	98,337	163,500

Figure 1: Ten year annual system capacity and treated water flow data.



The Regional Municipality of Durham
Beaverton Drinking Water System
2022 Flow Summary Report

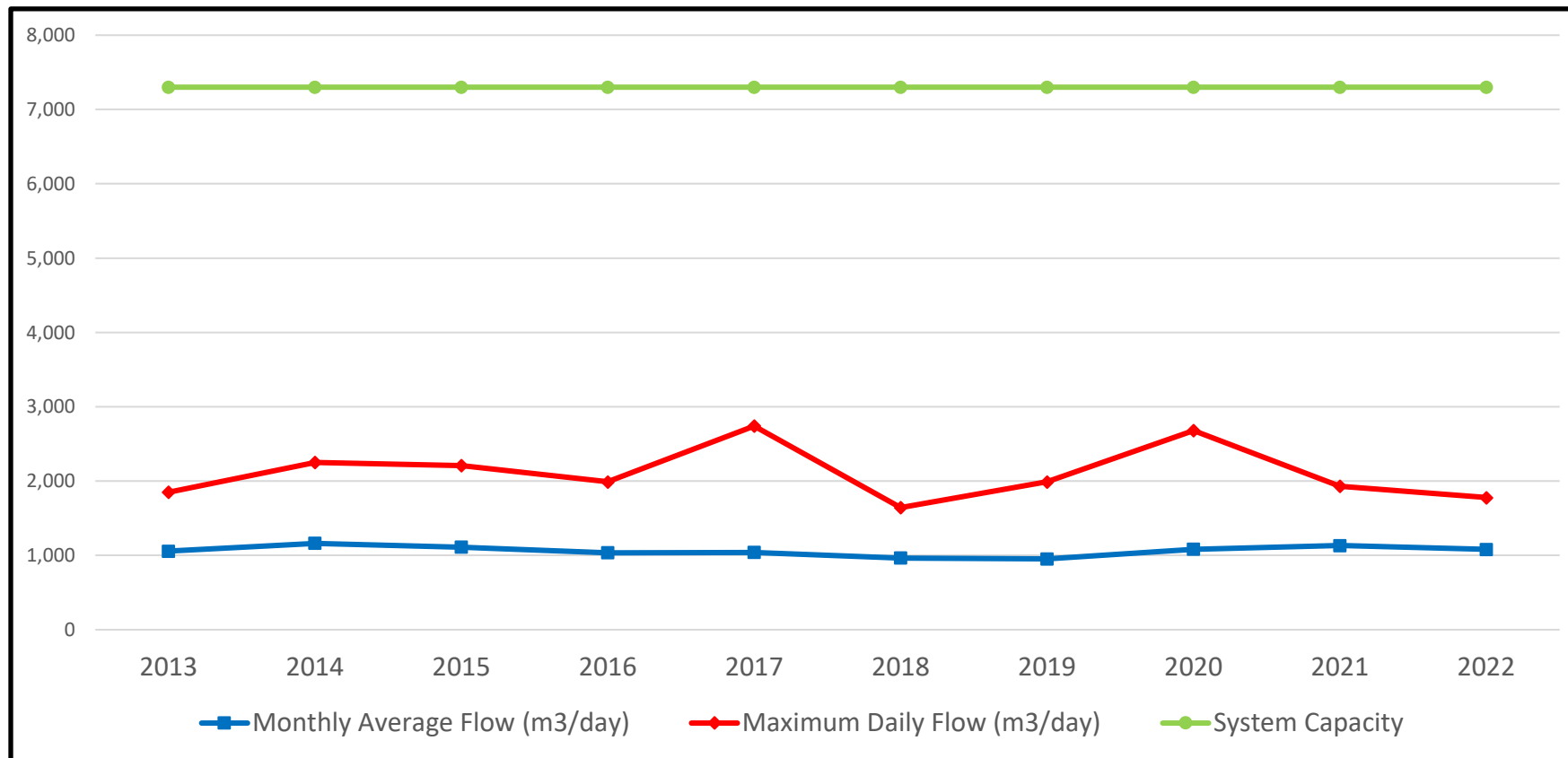
Month	Raw Water Monthly Average Flow Cubic metres per day (m ³ /day) Pro-Rated	Raw Water Maximum Daily Flow (m ³ /day) Pro-Rated	Total Raw Water Flow (m ³)	Treated Water Monthly Average Flow (m ³ /day) Pro-Rated	Treated Water Maximum Daily Flow (m ³ /day) Pro-Rated	Total Treated Water Flow (m ³)
January	1,033	1,194	31,983	967	1,106	29,936
February	1,063	1,354	29,920	964	1,057	26,981
March	1,044	1,360	32,438	971	1,255	30,092
April	1,043	1,356	31,407	936	1,013	28,142
May	1,261	1,577	39,124	1,157	1,591	35,876
June	1,366	1,726	41,047	1,224	1,532	36,702
July	1,557	1,925	48,212	1,390	1,777	43,066
August	1,517	1,845	47,060	1,321	1,514	40,865
September	1,309	1,937	39,388	1,145	1,643	34,423
October	1,097	1,554	34,138	967	1,166	30,010
November	1,043	1,407	31,443	922	1,053	27,698
December	1,071	1,437	33,209	985	1,176	30,380
Annual Total			439,369			394,171
Maximum		1,937			1,777	
Average	1,200			1,079		
% Capacity		27			24	
Permit to Take Water Limit		7,300				
Municipal Drinking Water Licence Limit					7,300	

**The Regional Municipality of Durham
Beaverton Drinking Water System
2022 Flow Summary Report**

Table 1: Ten year annual system capacity and treated water flow data.

Year	Monthly Average Flow (m ³ /day)	Maximum Daily Flow (m ³ /day)	System Capacity (m ³ /day)
2013	1,057	1,850	7,300
2014	1,161	2,251	7,300
2015	1,112	2,208	7,300
2016	1,034	1,989	7,300
2017	1,039	2,740	7,300
2018	964	1,643	7,300
2019	953	1,990	7,300
2020	1,082	2,679	7,300
2021	1,131	1,929	7,300
2022	1,079	1,777	7,300

Figure 1: Ten year annual system capacity and treated water flow data.



The Regional Municipality of Durham
Blackstock Drinking Water System
2022 Flow Summary Report

Month	Well # 7 Raw Water Maximum Taken per Minute (litres)	Well # 7 Raw Water Monthly Average Flow cubic metres per day (m ³ /day) Pro-rated	Well # 7 Raw Water Maximum Daily Flow (m ³ /day) Pro-rated	Well # 7 Total Raw Water Flow (m ³)	Well # 8 Raw Water Maximum Taken per Minute (litres)	Well # 8 Raw Water Monthly Average Flow (m ³ /day) Pro-rated	Well # 8 Raw Water Maximum Daily Flow (m ³ /day) Pro-rated	Well # 8 Total Raw Water Flow (m ³)
January	0	0	0	0	618	153	206	4,712
February	0	0	0	0	642	157	219	4,412
March	0	0	0	0	642	157	212	4,840
April	0	0	0	0	642	171	232	5,078
May	0	0	0	0	648	163	233	4,996
June	0	0	0	0	594	131	221	3,919
July	0	0	0	0	588	151	220	4,624
August	0	0	0	0	570	129	182	3,958
September	0	0	0	0	552	115	172	3,418
October	0	0	0	0	570	138	220	4,245
November	0	0	0	0	588	128	170	3,813
December	0	0	0	0	594	132	199	4,045
Annual Total				0				52,060
Maximum	0		0		648		233	
Average		0				144		
% Capacity					95		24	
Permit to Take Water Limit	684		985		684		985	

Well 7 not in service in 2022.

The Regional Municipality of Durham
 Blackstock Drinking Water System
 2022 Flow Summary Report

Month	Treated Water Monthly Average Flow cubic metres per day (m ³ /day)	Treated Water Maximum Daily Flow (m ³ /day)	Total Treated Water Flow (m ³)
January	131	166	4,066
February	139	202	3,888
March	134	160	4,163
April	150	176	4,487
May	134	176	4,153
June	101	132	3,016
July	119	172	3,689
August	89	139	2,750
September	43	104	1,284
October	116	164	3,598
November	116	153	3,484
December	119	183	3,680
Annual Total			42,258
Maximum		202	
Average	116		
% Capacity		20	
Municipal Drinking Water Licence Limit		994	

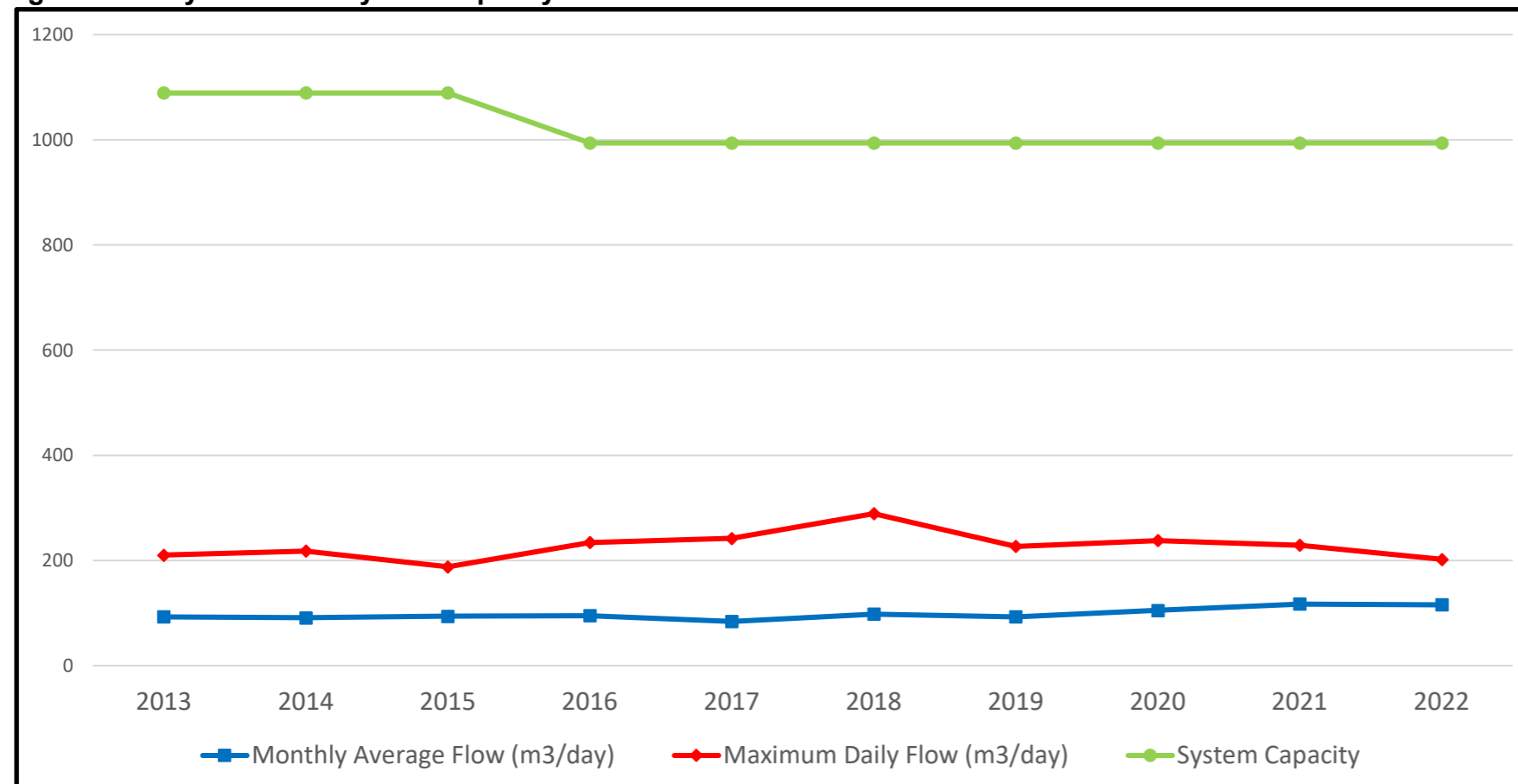
The Regional Municipality of Durham
 Blackstock Drinking Water System
 2022 Flow Summary Report

Table 1: Ten year annual system capacity and treated water flow data.

Year	Monthly Average Flow (m ³ /day)	Maximum Daily Flow (m ³ /day)	System Capacity (m ³ /day)*
2013	93	210	1,089
2014	91	218	1,089
2015	94	188	1,089
2016	95	234	994
2017	84	242	994
2018	98	289	994
2019	93	227	994
2020	105	238	994
2021	117	229	994
2022	116	202	994

* Well 7 not in service since 2016.

Figure 1: Ten year annual system capacity and treated water flow data.



The Regional Municipality of Durham
Bowmanville Drinking Water System
2022 Flow Summary Report

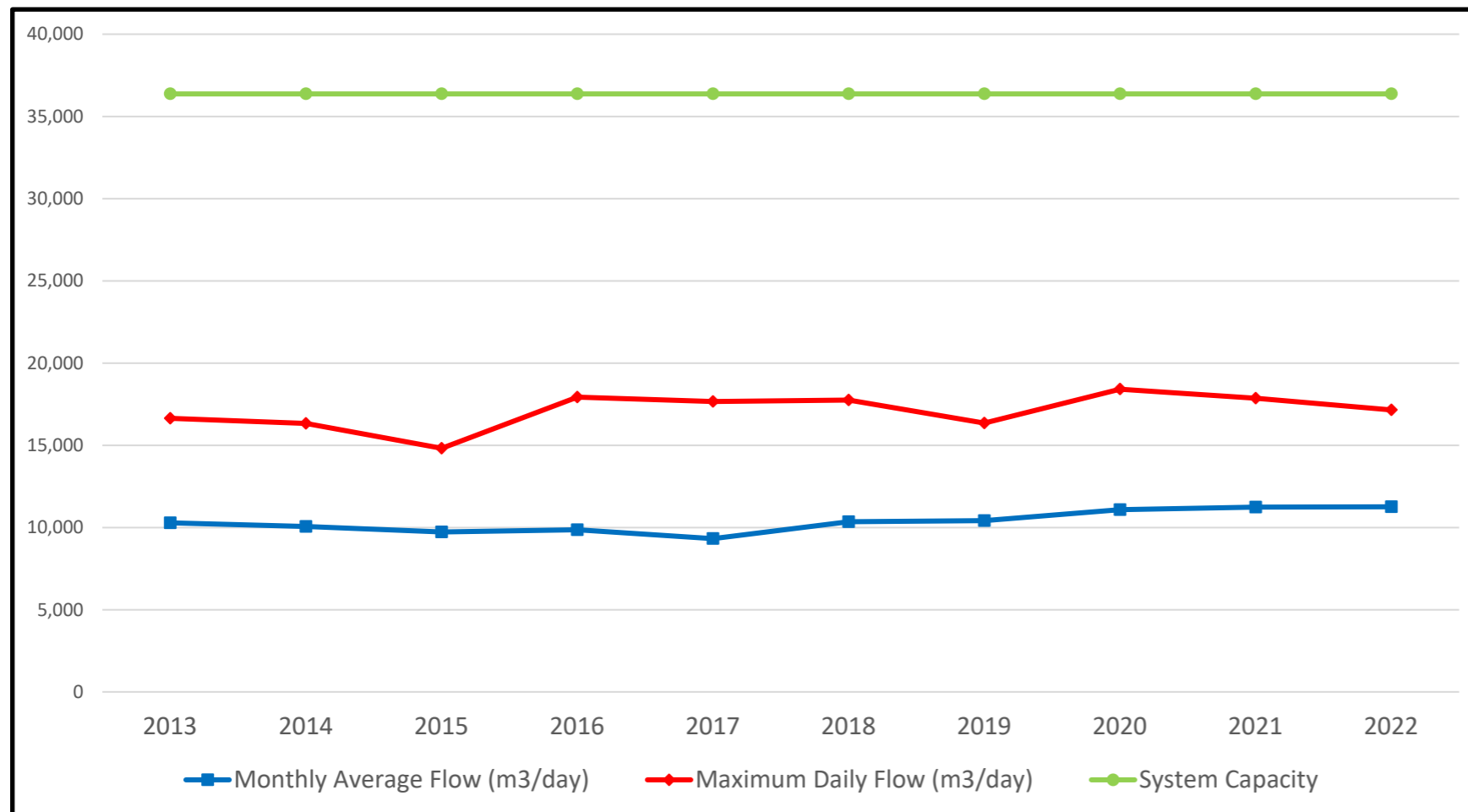
Month	Raw Water Monthly Average Flow Cubic metres per day (m ³ /day)	Raw Water Maximum Daily Flow (m ³ /day)	Total Raw Water Flow (m ³)	Treated Water Monthly Average Flow (m ³ /day)	Treated Water Maximum Daily Flow (m ³ /day)	Total Treated Water Flow (m ³)
January	11,303	12,749	350,393	10,315	11,606	319,758
February	11,245	13,694	314,847	10,368	12,263	290,299
March	10,733	12,736	332,732	10,246	12,521	317,619
April	10,746	13,297	322,383	10,204	12,698	306,127
May	12,247	14,795	379,664	11,698	14,107	362,650
June	13,065	15,307	391,941	12,421	14,792	372,622
July	13,926	18,075	431,707	13,194	17,140	409,008
August	13,362	15,942	414,217	12,680	15,482	393,065
September	12,039	14,499	361,164	11,430	14,390	342,891
October	11,403	12,692	353,486	10,791	12,358	334,534
November	11,268	13,164	338,046	10,674	12,132	320,233
December	11,757	13,407	364,467	11,075	13,354	343,337
Annual Total			4,355,047			4,112,143
Maximum		18,075			17,140	
Average	11,925			11,258		
% Capacity		38			47	
Permit to Take Water Limit		47,700				
Municipal Drinking Water Licence Limit					36,368	

**The Regional Municipality of Durham
Bowmanville Drinking Water System
2022 Flow Summary Report**

Table 1: Ten year annual system capacity and treated water flow data.

Year	Monthly Average Flow (m ³ /day)	Maximum Daily Flow (m ³ /day)	System Capacity (m ³ /day)
2013	10,280	16,633	36,368
2014	10,051	16,333	36,368
2015	9,722	14,815	36,368
2016	9,858	17,935	36,368
2017	9,321	17,659	36,368
2018	10,340	17,750	36,368
2019	10,423	16,354	36,368
2020	11,079	18,409	36,368
2021	11,227	17,867	36,368
2022	11,258	17,140	36,368

Figure 1: Ten year annual system capacity and treated water flow data.



The Regional Municipality of Durham
Cannington Drinking Water System
2022 Flow Summary Report

Month	Well # 2 Raw Water Maximum Taken per Minute (litres)	Well # 2 Raw Water Monthly Average Flow Cubic metres per day (m3/day) Pro-Rated	Well # 2 Raw Water Maximum Daily Flow (m3/day) Pro-rated	Well # 2 Total Raw Water Flow (m3)	Well # 2 Treated Water Monthly Average Flow (m3/day) Pro-rated	Well # 2 Treated Water Maximum Daily Flow (m3/day) Pro-rated	Well # 2 Total Treated Water Flow (m3)
January	80	44	56	1,359	44	56	1,359
February	80	46	64	1,282	46	64	1,282
March	80	48	55	1,487	48	55	1,487
April	80	51	57	1,534	51	57	1,534
May	80	50	65	1,554	50	65	1,554
June	80	42	52	1,261	42	52	1,261
July	80	41	51	1,285	41	51	1,285
August	80	40	50	1,240	40	50	1,240
September	80	37	42	1,119	37	42	1,119
October	80	37	45	1,149	37	45	1,149
November	80	38	45	1,136	38	45	1,136
December	80	41	51	1,272	41	51	1,272
Annual Total				15,678			15,678
Maximum	80		65			65	
Average		43			43		
% Capacity	95		53			13	
Permit to Take Water Limit	84		121				
Municipal Drinking Water Limit**						510	

*Treated water volumes calculated by subtracting waste from raw water volumes.

**Limit is combined for Wells 2 & 7.

The Regional Municipality of Durham
Cannington Drinking Water System
2022 Flow Summary Report

Month	Well # 7 Raw Water Maximum Taken per Minute (litres)	Well # 7 Raw Water Monthly Average Flow Cubic metres per day (m3/day)	Well # 7 Raw Water Maximum Daily Flow (m3/day) Pro-rated	Well # 7 Total Raw Water Flow (m3)	Well # 7 Treated Water Monthly Average Flow (m3/day) Pro-rated	Well # 7 Treated Water Maximum Daily Flow (m3/day) Pro-rated	Well # 7 Total Treated Water Flow (m3)
January	260	146	188	4,540	146	188	4,540
February	260	154	217	4,309	154	217	4,309
March	260	161	183	5,004	161	183	5,004
April	260	169	190	5,068	169	190	5,068
May	260	167	212	5,176	167	212	5,176
June	260	142	177	4,252	142	177	4,252
July	260	141	172	4,370	141	172	4,370
August	260	135	169	4,178	135	169	4,178
September	260	128	146	3,876	128	146	3,876
October	260	124	149	3,867	124	149	3,867
November	260	125	149	3,732	125	149	3,732
December	260	135	171	4,202	135	171	4,202
Annual Total				52,573			52,573
Maximum	260		217			217	
Average		144			144		
% Capacity	96		56			43	
Permit to Take Water Limit	270		389				
Municipal Drinking Water Licence Limit**						510	

*Treated water volumes calculated by subtracting waste from raw water volumes.

**Limit is combined for Wells 2 & 7.

The Regional Municipality of Durham
Cannington Drinking Water System
2022 Flow Summary Report

Month	Well # 2 and 7 Treated Water Monthly Average Flow Cubic metres per day (m ³ /day)	Well # 2 and 7 Treated Water Maximum Daily Flow (m ³ /day) Pro-rated	Well # 2 and 7 Total Treated Water Flow (m ³)
January	189	244	5,899
February	200	281	5,591
March	209	237	6,491
April	220	248	6,602
May	218	275	6,730
June	184	230	5,513
July	182	223	5,655
August	175	218	5,418
September	165	189	4,995
October	161	194	5,016
November	163	194	4,868
December	176	222	5,473
Maximum		281	
Average	187		
% Capacity		55	
Municipal Drinking Water Licence Limit		510	

*Treated water volumes calculated by subtracting waste from raw water volumes.

The Regional Municipality of Durham
Cannington Drinking Water System
2022 Flow Summary Report

Month	Well # 3 Raw Water Maximum Taken per Minute (litres)	Well # 3 Raw Water Monthly Average Flow Cubic metres per day (m ³ /day) Pro-rated	Well # 3 Raw Water Maximum Daily Flow (m ³ /day) Pro-rated	Well # 3 Total Raw Water Flow (m ³)	Well # 3 Treated Water Monthly Average Flow (m ³ /day) Pro-rated	Well # 3 Treated Water Maximum Daily Flow (m ³ /day) Pro-rated	Well # 3 Total Treated Water Flow (m ³)
January	160	88	113	2,731	88	113	2,731
February	160	96	111	2,679	96	111	2,679
March	170	100	116	3,084	100	116	3,084
April	160	106	113	3,186	106	113	3,186
May	160	102	133	3,160	102	133	3,160
June	170	86	110	2,583	86	110	2,583
July	160	88	109	2,727	88	109	2,727
August	160	81	98	2,513	81	98	2,513
September	160	78	90	2,353	78	90	2,353
October	160	77	94	2,387	77	94	2,387
November	160	78	95	2,323	78	95	2,323
December	160	80	99	1,907	80	99	1,907
Annual Total				31,632			31,632
Maximum	170		133			133	
Average		88			88		
% Capacity	94		51			51	
Permit to Take Water Limit	180		259				
Municipal Drinking Water License Limit						259	

*Treated water volumes calculated by subtracting waste from raw water volumes.

The Regional Municipality of Durham
Cannington Drinking Water System
2022 Flow Summary Report

Month	Well # 4 Raw Water Maximum Taken per Minute (litres)	Well # 4 Raw Water Monthly Average Flow Cubic metres per day (m ³ /day) Pro-rated	Well # 4 Raw Water Maximum Daily Flow (m ³ /day) Pro-rated	Well # 4 Total Raw Water Flow (m ³)	Well # 4 Treated Water Monthly Average Flow (m ³ /day) Pro-rated	Well # 4 Treated Water Maximum Daily Flow (m ³ /day) Pro-rated	Well # 4 Total Treated Water Flow (m ³)
January	180	101	129	3,135	101	129	3,135
February	190	109	140	3,044	109	140	3,044
March	190	104	127	3,244	104	127	3,244
April	190	110	123	3,313	110	123	3,313
May	190	110	173	3,401	110	173	3,401
June	190	94	111	2,821	94	111	2,821
July	190	90	107	2,802	90	107	2,802
August	180	87	104	2,690	87	104	2,690
September	180	85	105	2,556	85	105	2,556
October	190	82	110	2,551	82	110	2,551
November	180	86	102	2,594	86	102	2,594
December	190	97	128	3,004	97	128	3,004
Annual Total				35,154			35,154
Maximum	190		173			173	
Average		96			96		
% Capacity	99		62			63	
Permit to Take Water Limit	192		277				
Municipal Drinking Water License Limit						276	

*Treated water volumes calculated by subtracting waste from raw water volumes.

The Regional Municipality of Durham
Cannington Drinking Water System
2022 Flow Summary Report

Month	Well # 8 Raw Water Maximum Taken per Minute (litres)	Well # 8 Raw Water Monthly Average Flow Cubic metres per day (m ³ /day) Pro-rated	Well # 8 Raw Water Maximum Daily Flow (m ³ /day) Pro-rated	Well # 8 Total Raw Water Flow (m ³)	Well # 8 Treated Water Monthly Average Flow (m ³ /day) Pro-rated	Well # 8 Treated Water Maximum Daily Flow (m ³ /day) Pro-rated	Well # 8 Total Treated Water Flow (m ³)
January	380	191	249	5,950	191	249	5,950
February	390	206	270	5,776	206	270	5,776
March	390	212	244	6,599	212	244	6,599
April	390	226	248	6,782	226	248	6,782
May	385	221	357	6,837	221	357	6,837
June	380	174	204	5,273	174	204	5,273
July	370	183	232	5,666	183	232	5,666
August	370	175	223	5,440	175	223	5,440
September	370	165	210	4,954	165	210	4,954
October	380	161	221	4,996	161	221	4,996
November	380	153	194	4,577	153	194	4,577
December	340	156	219	4,847	156	219	4,847
Annual Total				67,696			67,696
Maximum	390		357			357	
Average		185			185		
% Capacity	69		44			44	
Permit to Take Water Limit	568		818				
Municipal Drinking Water License Limit						818	

*Treated water volumes calculated by subtracting waste from raw water volumes.

The Regional Municipality of Durham
Cannington Drinking Water System
2022 Flow Summary Report

Month	Total System Raw Water Monthly Average Flow Cubic metres per day (m ³ /day) Pro-rated	Total System Raw Water Maximum Daily Flow (m ³ /day)	Total Raw Water Flow (m ³)	Total System Treated Water Monthly Average Flow (m ³ /day)	Total System Treated Water Maximum Daily Flow (m ³ /day)	Total System Total Treated Water Flow (m ³)
January	570	735	17,715	570	735	17,715
February	610	801	17,090	610	801	17,090
March	626	708	19,418	626	708	19,418
April	662	710	19,883	662	710	19,883
May	651	818	20,128	651	818	20,128
June	537	608	16,190	537	608	16,190
July	543	643	16,850	543	643	16,850
August	517	625	16,061	517	625	16,061
September	493	590	14,856	493	590	14,856
October	481	617	14,948	481	617	14,948
November	480	559	14,362	480	559	14,362
December	490	614	15,231	490	614	15,231
Annual Total			202,732			202,732
Maximum		818			818	
Average	555			555		
% Capacity		44			44	
Permit to Take Water Limit		1863				
Municipal Drinking Water License Limit					1863	

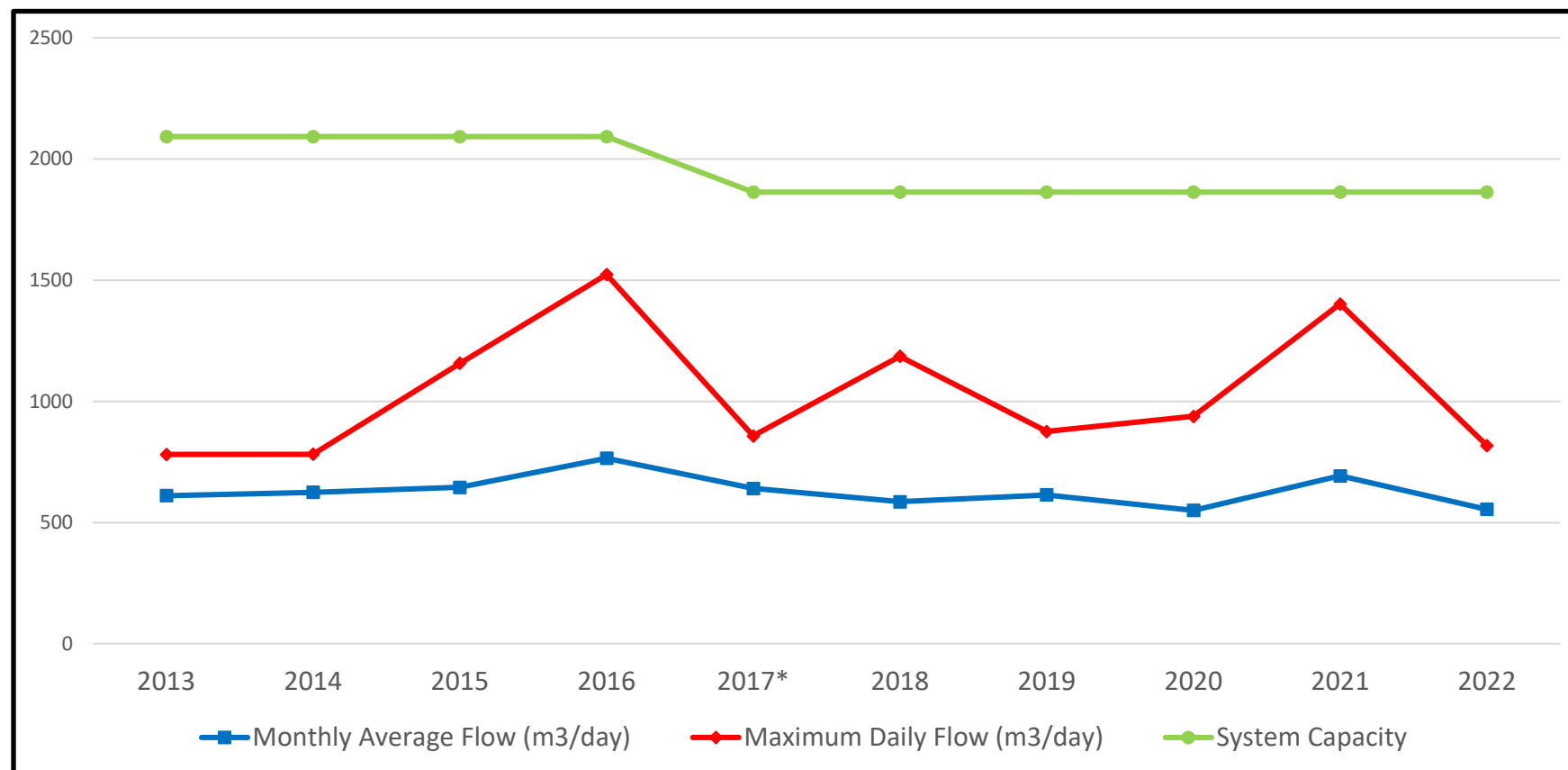
**The Regional Municipality of Durham
Cannington Drinking Water System
2022 Flow Summary Report**

Table 1: Ten year annual system capacity and treated water flow data.

Year	Monthly Average Flow (m ³ /day)	Maximum Daily Flow (m ³ /day)	System Capacity (m ³ /day)*
2013	611	781	2,092
2014	625	782	2,092
2015	645	1,157	2,092
2016	765	1,523	2,092
2017*	641	857	1,863
2018	586	1,186	1,863
2019	614	876	1,863
2020	550	938	1,863
2021	693	1,402	1,863
2022	555	818	1,863

*Capacity changed due to decommissioning of Well 6.

Figure 1: Ten year annual system capacity and treated water flow data.



Prepared by: Technical Support Water Group
Prepared on: 2023-01-26

The Regional Municipality of Durham
Greenbank Drinking Water System
2022 Flow Summary Report

Month	Well # 1 Raw Water Maximum Taken per Minute (litres)	Well # 1 Raw Water Monthly Average Flow cubic metres per (day m ³ /day) Pro-rated	Well # 1 Raw Water Maximum Daily Flow (m ³ /day) Pro-rated	Well # 1 Total Raw Water Flow (m ³)	Well # 3 Raw Water Maximum Taken per Minute (litres)	Well # 3 Raw Water Monthly Average Flow (m ³ /day) Pro-rated	Well # 3 Raw Water Maximum Daily Flow (m ³ /day) Pro-rated	Well # 3 Total Raw Water Flow (m ³)
January	60	20	31	586	80	27	45	844
February	60	17	21	473	85	25	31	689
March	60	24	45	726	85	32	59	996
April	65	30	45	879	85	36	55	1,061
May	65	34	47	1,034	85	43	63	1,329
June	65	24	31	710	85	31	42	952
July	65	24	33	734	83	30	42	932
August	60	22	30	676	80	29	40	887
September	60	21	28	624	80	27	36	822
October	60	20	29	607	80	27	41	822
November	60	16	27	478	80	22	49	657
December	60	19	25	585	80	23	30	724
Annual Total				8,112				10,715
Maximum	65		47		85		63	
Average		22				29		
% Capacity	93		46		93		48	
Permit to take water limit	70		101		91		130	

The Regional Municipality of Durham
Greenbank Drinking Water System
2022 Flow Summary Report

Month	Well # 4 Raw Water Maximum Taken per Minute (litres)	Well # 4 Raw Water Monthly Average Flow cubic metres per day (m ³ /day) Pro-rated	Well # 4 Raw Water Maximum Daily Flow (m ³ /day) Pro-rated	Well # 4 Total Raw Water Flow (m ³)	Well # 5 Raw Water Maximum Taken per Minute (litres)	Well # 5 Raw Water Monthly Average Flow (m ³ /day) Pro-rated	Well # 5 Raw Water Maximum Daily Flow (m ³ /day) Pro-rated	Well # 5 Total Raw Water Flow (m ³)
January	55	18	31	563	60	16	22	470
February	60	17	21	474	64	17	20	465
March	60	22	40	683	60	20	34	618
April	65	27	42	800	65	24	36	704
May	63	32	46	970	60	29	43	883
June	65	23	31	701	60	20	26	596
July	65	24	34	737	60	19	26	578
August	65	22	32	688	58	18	25	561
September	63	21	28	633	55	17	22	501
October	65	21	31	628	56	15	23	472
November	62	17	40	516	60	13	25	394
December	60	18	23	562	54	14	19	447
Annual Total				7,954				6,689
Maximum	65		46		65		43	
Average		22				18		
% Capacity	96		46		96		43	
Permit to take water limit	68		99		68		99	

The Regional Municipality of Durham
Greenbank Drinking Water System
2022 Flow Summary Report

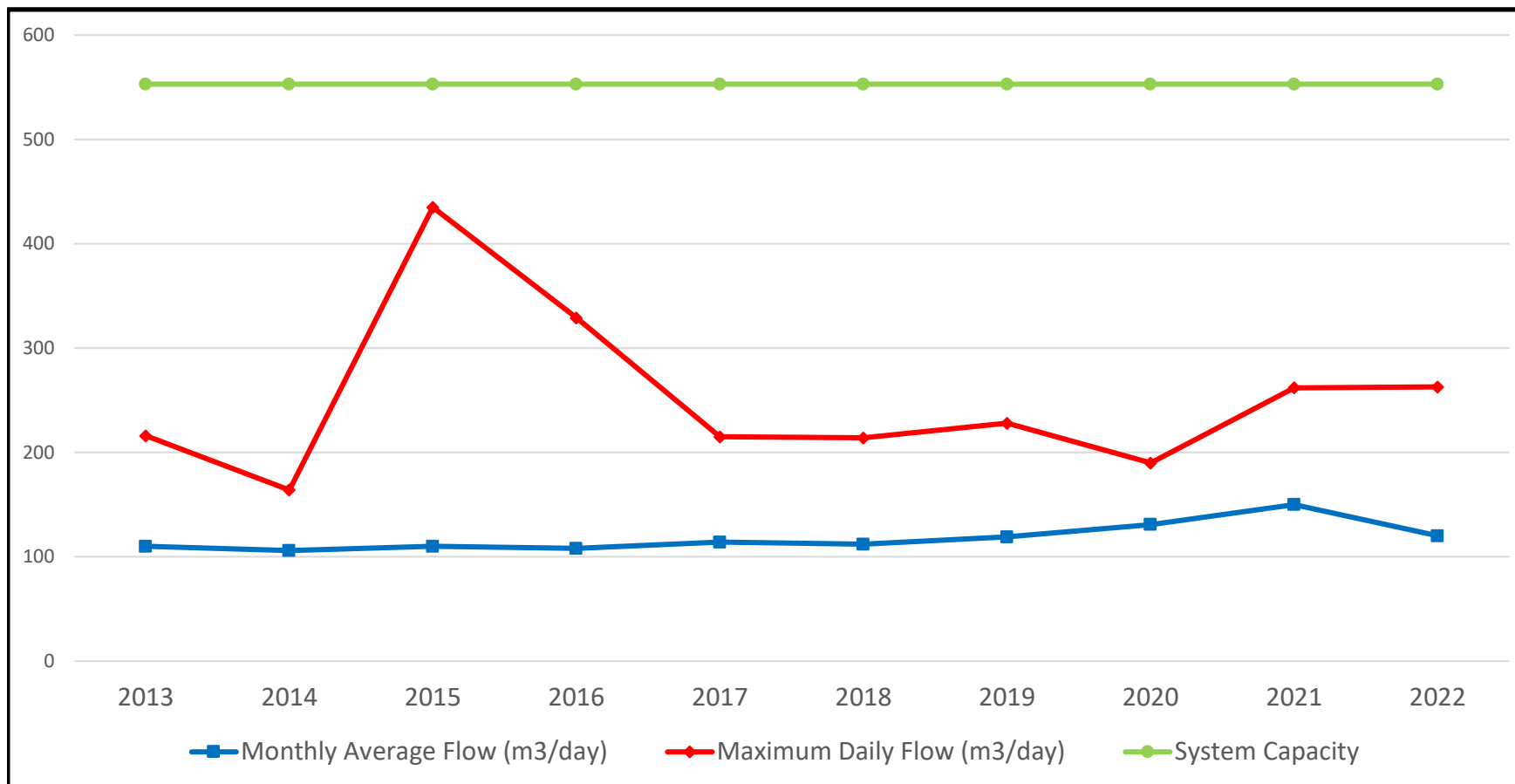
Month	Well # 6 Raw Water Maximum Taken per Minute (litres)	Well # 6 Raw Water Monthly Average Flow cubic metres per day (m ³ /day) Pro-rated	Well # 6 Raw Water Maximum Daily Flow (m ³ /day) Pro-rated	Well # 6 Total Raw Water Flow (m ³)	Treated Water Monthly Average Flow cubic metres per day (m ³ /day) Pro-rated	Treated Water Maximum Daily Flow (m ³ /day) Pro-rated	Total Treated Water Flow (m ³)
January	82	23	32	642	101	129	3,104
February	80	23	29	649	98	121	2,749
March	80	30	52	925	128	230	3,949
April	80	35	53	1,041	150	229	4,485
May	83	44	65	1,336	181	263	5,553
June	83	31	43	926	128	170	3,885
July	80	30	42	929	126	178	3,911
August	82	29	43	912	120	169	3,724
September	83	29	37	858	114	150	3,438
October	85	28	44	866	111	167	3,395
November	85	23	54	680	85	97	2,544
December	80	23	29	718	98	125	3,036
Annual Total				10,482			43,772
Maximum	85		65			263	
Average		29			120		
% Capacity	93		50			48	
Permit to take water limit	91		130				
Municipal Drinking Water License Limit						553	

**The Regional Municipality of Durham
Greenbank Drinking Water System
2022 Flow Summary Report**

Table 1: Ten year annual system capacity and treated water flow data.

Year	Monthly Average Flow (m ³ /day)	Maximum Daily Flow (m ³ /day)	System Capacity (m ³ /day)
2013	110	216	553
2014	106	164	553
2015	110	435	553
2016	108	329	553
2017	114	215	553
2018	112	214	553
2019	119	228	553
2020	131	190	553
2021	150	262	553
2022	120	263	553

Figure 1: Ten year annual system capacity and treated water flow data.



Prepared by: Technical Support Water Group
Prepared on: 2023-01-26

The Regional Municipality of Durham
Newcastle Drinking Water System
2022 Flow Summary Report

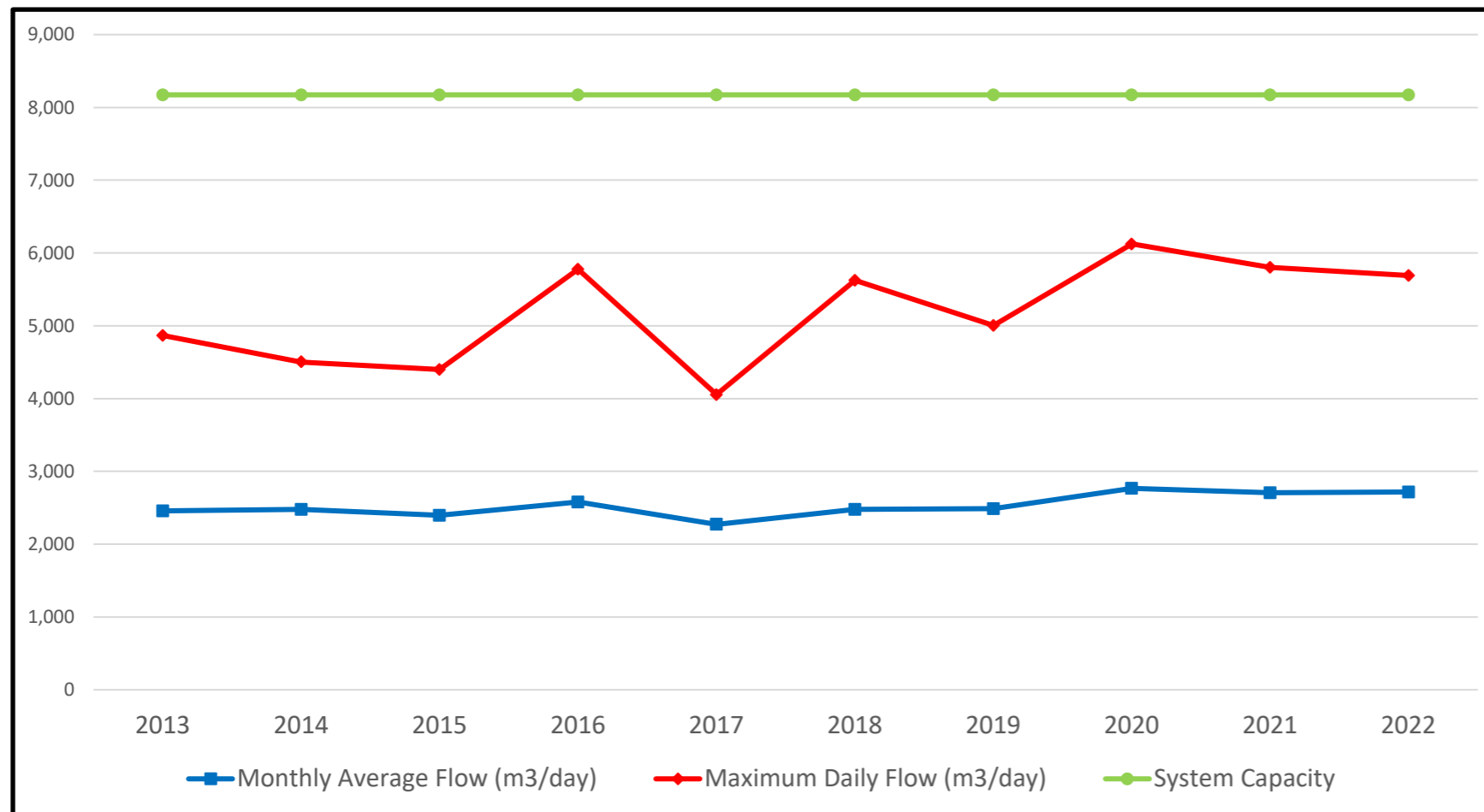
Month	Raw Water Monthly Average Flow Cubic metres per day (m ³ /day)	Raw Water Maximum Daily Flow (m ³ /day)	Total Raw Water Flow (m ³)	Treated Water Monthly Average Flow (m ³ /day)	Treated Water Maximum Daily Flow (m ³ /day)	Total Treated Water Flow (m ³)
January	2,526	3,344	78,612	2,414	3,250	74,829
February	2,511	3,454	70,300	2,389	3,250	66,892
March	2,472	3,022	76,627	2,343	2,818	72,619
April	2,478	3,306	74,339	2,348	3,187	70,437
May	3,057	4,739	94,769	2,887	4,430	89,496
June	3,396	4,582	101,889	3,219	4,392	96,562
July	3,824	5,938	118,551	3,656	5,690	113,334
August	3,641	5,020	112,861	3,460	4,740	107,265
September	2,933	4,224	88,002	2,743	4,412	82,297
October	2,625	3,634	81,389	2,443	3,349	75,740
November	2,496	3,348	74,868	2,353	3,105	70,601
December	2,487	3,290	77,108	2,338	3,090	72,488
Annual Total			1,049,315			992,560
Maximum		5,938			5,690	
Average	2,871			2,716		
% Capacity		33			70	
Permit to Take Water Limit		18,100				
Municipal Drinking Water Licence Limit					8,173	

The Regional Municipality of Durham
 Newcastle Drinking Water System
 2022 Flow Summary Report

Table 1: Ten year annual system capacity and treated water flow data.

Year	Monthly Average Flow (m ³ /day)	Maximum Daily Flow (m ³ /day)	System Capacity (m ³ /day)
2013	2,457	4,868	8,173
2014	2,480	4,504	8,173
2015	2,398	4,398	8,173
2016	2,579	5,777	8,173
2017	2,272	4,056	8,173
2018	2,476	5,623	8,173
2019	2,489	5,004	8,173
2020	2,767	6,125	8,173
2021	2,707	5,802	8,173
2022	2,716	5,690	8,173

Figure 1: Ten year annual system capacity and treated water flow data.



The Regional Municipality of Durham
Orono Drinking Water System
2022 Flow Summary Report

Month	Well # 3 Raw Water Maximum Taken per Minute (litres)	Well # 3 Raw Water Monthly Average Flow cubic metres per day (m ³ /day) Pro-rated	Well # 3 Raw Water Maximum Daily Flow (m ³ /day) Pro-rated	Well # 3 Total Raw Water Flow (m ³)	Well # 4 Raw Water Maximum Taken per Minute (litres)	Well # 4 Raw Water Monthly Average Flow (m ³ /day) Pro-rated	Well # 4 Raw Water Maximum Daily Flow (m ³ /day) Pro-rated	Well # 4 Total Raw Water Flow (m ³)
January	726	224	288	5,328	744	192	265	1,579
February	732	252	381	4,966	744	181	278	1,665
March	726	247	346	5,122	744	251	293	2,529
April	720	227	292	1,368	756	286	375	7,096
May	768	347	629	6,604	732	328	443	4,900
June	756	383	588	7,523	744	347	559	3,920
July	756	432	622	9,846	708	394	466	3,181
August	756	391	618	8,817	696	363	528	2,953
September	762	286	385	6,554	702	259	344	1,812
October	756	272	629	6,754	720	352	571	2,496
November	762	286	346	5,874	708	283	319	2,647
December	762	279	341	6,692	714	261	344	2,038
Annual Total				75,448				36,816
Maximum	768		629		756		571	
Average		302				291		
% Capacity	84		72		83		65	
Permit to Take Water Limit	909		872		909		872	

*Well cannot be run for more than sixteen hours per day as indicated in the Permit to Take Water.

The Regional Municipality of Durham
Orono Drinking Water System
2022 Flow Summary Report

Month	Well # 5* Raw Water Monthly Average Flow cubic metres per day (m ³ /day) Pro-rated	Well # 5* Raw Water Maximum Daily Flow (m ³ /day) Pro-rated	Well # 5* Total Raw Water Flow (m ³)	System Total Treated Water Monthly Average Flow (m ³ /day) Pro-rated	System Total Treated Water Maximum Daily Flow (m ³ /day) Pro-rated	System Total Treated Water Flow (m ³)
January	0	0	0	264	336	6,746
February	0	0	0	273	476	6,469
March	0	0	0	327	420	7,469
April	0	0	0	387	764	8,394
May	0	0	0	387	764	11,377
June	0	0	0	442	751	11,269
July	0	0	0	347	478	12,862
August	0	0	0	413	543	11,584
September	0	0	0	296	418	8,226
October	0	0	0	274	434	9,089
November	0	0	0	250	349	8,336
December	0	0	0	246	327	8,568
Annual Total						110,388
Maximum					764	
Average				326		
% Capacity					87 / 44	
Permit to Take Water Limit	909	872				
Municipal Drinking Water Licence Limit***					873 / 1,745	

*Well not in service.

**Treated water volumes calculated by subtracting waste from raw water volumes.

***The rated capacity can be increased to 1,745 m³/day for up to 90 days per calendar year.

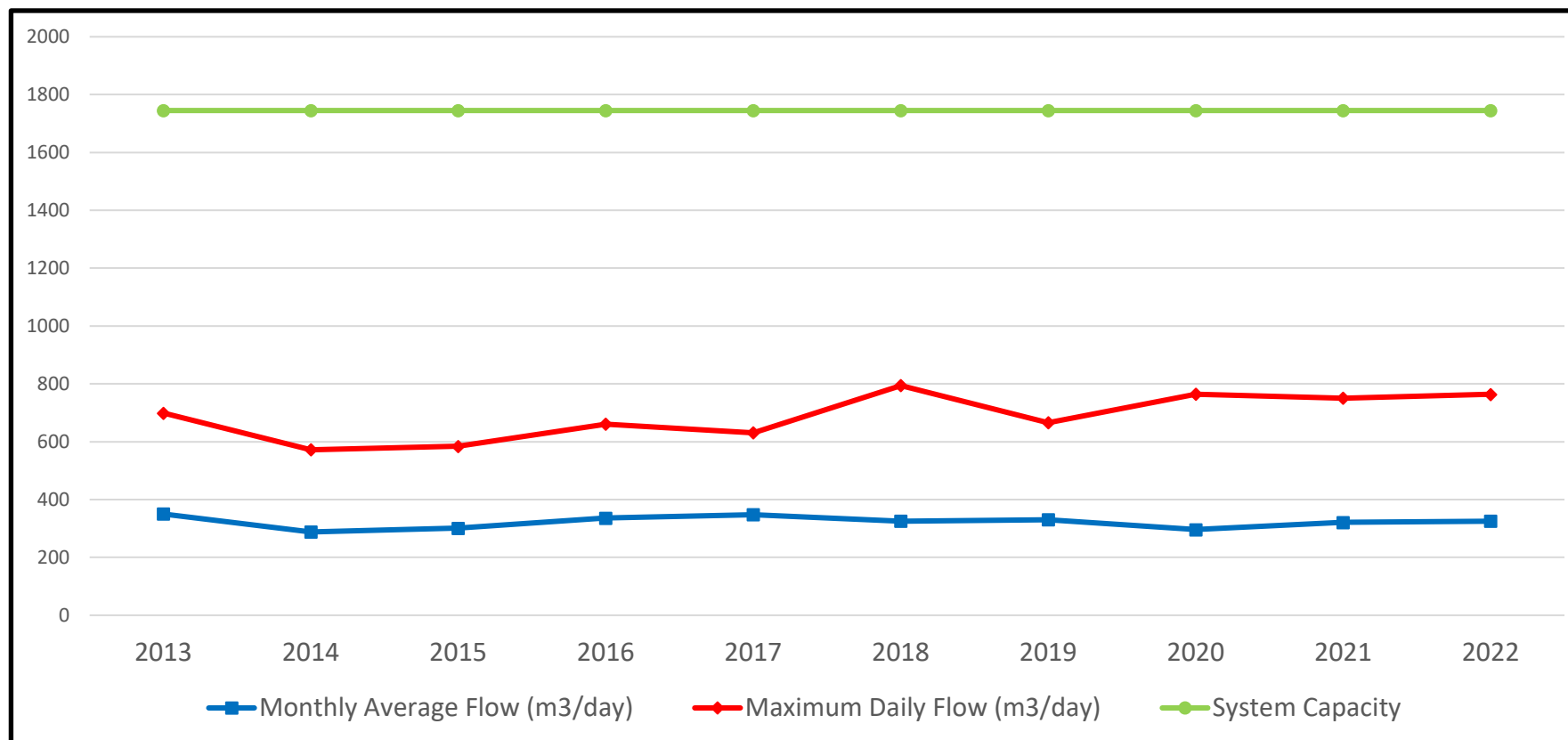
**The Regional Municipality of Durham
Orono Drinking Water System
2022 Flow Summary Report**

Table 1: Ten year annual system capacity and treated water flow data.

Year	Monthly Average Flow (m ³ /day)	Maximum Daily Flow (m ³ /day)	System Capacity (m ³ /day)*
2013	350	699	1,745
2014	288	572	1,745
2015	301	584	1,745
2016	336	661	1,745
2017	348	631	1,745
2018	325	794	1,745
2019	330	666	1,745
2020	296	764	1,745
2021	321	751	1,745
2022	326	764	1,745

*The rated capacity can be increased to 1,745 m³/day not exceeding 90 days per calendar year.

Figure 1: Ten year annual system capacity and treated water flow data.



The Regional Municipality of Durham
Oshawa Drinking Water System
2022 Flow Summary Report

Month	Plant 1 West Intake Raw Water Monthly Average Flow Cubic metres per day (m ³ /day)	Plant 1 West Intake Raw Water Maximum Daily Flow (m ³ /day)	Plant 1 West Intake Total Raw Water Flow (m ³)	Plant 2 East Intake Raw Water Monthly Average Flow (m ³ /day)	Plant 2 East Intake Raw Water Maximum Daily Flow (m ³ /day)	Plant 2 East Intake Total Raw Water Flow (m ³)
January	11,048	11,937	342,491	38,648	41,738	1,199,200
February	11,502	12,795	322,067	37,559	43,302	1,051,655
March	11,126	12,505	344,908	37,552	41,947	1,164,114
April	10,838	12,007	325,127	37,021	40,798	1,110,634
May	12,444	21,223	385,765	42,383	71,289	1,313,883
June	12,252	14,125	367,575	42,267	48,088	1,268,014
July	13,585	15,374	421,131	48,072	54,156	1,490,234
August	14,300	15,163	443,301	42,267	52,820	1,535,634
September	14,221	15,716	426,627	42,267	51,865	1,391,431
October	11,475	14,406	355,735	42,662	54,144	1,322,527
November	10,947	12,625	328,398	41,231	46,625	1,236,917
December	12,165	16,326	377,114	42,410	55,051	1,314,715
Annual Total			4,440,238			15,398,956
Maximum		21,223			71,289	
Average	12,159			41,195		
% Capacity		48			79	
Permit to Take Water Limit		44,000			90,000	

The Regional Municipality of Durham
Oshawa Drinking Water System
2022 Flow Summary Report

Month	Total Raw Water Monthly Average Flow Cubic metres per day (m3/day)	Total Raw Water Maximum Daily Flow (m3/day)	Total Raw Water Flow (m3)	Total Treated Water Monthly Average Flow (m3/day)	Total Treated Water Maximum Daily Flow (m3/day)	Total Treated Water Flow (m3)
January	49,732	53,609	1,541,691	44,452	48,571	1,378,022
February	49,061	56,098	1,373,722	44,483	50,401	1,245,516
March	48,678	54,452	1,509,021	43,644	49,392	1,352,953
April	47,859	52,804	1,435,761	43,648	48,172	1,309,453
May	50,777	92,512	1,574,099	49,941	83,547	1,548,183
June	54,520	62,213	1,635,589	49,656	56,242	1,489,688
July	61,657	69,530	1,911,364	56,697	62,822	1,757,597
August	63,837	67,781	1,978,934	59,877	62,919	1,856,179
September	60,602	65,941	1,818,058	57,806	62,632	1,734,182
October	54,137	68,550	1,678,261	48,435	61,602	1,501,472
November	52,177	58,655	1,565,315	46,453	51,020	1,393,585
December	54,575	70,583	1,691,829	46,869	59,505	1,452,929
Annual Total			19,713,644			18,019,759
Maximum		92,512			83,547	
Average	53,968			49,330		
% Capacity		69			78	
Permit to Take Water Limit*		134,000				
Municipal Drinking Water Licence Limit					107,000	

* Oshawa Plant 1 has a capacity of 27,000 m3/day. Plant 2 has a capacity of 107,000 m3/day. Only Plant 2 was operational during the reporting period.

The Regional Municipality of Durham
 Oshawa Drinking Water System
 2022 Flow Summary Report

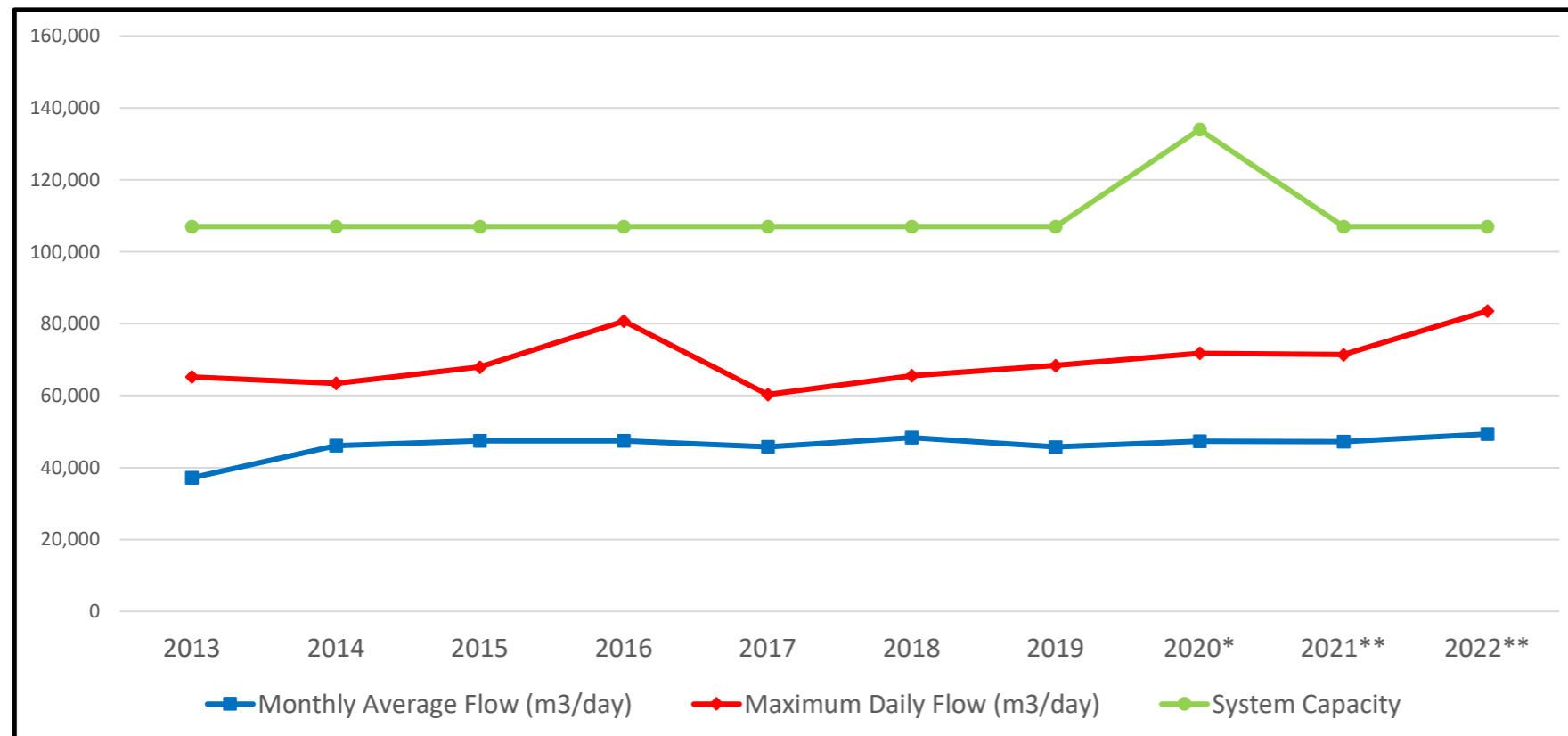
Table 1: Ten year annual system capacity and treated water flow data.

Year	Monthly Average Flow (m ³ /day)	Maximum Daily Flow (m ³ /day)	System Capacity (m ³ /day)
2013	37,155	65,193	107,000
2014	46,124	63,427	107,000
2015	47,429	67,944	107,000
2016	47,443	80,756	107,000
2017	45,763	60,306	107,000
2018	48,334	65,556	107,000
2019	45,707	68,374	107,000
2020*	47,311	71,764	134,000
2021**	47,229	71,381	107,000
2022**	49,330	83,547	107,000

*Oshawa Plant 1 has a capacity of 27,000 m³/day. Plant 2 has a capacity of 107,000 m³/day. Plant 1 was out of service from 2010 to 2020 for upgrades. When it came online November 3rd, 2020 the system capacity increased from 107,000 m³/day to 134,000 m³/day.

** Oshawa Plant 1 was taken out of service on June 3, 2021.

Figure 1: Ten year annual system capacity and treated water flow data.



The Regional Municipality of Durham
Port Perry Drinking Water System
2022 Flow Summary Report

Month	Well # 3 Maximum Taken per Minute (litres)	Well # 3 Monthly Average Flow cubic metres per day (m ³ /day) Pro-rated	Well # 3 Maximum Daily Flow (m ³ /day) Pro-rated	Well # 3 Total Water Flow (m ³)	Well # 5 Maximum Taken per Minute (litres)	Well # 5 Monthly Average Flow (m ³ /day) Pro-rated	Well # 5 Maximum Daily Flow (m ³ /day) Pro-rated	Well # 5 Total Water Flow (m ³)
January	1,700	257	325	7,975	1,650	238	296	7,401
February	1,700	237	312	6,583	1,750	239	318	6,636
March	1,700	204	311	6,387	1,700	204	298	6,405
April	1,700	161	267	4,822	1,700	160	264	4,802
May	1,700	203	308	6,260	1,700	201	302	6,201
June	1,700	226	377	6,745	1,700	222	371	6,622
July	1,700	238	352	7,367	1,700	224	313	6,912
August	1,700	214	379	6,650	1,700	203	370	6,313
September	1,700	207	351	6,165	1,700	198	368	5,895
October	1,700	168	313	5,205	1,700	302	158	4,912
November	1,700	239	584	7,167	1,700	223	539	6,667
December	1,700	207	268	6,443	1,700	190	253	5,908
Annual Total				77,769				74,674
Maximum	1,700		584		1,750		539	
Average		213				217		
% Capacity	94		22		96		21	
Permit to take water limit	1,817		2,617		1,817		2,617	
Municipal Drinking Water License Limit			2,618				2,618	

The Regional Municipality of Durham
Port Perry Drinking Water System
2022 Flow Summary Report

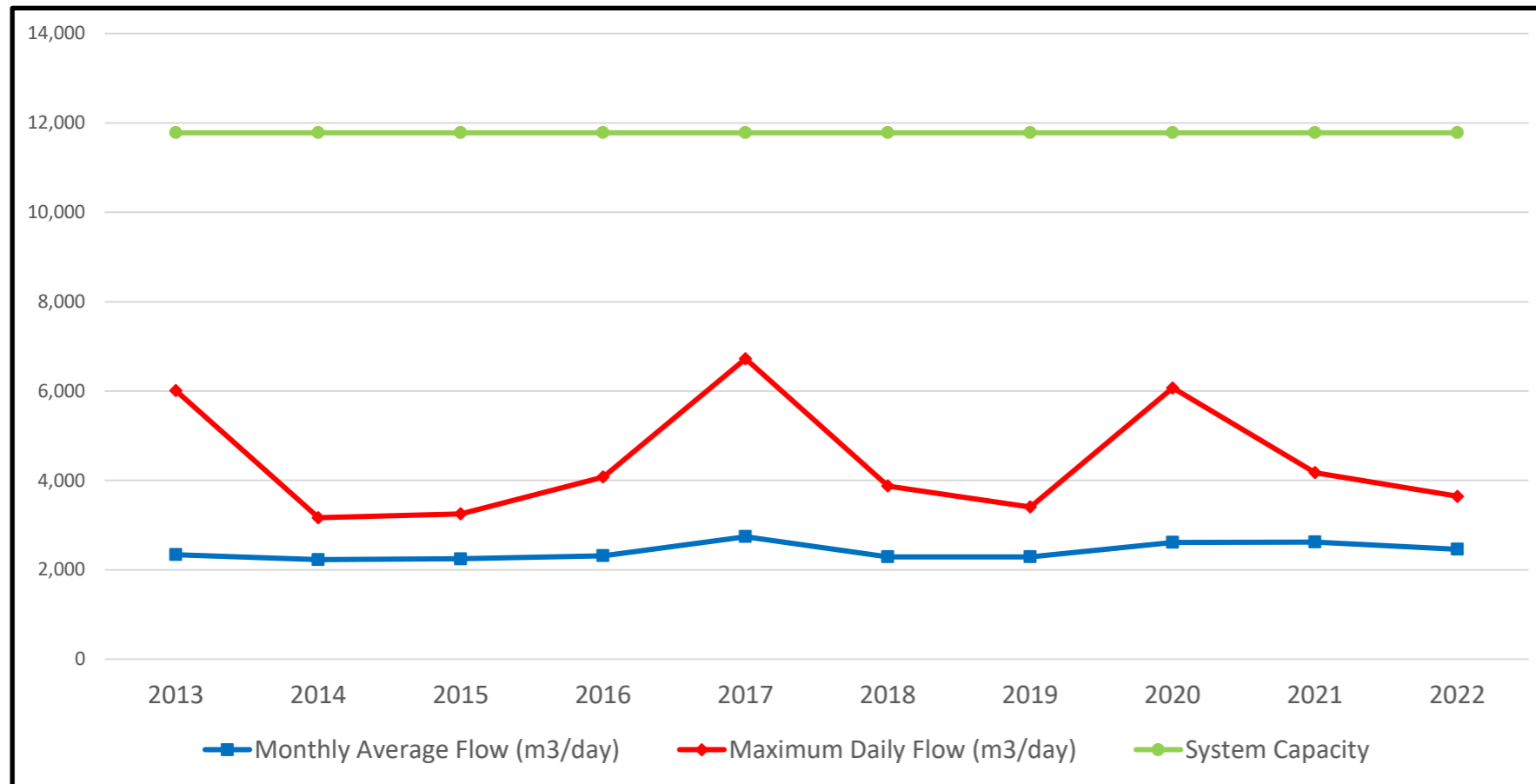
Month	Well # 6 Maximum Taken per Minute (litres)	Well # 6 Monthly Average Flow cubic metres per day (m ³ /day) Pro-rated	Well # 6 Maximum Daily Flow (m ³ /day) Pro-rated	Well # 6 Total Water Flow (m ³)	Treated Water Monthly Average Flow (m ³ /day) Pro-rated	Treated Water Maximum Daily Flow (m ³ /day) Pro-rated	Total Treated Water Flow (m ³)
January	4,300	1,868	2,202	58,135	2,363	2,711	73,256
February	4,300	1,817	2,030	50,981	2,293	2,457	64,200
March	4,300	1,871	2,150	58,155	2,279	2,559	70,947
April	4,300	1,937	2,380	58,085	2,257	2,583	67,708
May	4,300	2,177	2,560	67,628	2,580	2,959	80,090
June	4,300	2,358	3,284	71,608	2,806	3,631	84,975
July	4,300	2,581	3,150	80,032	3,043	3,621	94,311
August	4,300	2,472	3,250	77,027	2,888	3,644	89,990
September	4,300	2,083	2,779	62,755	2,488	2,996	74,815
October	4,300	1,918	2,390	59,388	2,244	2,762	69,505
November	4,300	1,662	2,314	49,998	2,124	2,432	63,832
December	4,300	1,776	2,055	55,378	2,173	2,391	67,729
Annual Total				749,170			901,358
Maximum	4,300		3,284			3,644	
Average		2,043			2,462		
% Capacity	95		50			31	
Permit to take water limit	4,543		6,542				
Municipal Drinking Water License Limit			6,545			11,781	

**The Regional Municipality of Durham
Port Perry Drinking Water System
2022 Flow Summary Report**

Table 1: Ten year annual system capacity and treated water flow data.

Year	Monthly Average Flow (m ³ /day)	Maximum Daily Flow (m ³ /day)	System Capacity (m ³ /day)
2013	2,341	6,006	11,781
2014	2,228	3,167	11,781
2015	2,245	3,251	11,781
2016	2,317	4,075	11,781
2017	2,740	6,724	11,781
2018	2,289	3,873	11,781
2019	2,292	3,403	11,781
2020	2,613	6,070	11,781
2021	2,621	4,173	11,781
2022	2,462	3,644	11,781

Figure 1: Ten year annual system capacity and treated water flow data.



The Regional Municipality of Durham
 Sunderland Drinking Water System
 2022 Flow Summary Report

Month	Well # 1 Raw Water Maximum Taken per Minute (litres)	Well # 1 Raw Water Monthly Average Flow Cubic metres per day (m ³ /day) Pro-rated	Well # 1 Raw Water Maximum Daily Flow (m ³ /day) Pro-rated	Well # 1 Total Raw Water Flow (m ³)	Well #1 Treated Water Monthly Average Flow (m ³ /day) Pro-rated	Well #1 Treated Water Maximum Daily Flow (m ³ /day) Pro-rated	Well # 1 Total Treated Water Flow (m ³)
January	450	300	433	9,302	300	433	9,302
February	450	363	387	10,195	363	387	10,195
March	450	331	406	10,268	331	406	10,268
April	450	323	368	9,696	323	368	9,696
May	456	369	469	11,466	369	469	11,466
June	450	388	518	11,585	388	518	11,585
July	450	376	490	11,658	376	490	11,658
August	450	422	631	13,078	422	631	13,078
September	450	415	580	12,547	415	580	12,547
October	450	363	600	11,173	363	600	11,173
November	450	335	364	10,080	335	364	10,080
December	450	359	440	11,121	359	440	11,121
Annual Total				132,169			132,169
Maximum	456		631			631	
Average		362			422		
% Capacity	45		46			46	
Permit to Take Water Limit	1,023		1,373				
Municipal Drinking Water Licence Limit						1,374	

*Treated water volumes calculated by subtracting waste from raw water volumes.

The Regional Municipality of Durham
 Sunderland Drinking Water System
 2022 Flow Summary Report

Month	Well # 2 Raw Water Maximum Taken per Minute (litres)	Well # 2 Raw Water Monthly Average Flow Cubic metres per day (m ³ /day) Pro-rated	Well # 2 Raw Water Maximum Daily Flow (m ³ /day) Pro-rated	Well # 2 Total Raw Water Flow (m ³)	Well # 2 Treated Water Monthly Average Flow (m ³ /day) Pro-rated	Well # 2 Treated Water Maximum Daily Flow (m ³ /day) Pro-rated	Well # 2 Total Treated Water Flow (m ³)
January	660	7	15	28	0	0	0
February	660	3	5	14	0	0	0
March	708	3	6	17	0	0	0
April	732	5	6	19	0	0	0
May	708	3	4	15	0	0	0
June	708	31	54	192	0	0	0
July	708	23	37	247	0	0	0
August	708	12	34	85	0	0	0
September	708	22	64	116	0	0	0
October	768	14	33	78	0	0	0
November	720	5	7	26	0	0	0
December	720	3	5	13	0	0	0
Annual Total				850			
Maximum			64				
Average		11					
% Capacity			5				
Permit to Take Water Limit	1,023		1,373				
Municipal Drinking Water Licence Limit						1,374	

*Well 2 was offline in 2022.

The Regional Municipality of Durham
 Sunderland Drinking Water System
 2022 Flow Summary Report

Month	Well # 3 Raw Water Maximum Taken per Minute (litres)	Well # 3 Raw Water Monthly Average Flow Cubic metres per day (m ³ /day) Pro-rated	Well # 3 Raw Water Maximum Daily Flow (m ³ /day) Pro-rated	Well # 3 Total Raw Water Flow (m ³)	Well # 3 Treated Water Monthly Average Flow (m ³ /day) Pro-rated	Well # 3 Treated Water Maximum Daily Flow (m ³ /day) Pro-rated	Well # 3 Total Treated Water Flow (m ³)
January	444	126	189	1,515	164	189	1,475
February	600	83	172	506	0	0	0
March	600	86	131	695	0	0	0
April	600	40	84	453	0	0	0
May	600	25	38	237	0	0	0
June	588	27	44	300	0	0	0
July	588	32	49	300	0	0	0
August	588	13	40	98	0	0	0
September	594	17	36	121	0	0	0
October	600	17	37	110	0	0	0
November	600	4	5	23	0	0	0
December	600	87	162	359	0	0	0
Annual Total				4,717			1,475
Maximum	600		189			189	
Average		46			14		
% Capacity	100		22			22	
Permit to Take Water Limit	600		864				
Municipal Drinking Water Licence Limit						864	

*Treated water volumes calculated by subtracting waste from raw water volumes.

The Regional Municipality of Durham
 Sunderland Drinking Water System
 2022 Flow Summary Report

Month	Raw Water Monthly Average Flow Cubic metres per day (m ³ /day) Pro-rated	Raw Water Maximum Daily Flow (m ³ /day) Pro-rated	Total Raw Water Flow (m ³)	Treated Water Monthly Average Flow (m ³ /day) Pro-rated	Treated Water Maximum Daily Flow (m ³ /day) Pro-rated	Total Treated Water Flow (m ³) Pro-rated
January	349	433	10,833	347	433	10,770
February	382	512	10,715	363	387	10,175
March	353	501	10,980	331	406	10,250
April	338	428	10,168	323	368	9,679
May	376	480	11,718	369	469	11,426
June	404	526	12,077	388	518	11,640
July	392	516	12,205	376	490	11,647
August	428	631	13,261	422	631	13,081
September	423	612	12,784	415	580	12,462
October	368	600	11,361	363	600	11,250
November	337	366	10,129	335	364	10,059
December	371	495	11,493	359	440	11,142
Annual Total			137,723			133,581
Maximum		631			631	
Average	377			366		
% Capacity		23			28	
Permit to Take Water Limit		2,745				
Municipal Drinking Water Licence Limit					2,238	

*Treated water volumes calculated by subtracting waste from raw water volumes.

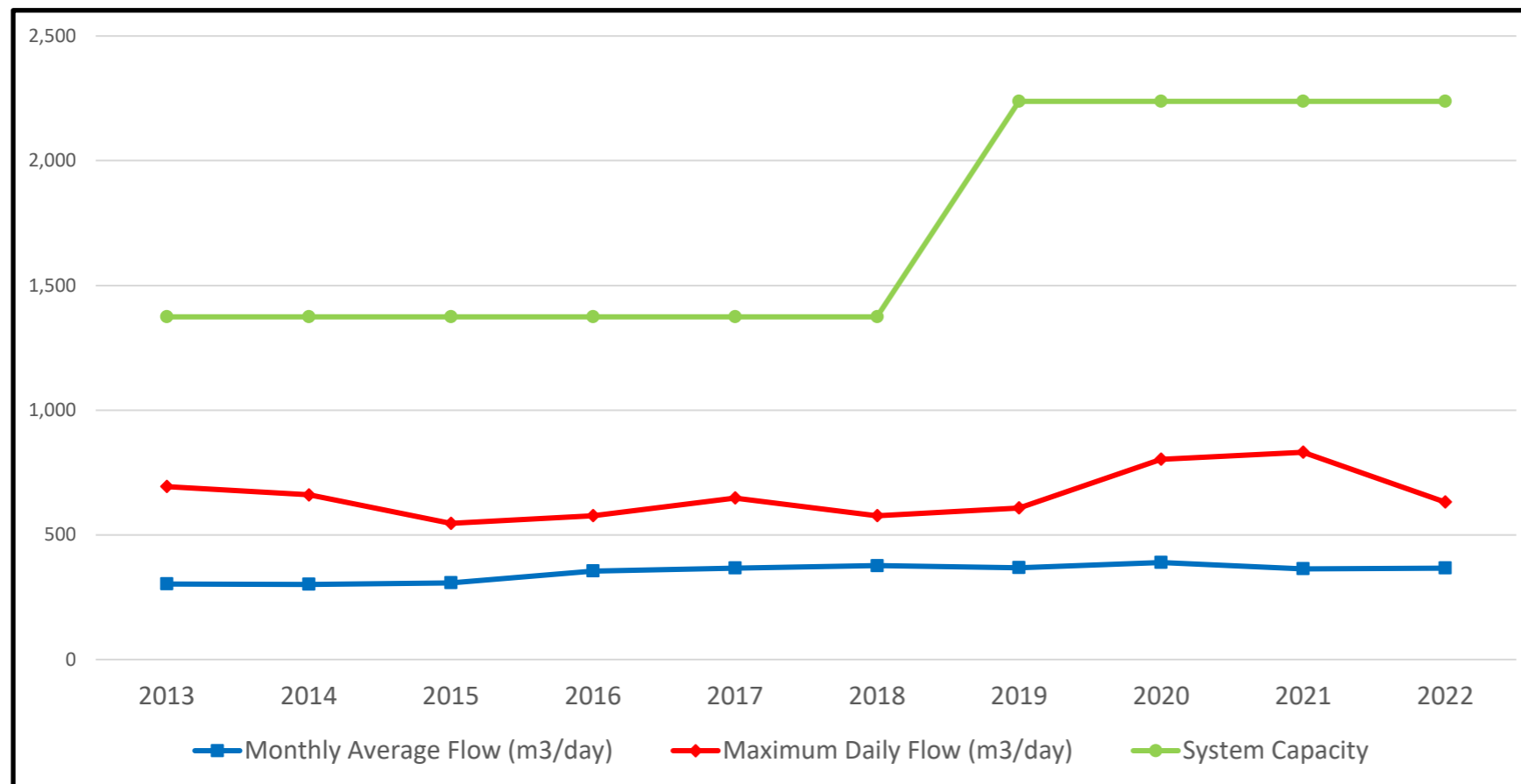
The Regional Municipality of Durham
 Sunderland Drinking Water System
 2022 Flow Summary Report

Table 1: Ten year annual system capacity and treated water flow data.

Year	Monthly Average Flow (m ³ /day)	Maximum Daily Flow (m ³ /day)	System Capacity (m ³ /day)*
2013	303	693	1,374
2014	301	660	1,374
2015	307	546	1,374
2016	355	576	1,374
2017	367	647	1,374
2018	376	576	1,374
2019	368	608	2,238
2020	389	803	2,238
2021	364	831	2,238
2022	366	631	2,238

*Sunderland DWS cannot achieve its rated capacity due to hydraulic restrictions within the treatment process.

Figure 1: Ten year annual system capacity and treated water flow data.



The Regional Municipality of Durham
 Uxbridge Drinking Water System
 2022 Flow Summary Report

Month	Well # 5 Raw Water Maximum Taken per Minute (litres)	Well # 5 Raw Water Monthly Average Flow Cubic metres per day (m ³ /day) Pro-rated	Well # 5 Raw Water Maximum Daily Flow (m ³ /day) Pro-rated	Well # 5 Total Raw Water Flow (m ³)	Well # 5 Treated Water Monthly Average Flow (m ³ /day) Pro-rated	Well # 5 Treated Water Maximum Daily Flow (m ³ /day) Pro-rated	Well # 5 Total Treated Water Flow (m ³)**
January	2,700	1,020	1,179	20,369	1,018	1,179	20,341
February	2,700	1,007	1,235	15,120	1,004	1,235	15,090
March	2,700	1,014	1,270	18,295	1,013	1,270	18,265
April	2,700	1,029	1,256	15,471	1,027	1,256	15,441
May	2,700	1,324	2,703	31,601	1,323	2,703	31,571
June	2,700	1,519	2,113	36,472	1,518	2,113	36,442
July	2,700	1,655	2,230	46,235	1,580	2,230	43,731
August	2,700	1,531	2,243	42,803	1,470	2,243	41,142
September	2,700	1,405	1,900	32,373	1,404	1,900	32,358
October	2,700	1,058	1,310	18,886	1,057	1,310	18,856
November	2,700	1,029	2,007	18,799	1,027	2,007	18,774
December	2,700	1,008	1,318	18,125	1,006	1,318	18,095
Annual Total				314,549			
Maximum	2,700		2,703			2,703	
Average		1,217			1,204		
% Capacity	90		63			33	
Permit to take water limit	3,000		4,320				
Municipal Drinking Water License Limit						8,251*	

*Limit is combined for Wells 5 and 7.

**Treated water volumes calculated by subtracting waste from raw water volumes.

The Regional Municipality of Durham
 Uxbridge Drinking Water System
 2022 Flow Summary Report

Month	Well # 7 Raw Water Maximum Taken per Minute (litres)	Well # 7 Raw Water Monthly Average Flow Cubic metres per day (m ³ /day) Pro-rated	Well # 7 Raw Water Maximum Daily Flow (m ³ /day) Pro-rated	Well # 7 Total Raw Water Flow (m ³)	Well # 7 Treated Water Monthly Average Flow (m ³ /day) Pro-rated	Well # 7 Treated Water Maximum Daily Flow (m ³ /day) Pro-rated	Well # 7 Total Treated Water Flow (m ³)**
January	1,500	726	906	10,913	724	906	10,883
February	1,500	760	976	12,886	758	976	12,856
March	1,600	725	900	13,071	722	900	13,026
April	1,600	784	940	14,999	782	940	14,969
May	1,600	814	1,420	11,632	811	1420	11,587
June	1,600	827	1,306	9,890	822	1306	9,840
July	1,600	837	1,500	8,463	833	1500	8,423
August	1,600	751	1,673	9,828	748	1673	9,783
September	1,600	739	1,340	9,066	736	1340	9,036
October	1,600	791	1,029	13,421	789	1029	13,391
November	1,600	715	969	11,449	713	969	11,419
December	1,600	783	982	14,176	781	982	14,146
Annual Total				139,794			
Maximum	1,600		1,673			1,673	
Average		771			768		
% Capacity	53		39			20	
Permit to Take Water Limit	3,000		4,320				
Municipal Drinking Water Licence Limit						8,251*	

*Limit is combined for Wells 5 and 7.

**Treated water volumes calculated by subtracting waste from raw water volumes.

The Regional Municipality of Durham
 Uxbridge Drinking Water System
 2022 Flow Summary Report

Month	Well # 5 and 7 Treated Water Monthly Average Flow Cubic metres per day (m ³ /day) Pro-rated	Well # 5 and 7 Treated Water Maximum Daily Flow (m ³ /day) Pro-rated	Well # 5 and 7 Total Treated Water Flow (m ³) Pro-rated**	Well # 6 Raw/Treated Water Maximum Taken per Minute (litres)	Well # 6 Raw/Treated Water Monthly Average Flow (m ³ /day) Pro-rated	Well # 6 Raw/Treated Water Maximum Daily Flow (m ³ /day) Pro-rated	Well # 6 Total Raw/Treated Water Flow (m ³)
January	1,007	1,179	31,220	2,520	1,335	1,547	41,398
February	998	1,235	27,955	2,520	1,369	1,604	38,406
March	1,007	1,270	31,228	2,520	1,346	1,619	41,828
April	1,009	1,256	30,259	2,520	1,403	1,631	42,320
May	1,390	2,703	43,102	2,520	1,526	2,317	47,595
June	1,543	2,113	46,304	2,520	1,782	2,175	53,459
July	1,695	2,256	52,559	2,520	1,921	2,463	59,615
August	1,642	2,243	50,887	2,520	1,890	2,482	58,571
September	1,371	1,900	41,134	2,520	1,604	2,299	48,525
October	1,046	1,310	32,424	2,520	1,385	1,687	42,745
November	996	2,007	29,890	2,520	1,356	1,703	40,885
December	1,037	1,318	32,160	2,520	1,362	1,934	42,233
Annual Total							
Maximum		2,703		2,520		2,482	
Average	1,229						
% Capacity		33		92		63	
Permit to Take Water Limit		4,320		2,730		3,931	
Municipal Drinking Water Licence Limit		8,251*				3,931	

*Limit is combined for Wells 5 and 7.

**Treated water volumes for Wells 5 and 7 calculated by subtracting waste from raw water volumes.

The Regional Municipality of Durham
 Uxbridge Drinking Water System
 2022 Flow Summary Report

Month	Raw Water Monthly Average Flow Cubic metres per day (m ³ /day) Pro-rated	Raw Water Maximum Daily Flow (m ³ /day) Pro-rated	Total Raw Water Flow (m ³)	Treated Water Monthly Average Flow (m ³ /day) Pro-rated	Treated Water Maximum Daily Flow (m ³ /day) Pro-rated	Total Treated Water Flow (m ³)
January	2,344	2,446	72,680	2,342	2,446	72,622
February	2,370	2,523	66,412	2,367	2,523	66,352
March	2,354	2,555	73,119	2,356	2,555	73,194
April	2,414	2,572	72,790	2,412	2,572	72,730
May	2,919	3,738	90,828	2,917	3,738	90,753
June	3,328	4,274	99,821	3,326	4,274	99,741
July	3,686	4,418	114,313	3,617	4,418	111,769
August	3,588	4,374	111,202	3,532	4,374	109,496
September	2,977	3,779	89,964	2,975	3,779	89,919
October	2,433	2,716	75,052	2,431	2,716	74,992
November	2,355	2,917	71,133	2,353	2,917	71,078
December	2,398	2,703	74,534	2,396	2,703	74,474
Annual Total			1,011,848			
Maximum		4,418			4,418	
Average	2,764			2,752		
% Capacity		54				
Permit to Take Water Limit		8,251*				
Municipal Drinking Water Licence Limit					8,251**/3,931***	

*Permit to Take Water allows two wells to operate simultaneously however, the daily total taking of water for any combination is limited to a maximum of 8,251 m³/day.

**8,251 m³/day is the rated capacity for Wells 5 and 7.

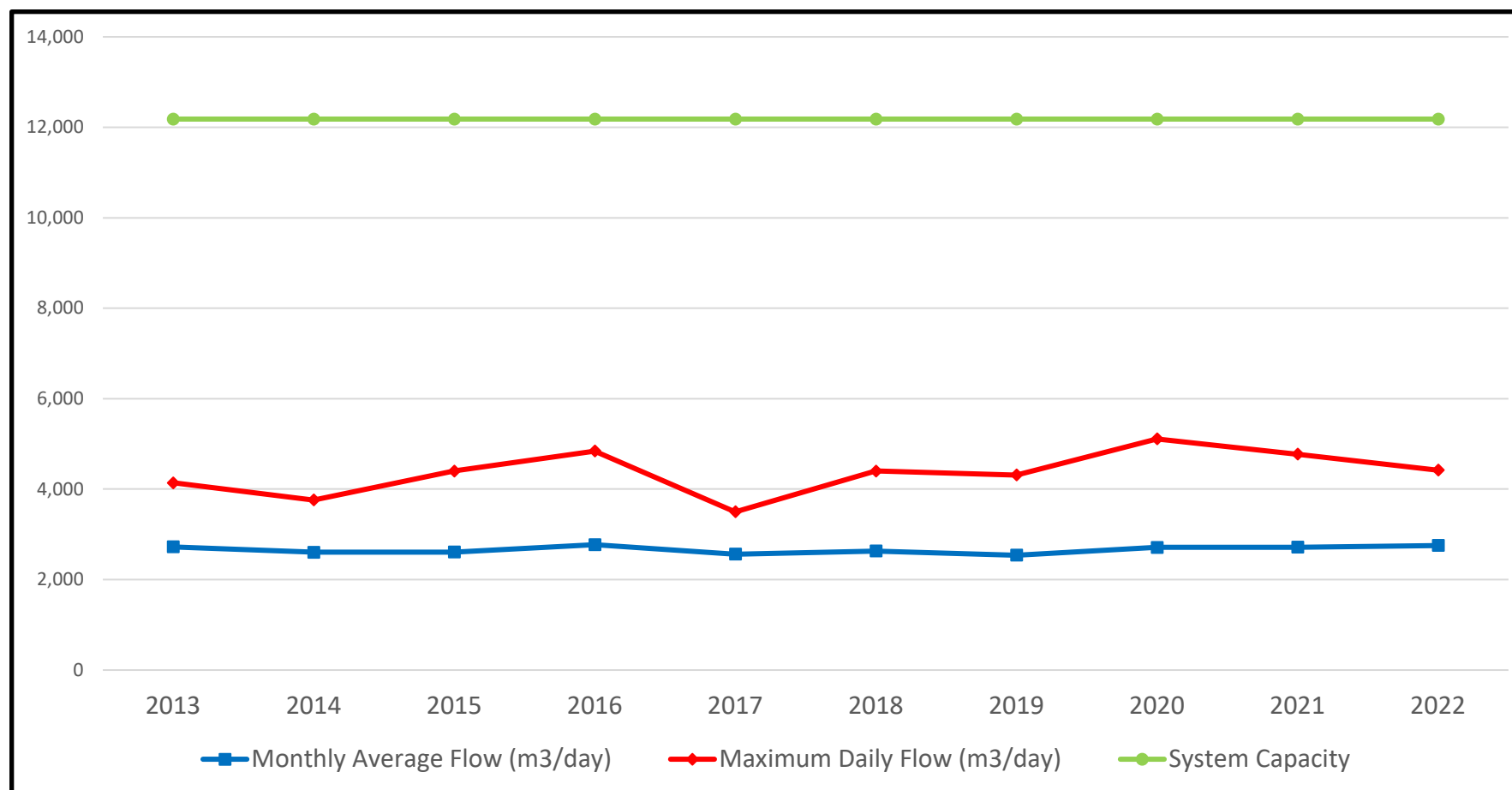
***3,931 m³/day is the rated capacity for Well 6.

**The Regional Municipality of Durham
Uxbridge Drinking Water System
2022 Flow Summary Report**

Table 1: Ten year annual system capacity and treated water flow data.

Year	Monthly Average Flow (m ³ /day)	Maximum Daily Flow (m ³ /day)	System Capacity (m ³ /day)
2013	2,721	4,139	12182
2014	2,605	3,760	12182
2015	2,609	4,401	12182
2016	2,772	4,839	12182
2017	2,564	3,497	12182
2018	2,630	4,401	12182
2019	2,538	4,310	12182
2020	2,711	5,109	12182
2021	2,715	4,771	12182
2022	2,752	4,418	12182

Figure 1: Ten year annual system capacity and treated water flow data.



The Regional Municipality of Durham
Whitby Drinking Water System
2022 Flow Summary Report

Month	Raw Process Water Monthly Average Flow Cubic metres per day (m3/day)	Raw Process Water Maximum Daily Flow (m3/day)	Total Raw Process Water Flow (m3)	Raw Industrial Water Monthly Average Flow (m3/day)	Raw Industrial Water Maximum Daily Flow (m3/day)	Total Raw Industrial Water Flow (m3)
January	52,002	54,023	1,612,067	8,577	10,333	265,880
February	52,037	53,678	1,457,046	9,183	10,190	257,114
March	51,534	52,894	1,597,541	5,205	7,019	161,363
April	51,924	54,559	1,557,728	4,365	5,410	130,955
May	54,482	77,269	1,688,950	5,002	9,013	155,076
June	61,162	78,056	1,834,853	6,932	10,211	207,972
July	70,512	82,931	2,185,866	6,755	10,755	209,420
August	66,658	78,914	2,066,387	8,084	10,915	250,617
September	54,882	66,805	1,646,447	6,978	12,477	209,328
October	53,226	60,624	1,650,019	3,622	7,178	112,279
November	53,296	55,240	1,598,876	5,476	10,954	164,289
December	54,090	58,693	1,676,775	4,435	5,790	137,485
Annual Total			20,572,555			2,261,778
Maximum		82,931			12,477	
Average	56,317			6,218		

The Regional Municipality of Durham
Whitby Drinking Water System
2022 Flow Summary Report

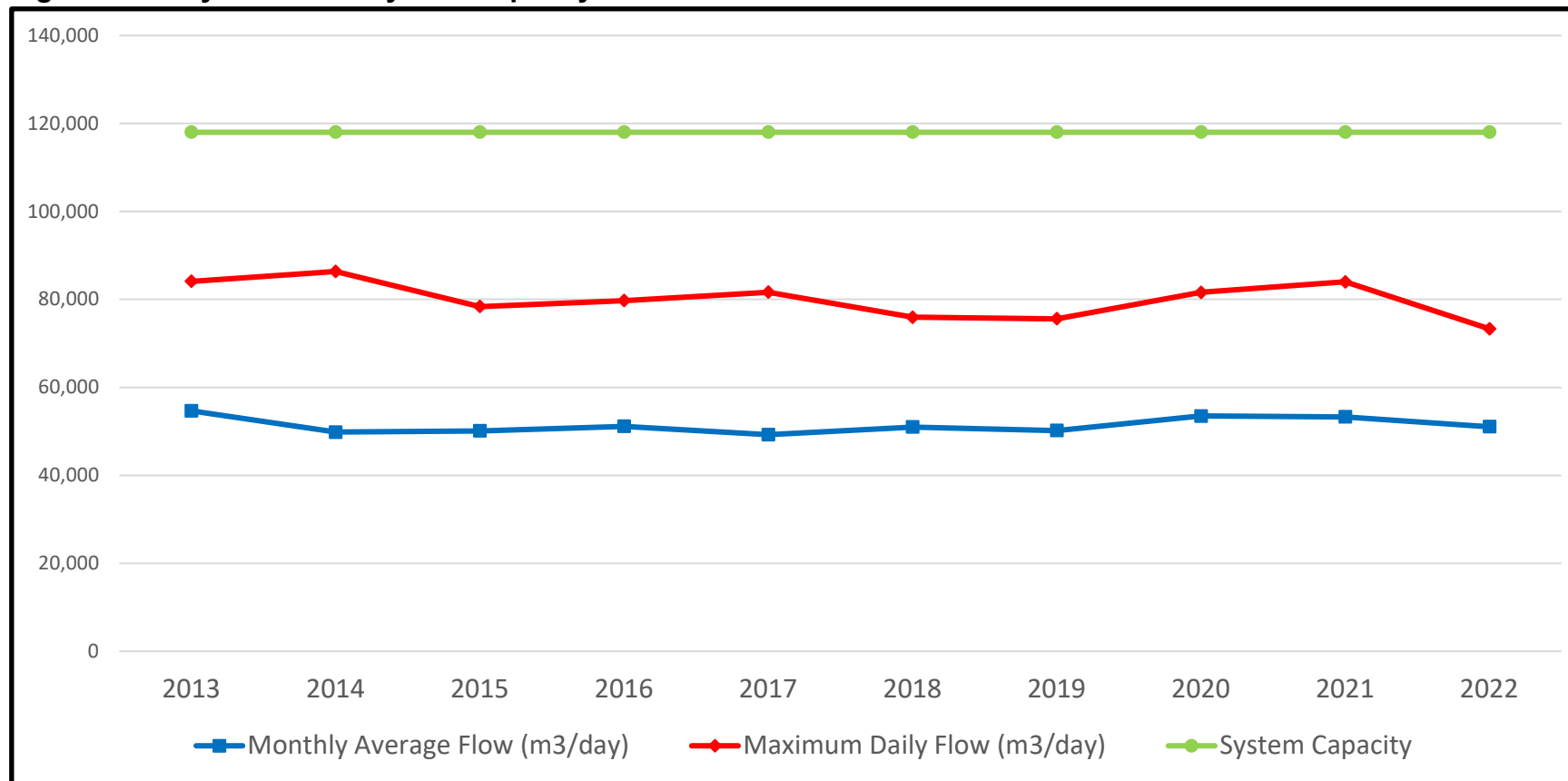
Month	Raw Water Monthly Average Flow Cubic metres per day (m3/day)	Raw Water Maximum Daily Flow (m3/day)	Total Raw Water Flow (m3)	Treated Water Monthly Average Flow (m3/day)	Treated Water Maximum Daily Flow (m3/day)	Total Treated Water Flow (m3)
January	60,939	63,587	1,889,122	51,617	53,256	1,600,131
February	61,589	63,383	1,724,506	48,059	51,959	1,345,649
March	57,149	59,489	1,771,605	46,051	47,185	1,427,572
April	56,598	59,891	1,697,954	46,160	49,087	1,384,804
May	59,801	86,208	1,853,842	48,394	70,454	1,500,205
June	68,463	86,510	2,053,880	54,215	70,662	1,626,445
July	77,670	93,097	2,407,756	61,747	73,316	1,914,171
August	75,160	89,759	2,329,969	58,661	70,186	1,818,485
September	62,233	76,448	1,866,997	48,517	59,567	1,455,517
October	57,143	61,094	1,771,435	47,197	54,872	1,463,109
November	59,109	64,444	1,773,281	49,933	52,344	1,497,980
December	58,826	63,838	1,823,600	52,312	56,289	1,621,662
Annual Total			22,963,946			18,655,731
Maximum		93,097			73,316	
Average	62,890			51,072		
% Capacity		65			62	
Permit to Take Water Limit		144,000				
Municipal Drinking Water Licence Limit					118,000	

**The Regional Municipality of Durham
Whitby Drinking Water System
2022 Flow Summary Report**

Table 1: Ten year annual system capacity and treated water flow data.

Year	Monthly Average Flow (m ³ /day)	Maximum Daily Flow (m ³ /day)	System Capacity (m ³ /day)
2013	54,657	84,127	118,000
2014	49,822	86,351	118,000
2015	50,101	78,362	118,000
2016	51,136	79,744	118,000
2017	49,246	81,622	118,000
2018	50,954	75,943	118,000
2019	50,169	75,591	118,000
2020	53,472	81,583	118,000
2021	53,268	83,975	118,000
2022	51,072	73,316	118,000

Figure 1: Ten year annual system capacity and treated water flow data.



If this information is required in an accessible format, please contact 1-800-372-1102 ext. 3540.



The Regional Municipality of Durham Report

To: Works Committee
From: Commissioner of Works
Report: #2023-W-11
Date: March 8, 2023

Subject:

Appointment of Staff as Well Contractor Licence Representatives and Delegation of Authority to the Commissioner of Works for Future Appointments

Recommendations:

That the Works Committee recommends to Regional Council:

- A) That Regional Council appoint Beata Golas as the Regional Municipality of Durham representative in matters related to and requiring a Well Contractor Licence as prescribed by the Ontario Water Resources Act;
 - B) That Regional Council delegate authority to the Commissioner of Works to make future appointments and authorize staff to represent the Regional Municipality of Durham in matters related to and requiring a Well Contractor Licence as prescribed by the Ontario Water Resources Act (or other such provincial legislation as may apply from time to time to provide for the management of wells) as necessary in the future; and
 - C) That a By-law to amend the Delegation By-law (By-law #04-2023), generally in the form included as Attachment #1 to this Report, to reflect the addition of the delegation of authority as provided in Recommendation B), be approved.
-

Report:

1. Purpose

- 1.1 This report requests Regional Municipality of Durham (Region) Council authorize Beata Golas as the Regional Municipality of Durham representative in matters

related to and requiring a Well Contractor Licence as prescribed by the Ontario Water Resources Act (the Act) and the Wells Regulation, R.R.O. Regulation 903 (the Regulation). Beata Golas is a Professional Geoscientist and holds the position as Hydrogeologist within the Works Department.

- 1.2 This report also requests that, moving forward, authority to appoint and authorized a Regional staff representative to comply with the Act and the Regulation (or other such provincial legislation as may apply from time to time to provide for the management of wells) be delegated to the Commissioner of Works.

2. Background

- 2.1 The Region owns, operates, and maintains eight municipal well based water supply systems. In addition to those systems, the Region, operates and maintains the privately owned Sun Valley well based water supply system.
- 2.2 The elements contained in the Regulation are aimed at the protection of the resource, the well owner, the industry, and the well water and assist in ensuring that groundwater quality, well water quality and the environment are protected.
- 2.3 While Regional employees do not construct wells, staff perform monitoring, testing and all manner of tasks that fall under the Regulation require a certified or licensed individual to comply with the Regulation. This legislative item requires the corporation to maintain a valid Well Contractor Licence with certified or licensed employees.

3. Well Contract Licences and Obligations

- 3.1 As a Well Contractor Licence holder the Region is responsible to:
 - Ensure at least one director, officer or partner is designated as the official representative of the licensee. The official representative must be assigned the responsibility of ensuring that the organization remains compliant with the requirements of the Act.
 - Ensure that the well technicians, other employees, and agents comply with the requirements of the Regulation, the Act and any other applicable provincial legislation relevant to constructing a well.
 - Maintain insurance in accordance with the requirements of the Regulation.

3.2 The Regulation sets out the classes of Well Technician licences and the requirements and qualifications necessary for each of these classes. Based on the Region's requirements, a Class 5 Well Licence is required by the individual applying for the Well Contractor Licence. This level of licence permits the holder to undertake monitoring, sampling, testing and non-powered construction and complete the following activities as required:

- Install and supervise the installation of monitoring, sampling, or testing equipment in a well, other than equipment used to test the yield of the well or the aquifer;
- Install and supervise the installation of pumps in a test hole or dewatering well for monitoring, sampling, or testing purposes; and,
- Construct and supervise the construction of test holes and dewatering wells by any method that does not use powered equipment.

3.3 To obtain a Class 5 Well Technician Licence, the individual must have certain qualifications and experience, as listed in Attachment #2. Select Regional staff possess and/or maintain the above qualifications as a component of their job function.

3.4 Existing licences must be renewed by March 31 of each year and requires confirmation of authority from the corporation for the individual to apply on behalf of the licensee.

4. Conclusion

4.1 In order to operate and maintain the existing wells throughout the well based municipal water systems, the Region requires a Well Contractor Licence and certified staff in accordance with the Ontario Water Resources Act. Re-certification of employees of a corporation requires a letter confirming the employee is designated as the licensee's official representative.

4.2 It is recommended that Regional Council amend Schedule "A" of By-law #04-2023 to delegate authority to the Commissioner of Works to identify and authorize staff to represent the Region and act on its behalf to comply with the Ontario Water Resources Act or successor legislation.

4.3 This report has been reviewed by Legal Services – Office of the CAO and Legislative Services – Corporate Services Department.

4.4 For additional information, please contact Aaron Christie, Manager of Engineering Planning and Studies, at 905-668-7711 extension 3608.

5. Attachments

Attachment #1: Draft By-law to Amend By-law #04-2023

Attachment #2: Class 5 Well Technician Contractor Licence Requirements

Respectfully submitted,

Original signed by:

John Presta, P.Eng., MPA
Commissioner of Works

Recommended for Presentation to Committee

Original signed by:

Elaine C. Baxter-Trahair
Chief Administrative Officer

By-law Number *-2023**

of The Regional Municipality of Durham

Being a by-law to amend By-law #04-2023 to provide the Commissioner of Works with the authority to designate an official representative for the purposes of the *Ontario Water Resources Act*, R.S.O. 1990, c. O.40.

Whereas the *Ontario Water Resources Act*, R.S.O. 1990, c. O.40 (the “Act”) requires a person to hold a well contractor licence to bore, dig, drill or otherwise make, extend or alter a well including by the installation of equipment connected to a well;

And whereas the Region requires a well contractor licence to undertake well monitoring and other activities related to the water supply system;

And whereas the Wells Regulation, R.R.O. Reg. 903, made under the Act prescribes that the licensee must designate an official representative to apply for, renew and maintain a well contractor licence;

And whereas subsection 23.1 (1) of the *Municipal Act, 2001*, S.O. 2001, c. 25, provides for a municipality to delegate its powers and duties under that or any Act to a person or body subject to certain restrictions;

Now therefore, the Council of The Regional Municipality of Durham hereby enacts as follows:

1. That the table in Schedule “A” to By-law #04-2023 be amended by adding thereto the following:

#	Delegation of Authority	Delegate	Delegation Process	Document	Reporting Existing/Proposed
3.38	The authority to authorize one or more qualified individuals as an official representative under the <i>Ontario Water Resources Act</i> , or other such statute as may be enacted from time to time to provide for the management of wells, and any regulations made under such a statute in respect of a well contractor licence issued to the Region.	Commissioner of Works	That the qualified individual is a member of staff who has successfully completed an examination and other requirements set by the Ministry of Environment, Conservation and Parks or other such ministry as may be assigned the administration of provincial legislation in respect of wells.	Regional Infrastructure	

This By-law Read and Passed on the ---- day of ----, 2023.

J. Henry, Regional Chair and CEO

A. Harras, Regional Clerk

Class 5 Well Technician Contractor Licence Requirements

- Applicant must be eighteen years of age or older
- Applicant must be a member of the Association of Professional Engineers of Ontario as a professional engineer (PEng) or as an engineer-in-training (EIT); or
- A member of the Association of Professional Geoscientists of Ontario (APGO) or as a geoscientist-in-training (GIT); or
- A member of the Ontario Association of Certified Engineering Technicians and Technologists (CET/C.Tech) or as a technician or technologist-in-training (CTIT).
- Have successfully completed a course of study of at least 15 hours that is approved by the Director for the class of well technician license being applied for and have 500 hours of work experience helping at or doing the activity that would be authorized by the license applied for, or a combination of work experience and other qualifications that the Director considers equivalent; and
- Pass a Ministry examination with a minimum grade of 75 per cent (the examination includes relevant sections of the Wells Regulation and the Ontario Water Resources Act).

If this information is required in an accessible format, please contact 1-800-372-1102 ext. 3540.



The Regional Municipality of Durham Report

To: Works Committee
From: Commissioner of Works
Report: #2023-W-12
Date: March 8, 2023

Subject:

Approval of Capital Works and Financing to be Incorporated into a Servicing Agreement with Winash Developments Limited, Including Cost Sharing in Accordance with the Region Share Policy for Regional Infrastructure along the proposed Mid-Block Arterial Roadway in the Brooklin Urban Area, in the Town of Whitby

Recommendations:

That the Works Committee recommends to Regional Council:

- A) That capital works and financing estimated at \$16,545,100 for the Region share of the extension and oversizing of a sanitary sewer, local watermain and feedermain, in the Town of Whitby, be approved;
- B) That the Regional Municipality of Durham be authorized to enter into a Servicing Agreement with Winash Developments Limited for the construction and oversizing of a sanitary sewer and a local watermain and feedermain, in the Town of Whitby, including cost sharing in accordance with the Regional Municipality of Durham's Region Share Policy, at an estimated total project cost of \$22,486,400;
- C) That financing for the servicing agreement be provided from the following sources:

Developer's Share – Sanitary Sewer

Winash Developments Limited	<u>\$4,569,400</u>
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Developer's Share – Watermain

Winash Developments Limited	<u>\$1,371,900</u>
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Total Developer's Share	<u>\$5,941,300</u>
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Regional Share – Sanitary Sewer**2022 Sanitary Sewage System Capital Budget**

Item 63: Southwest Brooklin Trunk Sanitary Sewer from west of Cochrane St. to east of Highway # 12, Whitby Region's share (Project id: D2220)

Residential Development Charges	\$2,728,017
Commercial Development Charges	\$170,039
User Rate	<u>\$798,444</u>

Total Regional Share – Sanitary Sewer **\$3,696,500**

Regional Costs – Watermain**2023 Water Supply System Capital Budget**

Item 132: Zone 3 feedermain on Mid-Block Arterial from Lynde Creek to Ashburn Rd., Whitby (West Loop) Region's Share (Project id: D2202)

Residential Development Charges	\$5,824,174
Commercial Development Charges	\$146,269
User Rate	<u>\$678,157</u>
Total Funding	\$6,648,600

Prior Funding – 2022 Water Supply System Capital Budget

Item 155: Zone 3 feedermain on Ashburn Rd. from Mid-Block Arterial to Winchester Rd. (Project id: D2203)

Residential Development Charges	\$5,431,200
Commercial Development Charges	\$136,400
User Rate	<u>\$632,400</u>
Total Funding	\$6,200,000

Total Regional Share – Watermain **\$12,848,600**

Total Regional Share **\$16,545,100**

Total Project Financing **\$22,486,400**

Report:**1. Purpose**

- 1.1 The purpose of this report is to obtain approval for capital work and financing including entering into a servicing agreement with Winash Developments Limited,

including cost sharing in accordance with the Regional Municipality of Durham's (Region) Share Policy, related to the construction of a proposed sanitary sewer, local watermain and feedermain, in the Town of Whitby (see Attachment #1).

2. Background

- 2.1 Winash Developments Limited and the Town of Whitby plan to build a new mid-block arterial roadway from Ashburn Road east to Lynde Creek. This arterial will ultimately extend easterly to Britannia Road in the City of Oshawa and westerly to Cochrane Street. The mid-block arterial road will service lands along the corridor being developed by the Brooklin Gate Landowners Group. Winash Developments Limited is a member of the Brooklin Gate Landowners Group. To develop these lands, the construction of the subject sanitary sewer along the future mid-block arterial roadway and north along Ashburn Road is required. Winash Developments Limited must construct all local watermains required for the subject development and the Region has requested that they also construct a 600 millimetre (mm) feedermain to provide servicing along the Mid-Block Arterial and north along Ashburn Road from the future Mid-Block Arterial road to north of Winchester Road to service future developments in Brooklin north of Highway 407. This feedermain is required now to provide a second water supply feed to the subject lands. Winash Developments Limited has requested permission to construct the project through a servicing agreement with the Region and to cost share with the Region in accordance with the Region's Share Policy.
- 2.2 The Region's Share Policy generally requires the developer to pay for the works required to service the subject development, with the Region responsible for the oversizing cost. In this case, Winash Developments Limited would be responsible to pay for the cost to construct a 200 mm to 450 mm diameter local sanitary sewer, and the Region would be required to pay the cost of oversizing to a 600 mm diameter sanitary sewer. Winash would also be responsible to pay for the cost to construct the 300 mm diameter local watermains to service the proposed development and the Region would be required to pay the cost for the extension of the 600 mm feedermain.
- 2.3 Regional staff do not have standing authority to approve cost sharing in Servicing Agreements. Regional Council approval is required for the Region Share payments within a Servicing Agreement.
- 2.4 All other requirements of the Regional Servicing Agreement will be in place, including the posting of a letter of credit for 100 per cent of the cost of the works, Regional inspection requirements and the two-year infrastructure maintenance period.

3. Previous Reports and Decisions

3.1 There are no previous reports/decisions related to this report.

4. Financing

4.1 Financing of \$22,486,400, including the Developer’s share of \$5,941,300 and the Region’s share of \$16,545,100 for the oversizing costs and the construction of the 600 mm feedermain can be provided from the following sources:

Developer’s Share – Sanitary Sewer

Winash Developments Limited	<u>\$4,569,400</u>
Total Developer’s Share	<u>\$4,569,400</u>

Regional Share – Sanitary Sewer

2022 Sanitary Sewage System Capital Budget

Item 63: Southwest Brooklin Trunk Sanitary Sewer from west of Cochrane St. to east of Highway # 12, Whitby Region’s share (Project id: D2220)

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Commercial Development Charges	\$170,039
User Rate	<u>\$798,444</u>
Total Regional Share – Sanitary Sewer	<u>\$3,696,500</u>
Total Project Estimate Sanitary Sewer	<u>\$8,265,900</u>

Developer’s Share – Watermain

Winash Developments Limited	<u>\$1,371,900</u>
Total Developer’s Share	<u>\$1,371,900</u>

Regional Share – Watermain

2023 Water Supply System Capital Budget

Item 132: Zone 3 feedermain on Mid-Block Arterial from Lynde Creek to Ashburn Rd., Whitby (West Loop) Region’s Share (Project id: D2202)

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Commercial Development Charges	\$136,400
User Rate	<u>\$632,400</u>
Total Funding	\$6,200,000
Total Regional Share – Watermain	<u>\$12,848,600</u>
Total Regional Share	<u>\$16,545,100</u>
Total Developer Share	<u>\$5,941,300</u>
Total Project Financing	<u>\$22,486,400</u>

5. Relationship to Strategic Plan

- 5.1 This report aligns with/addresses the following strategic goals and priorities in the Durham Region Strategic Plan:
- Goal 5 Service Excellence – to provide exceptional value to Durham taxpayers through responsive, effective and fiscally sustainable services delivery.
 - Priority 5.1 – Optimize resources and partnerships to deliver exceptional quality services and value.

6. Conclusion

- 6.1 It is recommended that Regional Council enter into a Servicing Agreement with Winash Developments Limited containing the foregoing provisions and that the capital works be approved as identified in the report.
- 6.2 This report has been reviewed by the Finance Department and the Commissioner of Finance concurs with the financial recommendation.
- 6.3 For additional information, contact: Charlotte Pattee, Development Approvals Engineer, at 905-668-7711 extension 3435.

7. Attachments

Attachment #1: Location Plan

Respectfully submitted,

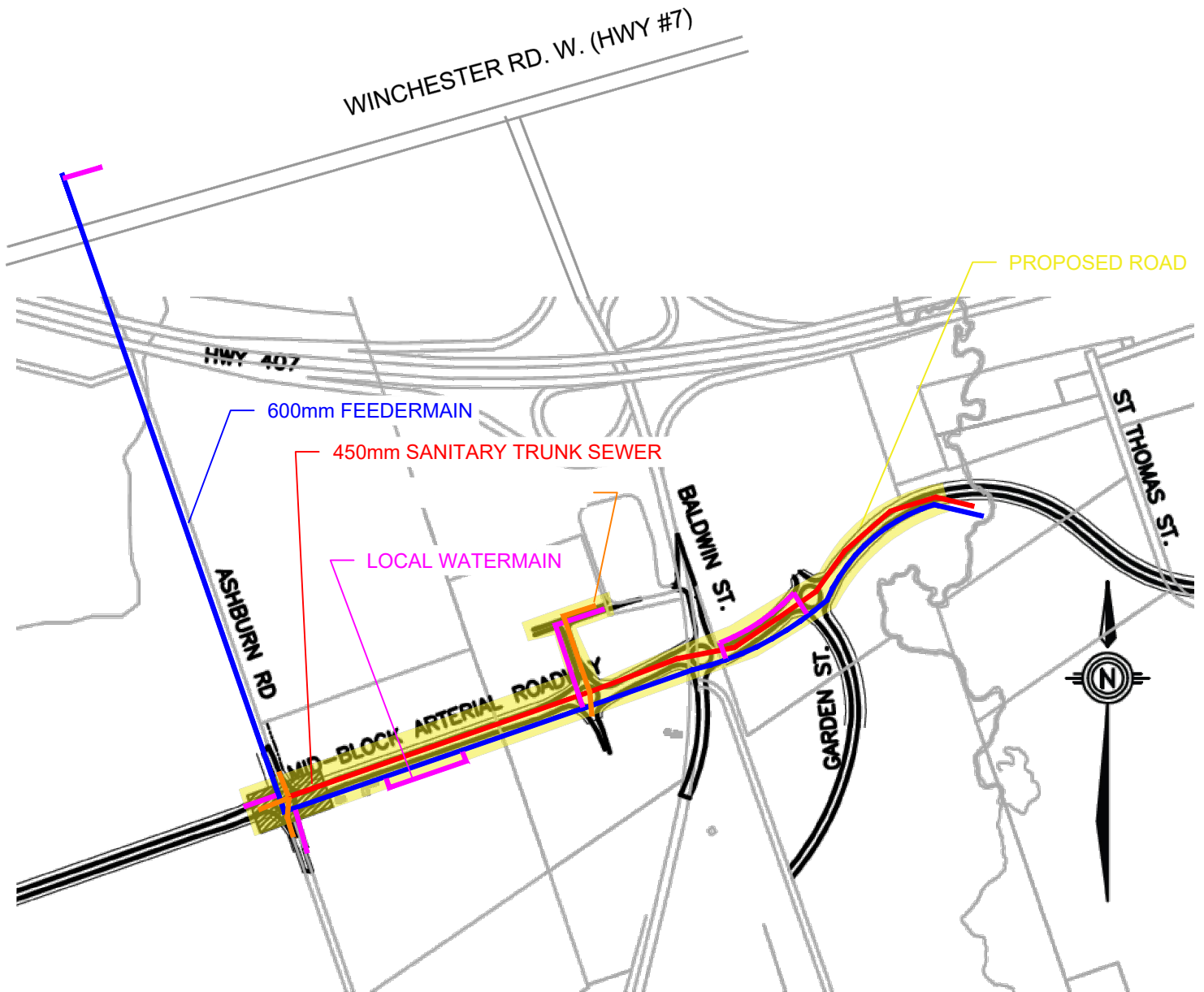
Original signed by:

John Presta, P.Eng., MPA
Commissioner of Works

Recommended for Presentation to Committee

Original signed by:

Elaine C. Baxter-Trahair
Chief Administrative Officer



Attachment #1: Location Plan – MID. BLOCK ARTERIAL



This map has been produced from a variety of sources. The Region of Durham does not make any representations concerning the accuracy, likely results, or reliability of the use of the materials. The Region disclaims all representation and warranties.
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The Regional Municipality of Durham Report

To: Works Committee
From: Commissioner of Works
Report: #2023-W-13
Date: March 8, 2023

Subject:

2023 Works Department Business Plans and Budget

Recommendation:

That the Works Committee recommends to the Finance and Administration Committee for subsequent recommendation to Regional Council that the 2023 Business Plans and Budget for the Works Department's General Tax and Solid Waste Management operations be approved.

Report:

1. Purpose

- 1.1 The purpose of this report is to obtain Works Committee concurrence of the 2023 Business Plans and Budget for the Works Department's General Tax (including roads, bridges, and other general tax supported programs) and Solid Waste Management programs. The Works Department 2023 Business Plans and Budget will be referred to the Finance and Administration Committee for consideration during deliberations of the 2023 Property Tax Supported Business Plans and Budget.

2. Overview

2.1 The recommended 2023 Works Department Business Plans and Budget meets the Council approved guideline for the 2023 Property Tax Supported Business Plans and Budget.

2.2 The 2023 Works Department Business Plans and Budget supports and advances the goals of the Regional Municipality of Durham's (Region) Strategic Plan, namely:

- Environmental Sustainability
- Community Vitality
- Economic Prosperity
- Social Investment
- Service Excellence

2.3 The recommended 2023 Works Department Business Plans and Budget include:

- a. Works General Tax: gross expenditures to deliver roads, bridges and other general tax programs totalling \$264.7 million in gross expenditures, requiring \$54.2 million in property tax funding with the remaining funded by program fees, development charges, Canada Community-Building Fund proceeds, reserves/reserve funds and debenture financing; and,
- b. Solid Waste Management: gross expenditures to deliver solid waste management planning and operating activities totalling \$90.6 million, requiring \$58.7 million in property tax funding with the remaining expenditures funded by program fees, industry funding, reserves and reserve funds, and recovery from the Regional Municipality of York.

2.4 The recommended 2023 Works Department Business Plans and Budget provides operating and capital funding for the following divisions:

Works General Tax

- a. Maintenance Operations

- Winter Control
 - Roadside Maintenance
 - Regional Storm Sewers
- b. Traffic Operations
- Signals and Systems
 - Signs, Markings and Roadside Protection
 - Engineering and Central Control Systems
- c. Engineering and Staff Support
- d. Facilities Management
- e. Regional Forest
- f. Depot Operations
- g. Fleet Operations
- h. Administration

Solid Waste Management Operations

- a. Waste Management Facilities
- b. Collections, Processing and Disposal
- c. Administration
- d. Facilities Management
- e. Regional Corporate Costs
- f. Waste Management Centre
- g. Community Outreach
- h. Environmental Studies

2.5 The 2023 Works Department Business Plans and Budget also provide funding for a share of the operation and maintenance of Regional Headquarters.

3. 2022 Accomplishments

3.1 In 2022, the Works Department:

- a. Advanced the implementation of the Durham Vision Zero Safety Plan, including the installation of four new fixed Automated Speed Enforcement (ASE) cameras, and the continued deployment of four ASE cameras on a rotational basis covering 23 locations with over 1,900 camera days.
- b. Completed the rehabilitation of 22 kilometres of Regional roads including the installation of wider paved shoulders on rural roads to provide a safer cycling environment.
- c. Supported Durham OneNet Inc. with the completion of the first broadband project to extend the Region's fibre network to four rural communities from Pickering to Uxbridge and connected 14 traffic intersections to the said fibre network.
- d. Completed road widenings for several major growth-related projects including Simcoe Street (Regional Road 2) from north of Conlin Road to the south of Winchester Road (Regional Road 3), Westney Road from Rossland Road to Taunton Road, and Brock Street from Manning Road to Rossland Road.
- e. Completed the rehabilitation of Regional Road 18 using recycled waste material.
- f. Commenced a visioning and initial business case study to explore rapid transit on Simcoe Street.
- g. Commenced detailed design for 13 kilometres of median bus rapid transit lane through Pickering, Ajax, and Whitby.
- h. Facilitated online public consultations that helped to frame the development of the future median transit shelter concept.
- i. Completed the transfers of roads to and from (road rationalization) the Town of Whitby (Whitby). The Region transferred jurisdiction of Henry Street to

Cochrane Street to Whitby and Rossland Road from Lake Ridge Road to Cochrane Street became the jurisdiction of the Region.

- j. Earned the Smart 50 Award and Transportation Association of Canada Technology Achievement Award for optimizing road maintenance using artificial intelligence (AI). Durham is the first regional municipality in Canada to implement ROVER AI for pothole detection.
- k. Acquired properties to support the advancement of Regional strategic initiatives and projects and negotiated leases for space for program delivery including the following strategic acquisitions:
 - Executed the lease agreement for the Regional owned Material Recycling Facility (MRF) which will no longer be required due to the transfer of responsibility for Ontario's Blue Box program from municipalities to the producers of the products and packaging. The Region is scheduled to complete the transition from the Blue Box program in 2024 at which time the lease will come into effect.
 - Secured and operationalized leased space at 27 Station Street, in the Town of Ajax, for the operation of an emergency warming centre and shelter for Durham residents experiencing homelessness.
 - Secured three leased spaces to replace Durham Regional Police Service's leased facility in Clarington that was destroyed by fire.
 - Land requirements for several growth and road rehabilitation projects to advance the transportation objectives outlined in the Region of Durham Official Plan.
- l. Acquired 44 properties for the Highway 2 Bus Rapid Transit (BRT) project to advance the Rapid Transit program in Durham.
- m. Completed valuations of Durham Regional Local Housing Corporation (DRLHC) owned properties and explored other Regional owned properties for potential housing solutions.
- n. Provided service to more than 330,000 customers at the Region's Waste Management facilities.

-
- o. Initiated a Biocover Feasibility Project at the closed Oshawa Landfill site to determine if a biocover is an effective methane reduction method for closed landfills in the Region.
 - p. Awarded a contract for the collection of solid waste in the Town of Ajax and the City of Pickering specifying the use of renewable natural gas fuelled collection vehicles and options for servicing developments that do not meet the Region's traditional design standards for municipal waste collection services.
 - q. Completed the transition of the Waste Management Customer Service portfolio to MyDurham311.
 - r. Fully implemented the Enterprise Maintenance Management System (EMMS). Facilities, Traffic and Maintenance operations are now utilizing this comprehensive work management system to manage activities, capture life cycle cost data and provide real-time maintenance information.
 - s. Advanced Regional facilities capital projects including:
 - Completed construction of 10 modular housing units and two service units for the Oshawa Micro-homes pilot project. The homes were occupied in early 2022.
 - Commenced construction of the Beaverton Supportive Housing in the fall of 2022 with occupancy expected in 2023.
 - Initiated construction of the Region of Durham Paramedic Services (RDPS) Station and Training facility in Seaton in the spring of 2022.
 - Commenced construction of Phase 2 of the Durham Regional Police Service Clarington project in early 2022.
 - Continued work on the York Durham Regional Environmental Lab with work expected to be completed in 2023.
 - Commenced construction of Phase 1 of the Workplace Modernization project at Regional Headquarters with occupancy of the fifth floor scheduled for spring of 2023.

- Commenced the installation of 36 charging stations at Regional facilities.
 - Completed various state-of-good repair projects to support the goals of the Region's Asset Management plan.
- t. Supported the implementation of the Regional Cycling Plan to provide residents with a safe and accessible network through the addition of 21 kilometres of new cycling facilities.

4. 2023 Strategic Highlights

- 4.1 The Works Department 2023 Business Plans and Budget proposes significant investments for capital infrastructure, including:
- a. Total capital for Regional roads and infrastructure projects totalling \$213.0 million, including \$78.6 million in Regional transportation projects funded under the Investing in Canada Infrastructure Program (ICIP). Of the \$104.6 million transportation-related projects, excluding ICIP, \$46.3 million are growth related with the balance of \$58.3 million for rehabilitation of existing infrastructure and system improvement projects including \$0.5 million for cycling infill projects.
 - b. \$1.7 million in capital investments to achieve Durham Vision Zero's goals, with the financing of \$0.675 million provided from the Vision Zero Initiatives Reserve Fund, for the implementation of automated red-light and speed enforcement cameras and enhanced pavement and line markings.
 - c. \$42.0 million in capital investments for property acquisition for the expansion and modernization of the Sunderland and Oshawa/Whitby Maintenance Depots and \$5.0 million for the design of the Ajax/Pickering Maintenance Depot expansion to accommodate increased service demand due to population growth, proposed to be financed by debentures.
 - d. An additional \$5.85 million investment for the energy retrofit and modernization of Regional facility at 101 Consumers Drive, Whitby, to optimize space, reduce greenhouse gas emissions and provide energy-efficient lighting.
 - e. A \$1.0 million investment to redesign and reconstruct the Oshawa Waste Management Facility, optimizing the site to ensure it is utilized to its full

extent and achieves the goals outlined in the Region's Long-Term Waste Management Plan, 2022-2040.

- 4.2 In addition to these capital priorities, the proposed 2023 Works Department Business Plans and Budget include investments for key operational initiatives such as:
- a. Implementation of the Durham Vision Zero countermeasures program totalling \$1.84 million for the ongoing delivery of red-light camera technology and Automated Speed Enforcement (ASE), including two new mobile and two new fixed ASE cameras.
 - b. Increases in road maintenance costs in response to growth, historical service demands and increased cost of operations totalling \$0.613 million.
 - c. \$0.085 million investment to increase the supply of blue boxes, green bins, and blue box lids to accommodate growth and demand.
- 4.3 Aside from the delivery of essential services to the public, the Works Department leads and supports key corporate projects and initiatives, including:
- a. The design, construction, and commissioning of the Seaton Long-Term Care Facility in the City of Pickering under an accelerated schedule, with an estimated project cost of \$126.0 million.
 - b. The redevelopment of Durham Regional Local Housing Corporation sites and 300 Ritson Road South, in the City of Oshawa.
 - c. Design, construction, and property acquisition to advance Bus Rapid Transit initiatives, and Durham Transit facilities at 2400 Thornton Road and 710 Raleigh Avenue.
 - d. Delivery of deep energy retrofit work at four DRLHC properties.
 - e. Continued support of Durham OneNet Inc. (DONI) in advancing the Region's broadband expansion network.
- 4.4 A total of 21.954 new full-time equivalent employees (FTEs) are included in the proposed 2023 budget for General Tax and Waste, representing new permanent resources to support the delivery of the Works Department's capital projects, delivery of key strategic corporate projects and priorities and operating activities.

Proposed positions include 10 positions for the delivery of utility locates program as recommended by the consultants from review of the underground Locates Program and to ensure compliance with legislated requirements. The cost of some of these positions is allocated at varying levels to capital projects or maintenance activities:

a. New Positions to support existing activities:

- Contract Coordinator in Facilities, Design, Construction and Asset Management 1.000 FTE
- Project Supervisor in Facilities, Design, Construction and Asset Management (costs are shared with Water Supply, Sanitary Sewerage, Works General Tax and Solid Waste) 0.343 FTE
- Stockkeeper in Fleet Operations 1.000 FTE
- Skilled Maintenance Worker 1 in Maintenance Operations (utility locate office) 10.000 FTEs
- Senior Project Coordinator in Fleet Operations 1.000 FTE
- Project Manager in Rapid Transit Office 1.000 FTE
- Inspector 3 in Rapid Transit Office 1.000 FTE
- Medium Equipment Operator in Maintenance Operations 1.000 FTE
- Inspector 3 (Capital) in Construction (costs are shared with Water Supply, Sanitary Sewerage and Works General Tax) 0.358 FTE
- Emergency Management Coordinator (Compliance) in the Commissioner's Office (costs are shared with Water Supply, Sanitary Sewerage, Works General Tax and Solid Waste) 0.500 FTE
- Business Analyst in Systems, Policies and Process (costs are shared with Water Supply, Sanitary Sewerage and Works General Tax) 0.410 FTE

b. Temporary to Permanent Conversions:

- Labourers in Maintenance Operations 4.000 FTEs
- Project Manager in Facilities Design, Construction and Asset Management (costs are shared with Water Supply, Sanitary Sewer, Works General Tax and Solid Waste) 0.343 FTE

4.5 The Works Department provides significant support and leadership to key Regional initiatives included in the 2023 Business Plans and Budget that provide mitigation and adaptation measures and strategies to address the Region's climate change initiatives, including:

- a. The replacement of nine electric hybrid half ton pick-up trucks at various locations for \$0.8 million, funded through the equipment replacement reserves.
- b. Continued support through the Rapid Transit Office and Corporate Real Estate for the implementation of Bus Rapid Transit on Highway 2.
- c. Evaluation of third-party waste haulage emissions to quantify the impact of switching to renewable natural gas or other low-carbon fuel to reduce GHG emissions associated with residential waste collection.
- d. Delivery of deep energy retrofit work at four Durham Regional Local Housing Corporation seniors' buildings with an approved budget of \$22.4 million.
- e. Leading the design and construction of the Durham Region Transit Maintenance facility on Thornton Road North in Oshawa. This facility will support a full fleet of zero emission vehicles while aiming for high energy standards that will allow it to be a net-zero energy building.
- f. Utilization of recycled materials for road construction.

5. 2023 Risks and Uncertainties

5.1 Areas of potential risks and pressures that could impact the operating and capital budget of the Works Department include:

- a. Risks related to legislative changes, regulations, and provincial reviews:

- Ongoing efforts to comply with Ontario Regulation 239/02, minimum road maintenance standards with the expansion of the Region's Road network.
 - Ongoing challenges to meet the requirements of the Accessibility for Ontarians with Disability Act (AODA) as it relates to the installation of Accessible Pedestrian Signals.
 - Obligation to meet legislative standards, for example, the Ontario One-Call program to meet response time requirements.
 - On-Site and Excess Soil Management Regulation 406/19.
 - Transition to the Extended Producer Responsibility (EPR) regime, including the timing and content of regulations supporting the transition.
 - Requirements and timing of the Province's Food and Organic Waste Policy Statement/Framework.
- b. Revenue/Funding pressures:
- Uncertainty around revenue/funding pressures (e.g., provincial/federal infrastructure programs which require matching Regional investment).
 - Uncertainty around receipt and availability of development charge revenue to fund major projects resulting from Provincial Bill 23. Any reduction in Development Charges for growth will result in increased pressure on road rehabilitation.
 - Uncertainty regarding blue box material commodity pricing and industry funding.
- c. Operating Pressures:
- Increasing costs of operations due to unprecedented inflation on materials and supplies, including contractual increases, critical for service provision and capital project delivery.
 - Increase in gasoline and fuel prices impacting fleet operating costs and contracted waste collection services.

- Resource pressures for the delivery of capital programs due to the increasing number and complexity of projects.
- Recruiting and retaining qualified staff, especially in the highly competitive, job market.
- Ongoing difficulties experienced by contractors to recruit and retain staff to deliver waste management services resulting in increased contract costs.
- Managing the pressures from growth and increased demand on services to support residents and businesses as well as the operational and maintenance requirements for Regional infrastructure including the transportation network and waste management operations.
- Higher than anticipated costs for winter maintenance, and increased costs for repairs of roads due to severe weather events.

6. Future Budget Pressures

6.1 Items proposed in the 2023 Works Department Business Plans and Budget will result in impacts to the 2024 budget including:

a. Annualization of new positions proposed in 2023, including recoveries from capital projects:

- Works – General Tax \$1.08 million
- Solid Waste Management \$0.02 million

6.2 Looking forward over the next four years, the following significant budget pressures include:

a. Growth Requirements:

- Increased demands for road maintenance, traffic signal maintenance and solid waste management programs in growth areas.
- Increased fleet and equipment requirements to service and maintain growing infrastructure.

- Increased capital infrastructure including new, expanded, and modernized facilities to accommodate service growth and development.
- b. Asset Management and Infrastructure Requirements:
- Reconstruction, modernization and expansion of existing Maintenance Operations Depots and Regional Waste Management Facilities.
 - Increased infrastructure to support Durham Regional Local Housing Corporation initiatives as well as expansion of Long-Term Care, Region of Durham Paramedic Services, Durham Regional Police Services and Durham Region Transit needs.
 - Replacement of the fuel management system and related infrastructure.
 - Capital road, traffic control and bridge expansion and rehabilitation need.
- c. Legislative and Regulatory Requirements:
- Bill 23-Supporting Growth and Housing in York and Durham Regions Act, 2022, will impact the number of development charges available to fund new and expanded infrastructure to service growth. Without development charges this infrastructure will need to be funded from property taxes.
 - The provincial direction to develop 1.5 million homes in an expedited manner and allow the development of Greenbelt lands with restricted timelines will be an additional and unplanned development pressure competing for Regional infrastructure funds and resources. Staff are working on the financial impacts on future Regional budgets through the update to the Region's Development Charges Background Study. A thorough review of the proposed legislation details will be undertaken and accommodated starting in the 2024 Business Plans and Budget.
 - Ongoing environmental protection, compliance, and rehabilitation requirements for closed landfills.

- Continued uncertainty regarding recyclable commodity price revenues.
- Increased requirements for the reduction and diversion of food and organic waste.
- Expansions of Vision Zero countermeasures.

7. Relationship to Strategic Plan

7.1 This report aligns with/addresses the following strategic goal and priorities in the Durham Region Strategic Plan.

a. Goal 1 - Environmental Sustainability:

- Accelerating the adoption of green technologies and clean energy solutions through strategic partnerships and investment with internal and external partners and academic institutions. The Region is currently partnering with the Toronto Atmospheric Fund to deliver building retrofits of the senior's housing portfolio to reduce energy consumption and carbon emissions under FCM's Sustainable Affordable Housing program.
- Increasing resource recovery through the implementation of an interim food and organic waste management strategy in 2024 with continued efforts to develop a long-term food and organic waste management strategy; converting the Region's contracted waste management fleet to renewable natural gas fuelling; and promoting the use of recycled materials in construction projects.
- Protecting, preserving and restoring the natural environment including greenspaces, waterways, parks, trails, and farmlands by exploring alternative winter de-icing materials to minimize salt impacts; integrating environmentally sensitive solutions and practices; increasing restoration measures for impacted areas from construction projects; continuing controlled-harvest practices in all Durham Region Forest tracts; exploring low and no-mow landscaping options and naturalization on sites; and ensuring site plan development preserves natural features and favour native plant restoration.

- Demonstrating leadership in sustainability and climate change action by mitigating the environmental impacts of projects and continuing to showcase environmental awareness and the importance of Regional assets, such as the Regional Forest. Landfill reclamation and remediation work will continue along with the ongoing implementation of the Oshawa Landfill pilot project to study the potential of a biocover to mitigate landfill gas generation.
 - Expanding sustainable and active transportation by promoting transit and cycling; identifying and prioritizing road maintenance and winter response on primary cycling routes.
- b. Goal 2 - Community Vitality:
- Revitalizing existing neighbourhoods and building complete communities that are walkable, well-connected, and have a mix of attainable housing through the expansion of the Regional cycling network.
 - Enhancing community safety and well-being with improvements to road traffic safety by advancing projects that are part of the Durham Vision Zero initiative.
- c. Goal 3 - Economic Prosperity:
- Better connections for people and the movement of goods by constructing and maintaining an efficient goods movement network.
 - Supporting the Bowmanville GO extension and the Rapid Transit network.
 - Centralizing Regional services at strategic facilities to reduce travelling time and increasing convenience for residents.
 - Expediting the delivery of high-speed internet services to the rural and underserved communities across Durham Region by leveraging and expanding upon the existing Traffic Operations fibre network.

d. Goal 4 – Social Investment:

- Supporting the revitalization of Durham Region Local Housing Corporation sites, including advancing the redevelopment of underutilized Regional sites to facilitate modern, safe mixed-income communities while increasing the number of affordable housing units.
- Collaborating with departments and community organizations to advance housing support across the Region, including leading the design and construction of modular supportive housing and microhomes and advancing land banking opportunities.

e. Goal 5 - Service Excellence:

- Collaborating for a seamless service experience by partnering with local municipalities and maintaining the service request system to address external concerns through a single point of contact.
- Demonstrating commitment to continuous quality improvement and transparency through public engagement on all major public works initiatives in real-time.

7.2 The Strategic Priorities section of the 2023 Works Department Business Plans and Budget document further highlights planned activities for the current budget year which will contribute to the achievement of the priorities outlined in the Region's Strategic Plan.

8. Conclusion

8.1 The proposed 2023 Works Department Business Plans and Budget meet the Council-approved guideline for the 2023 Property Tax Supported Business Plans and Budget and supports the Department's role in the provision of roads, bridges and other general tax supported programs and services.

8.2 It is recommended that the Works Committee approve the 2023 Business Plans and Budget for the Works Department's General Tax and Solid Waste Management Operations and forward this report to the Finance and Administration Committee for consideration during the budget deliberations of the 2023 Property Tax Supported Business Plans and Budget.

8.3 This report has been reviewed by the Finance Department and the Commissioner of Finance concurs with the recommendation.

9. Attachments

9.1 Detailed 2023 Business Plans and Budget for the Works Department's General Tax and Solid Waste Management Operations are available online from the March 8 Works Committee Agenda.

Respectfully submitted,

Original signed by:

John Presta, P.Eng., MPA
Commissioner of Works

Recommended for Presentation to Committee

Original signed by:

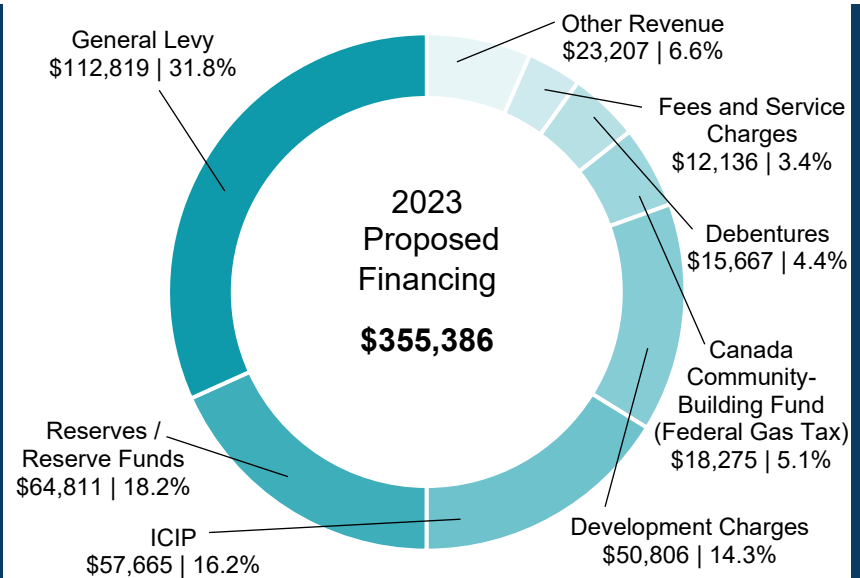
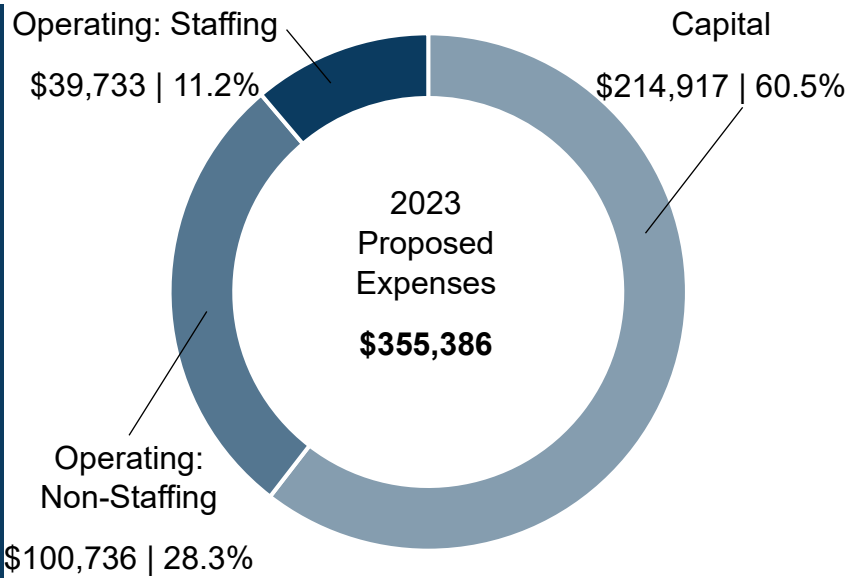
Elaine Baxter-Trahair
Chief Administrative Officer



Durham Budget 2023

WORKS DEPARTMENT

Plans, designs, constructs, operates, and maintains Regional roads, bridges, traffic signals and facilities. Responsible for the collection, processing and disposal of garbage, recyclables and compost, the collection of special waste such as electronic and household hazardous waste, and the operation of the Durham York Energy Centre



Amounts are in \$,000's

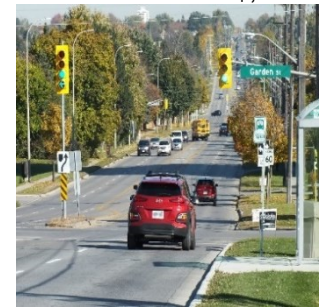


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Major Programs and Services

Regional Roads and Infrastructure

Winter Control

Reduce the hazards of winter conditions on the Regional road network by responding to winter events in a timely manner, lessening impacts on economic activity and improving quality of life for residents and businesses. Includes snow plowing, salting and anti-icing measures and condition monitoring through road patrols and advanced monitoring technologies to assess and address rapidly changing road conditions. Additional activities include snow removal in commercial areas, drainage, and spring cleanup activities.

Roadside Maintenance

Maintain the Regional road network efficiently and effectively to reduce or eliminate hazards to Regional road users. Includes filling potholes, dust control applications and priming of road shoulders to control erosion, maintaining brush and vegetation, cleaning and regrading ditches, culverts and catch basins, and boulevard maintenance.

Storm Sewers

Maintain and operate the Regional storm sewer collection system efficiently and in a cost-effective manner to prevent unnecessary damage to public and private properties and pollution to the environment. Includes repair of maintenance holes, cleaning, installing and repair of storm sewer service connections within the road allowance and visual and closed-circuit camera inspection of the maintenance holes and sewers.

Traffic Signals and Systems

Install, maintain, and operate the Region's network of traffic control signals and associated devices to support the safe and efficient movement of motorists, cyclists, and pedestrians. Includes the installation and maintenance of traffic control devices and beacons, central traffic control system devices, closed circuit television and associated communication and intelligent transportation systems technology.

Traffic Signs, Markings and Roadside Protection

Improve safety and convenience for the users of the Regional road network while promoting the efficient movement of people and goods. Includes the design, manufacture, and installation of regulatory, warning and information signage, the installation and maintenance of guiderails, detour route and traffic control planning for roadworks and the application of lane line markings.

Major Programs and Services Continued

Traffic Engineering and Central Control Systems

Supports the safe and efficient movement of traffic on the Regional road network through the provision of project management, functional planning and engineering studies, traffic signal design, and custodianship of the Region's Traffic By-laws. Includes the operation of the computerized central traffic control system and the development and management of Intelligent Transportation Systems, administration of the Red-Light Camera and Automated Speed Enforcement programs, undertaking road safety studies and implementation of recommendations supporting the Region's Vision Zero initiative.

Engineering and Staff Support

Support the delivery of capital projects and initiatives through design and construction activities, real estate services including land and lease acquisitions/management to all Regional programs, maintain linear infrastructure data within GIS systems, and providing financial and administrative support services to all divisions within the Works Department.

Facilities Management

Provide overall lifecycle management of all Regional facilities. Services include the design and construction of new Regional, Durham Regional Local Housing Corporation and Durham Regional Police Service facilities and leasehold improvements, lifecycle maintenance and replacement strategies for Regional facilities, corporate security services, and the ongoing and preventative maintenance and overall operation of Regional facilities, properties, and grounds.

Regional Forest

The Regional Forest, consisting of six tracts totaling approximately 598 hectares, is managed under contract by the Lake Simcoe Region Conservation Authority. The forest, a significant environmental asset, provides natural habitat for wildlife, maintenance of water levels and stream flows, prevention of erosion and floods and a space for nature appreciation and use through hiking, walking, cross-country skiing, mountain biking and horseback riding.

Depot Operations

Support the delivery of road maintenance activities including winter control, and roadside and storm sewer repairs and cleaning.

Fleet Operations

Support the acquisition, lifecycle management and maintenance of the Region's fleet of vehicles and equipment, excluding those operated by Durham Regional Police Service and Durham Region Transit. Ensures compliance with the requirements of the Highway Traffic Act and the Commercial Vehicle Operations Registration (CVOR) Program.

Major Programs and Services Continued

Fleet Clearing

Maintain the Region's fleet of vehicles and equipment, excluding those operated by Durham Regional Police Service and Durham Region Transit. Costs accumulated in this program are allocated out to programs and activities through a combination of direct charges and hourly vehicle utilization rates.

Payroll Clearing

Resources that undertake the maintenance of the Region's road network, traffic signals, line markings, roadside signage and underground water and sewer infrastructure, provide utility locating services, conduct traffic data mapping and analysis and undertake water meter repairs. Costs accumulated in this program are allocated out to various activities within other Works Department maintenance programs through work orders generated for these activities.

Administration

Provide the overall strategic planning and direction to all programs within the Works Department – Regional Roads and Infrastructure.

Headquarters Shared Costs – Regional Roads and Infrastructure Portion

The allocated share of costs attributable to the Works Department – Regional Roads and Infrastructure for the operation of Regional Headquarters facility.

Construction of Municipal Services

Plan, design and construction of the Regional road and infrastructure major capital program.

Solid Waste Management

Oshawa Waste Management Facility

Operate this facility, with the objective of protecting and enhancing the environment by providing a safe, convenient, and cost-effective location to receive residential waste for reuse, recycling, composting or disposal. This location receives and transfers garbage, e-waste, compostable material, municipal hazardous and special waste and delivers a paint re-use program.

Scugog Waste Management Facility

Operate this facility, with the objective of protecting and enhancing the environment by providing a safe, convenient, and cost-effective location to receive residential waste for reuse, recycling, composting or disposal. This location receives and transfers garbage, e-waste, compostable material, and municipal hazardous and special waste.

Major Programs and Services Continued

Brock Waste Management Facility

Operate this facility, with the objective of protecting and enhancing the environment by providing a safe, convenient, and cost-effective location to receive residential waste for reuse, recycling, composting or disposal. This location receives and transfers garbage, e-waste, compostable material, and municipal hazardous and special waste.

Pickering Waste Management Facility

Use of this private waste transfer facility, with the objective of protecting and enhancing the environment by providing a safe, convenient, and cost-effective location to receive municipal hazardous and special waste.

Clarington Environmental Facility

Operate this facility, with the objective of protecting and enhancing the environment by providing a safe, convenient, and cost-effective location to receive municipal hazardous and special waste.

Durham Material Recovery Facility

Operate this facility through a third-party service provider, with the objective of protecting and enhancing the environment through the safe and cost-effective receipt and processing of recycling material collected as part of the curbside program and at the Region's Waste Management Facilities. Recyclable materials processed at this facility are packaged for transport to end markets.

Durham York Energy Centre

Operate this facility through a third-party service provider, providing a local long-term solution for the responsible management and disposal of residual municipal solid waste through thermal treatment for the Regions of Durham and York. Revenue is generated through the sale of materials recovered and energy generated from the thermal process.

Collections, Processing, and Disposal Services

Deliver the Region's curbside waste collection programs to residential, multi-residential and some small businesses. Services delivered across the Region include garbage, blue box, organics and leaf and yard waste collection, along with bulky waste collection and disposal as part of an integrated collection program. The City of Oshawa and Town of Whitby administer their own curbside garbage, green bin, and bulky waste collection services—the Region is responsible for all curbside blue box recycling collection.

Major Programs and Services Continued

Waste Administration

Support the delivery of capital initiatives through design and construction activities, undertaking studies to explore diversion opportunities and manage landfills, oversee contracted services, and provide administrative and technical support to the Region's Solid Waste Management programming.

Administration

Provide the overall strategic planning and direction to all programs within the Works Department – Solid Waste Management.

Facilities Management

Provide overall lifecycle management of all Regional facilities. Includes the design and construction of Regional waste facilities, lifecycle maintenance and replacement strategies, corporate security services, and the ongoing and preventative maintenance and overall operation of Regional facilities, properties, and grounds.

Headquarters Shared Costs - Solid Waste Management Portion

The allocated share of costs attributable to the Works Department – Solid Waste Management for the operation of Regional Headquarters facility.

Regional Corporate Costs

Support services across the organization are provided to support the delivery of Solid Waste Management programs and services. This program also captures the annual reserve fund contribution, setting aside sustainable funding for future solid waste capital and operating initiatives, and to mitigate significant financial impacts.

Waste Management Centre

Provide support and information to residents related to the Region's Solid Waste Management programs and services. Includes responding to social media, telephone, waste app and email inquiries, providing in-person customer service for bin exchanges and bin and bag tag sales, administering the Region's call-in waste collection services, providing by-law enforcement services, and collecting data and inventory information to support continuous improvement of Durham's waste collection programs.

Major Programs and Services Continued

Community Outreach

Promote and encourage participation in the Region's waste management and waste diversion programs. Includes sharing information on multiple media platforms including radio, television, print, internet, and public space advertising, promoting waste reduction and diversion through the development of school curriculum material and waste facility tours, and through public events including waste fairs, compost events and participation in Waste Reduction Week.

Environmental Studies

Protect and enhance the environment through the management, monitoring, and inspection of former landfill sites within the Region ensuring full environmental compliance. Includes examination of monitoring results, preparation of annual technical reports, undertaking site improvements, ground and surface water testing and undertaking any amendments to Environmental Compliance Approvals for landfill and waste management facility operations.

Blue Box Revenues and Subsidies

Includes the proceeds from the sale of newspaper, cardboard, steel, aluminum, and glass to end markets, along with Stewardship Ontario's Resource Productivity and Recovery Authority funding.

Major Capital Projects

Consolidated capital program for Solid Waste Management.

Strategic Priorities

For 2023 key priorities and planned actions focus on:

Environmental Sustainability



Accelerate the adoption of green technologies and clean energy solutions through strategic partnerships and investment with internal and external partners and academic institutions. The Region, with the assistance of the Toronto Atmospheric Fund received federal funding to deliver deep energy building retrofits of Durham Regional Local Housing Authority's senior's housing portfolio to reduce energy consumption and carbon emissions under FCM's Sustainable Affordable Housing program. Deep energy retrofit work is also being undertaken at the Region's 101 Consumers Drive facility



Increase resource recovery through the implementation of the Long-Term Waste Management Plan, and continued promotion of the use of recycled materials in construction projects



Protect, preserve and restore the natural environment including greenspaces, waterways, parks, trails, and farmlands by exploring alternative winter de-icing materials to minimize salt impacts; integrating environmentally sensitive solutions and practices; exploring low water/low mow landscaping options at Regional sites; increasing restoration measures for impacted areas from construction projects; continue controlled-harvest practices in all Durham Region Forest tracts; and ensuring site plan development preserve natural features and favour native plant restoration



Demonstrate leadership in sustainability and climate change action by mitigating the environmental impacts of projects and continuing to showcase environmental awareness and the importance of Regional assets, such as the Regional Forest. The continued focus on mitigation or improvement to the environment, as demonstrated in the award winning Victoria Street Reconstruction and Widening project will be reflected in ongoing project design work

Strategic Priorities Continued



Expand sustainable and active transportation by promoting transit and cycling; identifying and prioritizing road maintenance and winter response on primary cycling routes; embracing sustainable urban design principles; increasing availability of EV charging stations at Regional facilities; and exploring alternative fuels for the Regional fleet. The Region has installed 109 charging stations to date at various locations, with 59 dedicated to fleet/workplace charging. Design work has commenced for the new Bus Maintenance Facility in Oshawa, targeting net zero



Support rapid transit initiatives through the design and construction of dedicated transit lanes on Regional Roads



Implement measures aimed towards increasing organic and recyclable materials from curbside collection activities through ongoing community outreach, included ongoing education programs at the elementary, secondary and post-secondary level

Community Vitality



Revitalize existing neighbourhoods and build complete communities that are walkable, well-connected, and have a mix of attainable housing through the expansion of the Regional cycling network. In support of Durham Regional Local Housing, staff are engaged in the redevelopment and revitalization of community housing sites that will maximize transit-oriented development opportunities. Community consultation for the Ritson School redevelopment will take place throughout the year to determine the community's service needs and vision for the site



Enhance community safety and well-being with improvements to road traffic safety by advancing projects that are part of the Durham Vision Zero initiative

Strategic Priorities Continued



Support diversity and inclusion through updated building amenities and accessibility improvements, including the construction of all gender washroom facilities and the installation of a lift between the lower galleria and upper galleria in Regional Headquarters



Position Durham Region as the location of choice for business by servicing strategic Employment Lands; streamlining review and payment processes; and planning for growth

Economic Prosperity



Better connect people and move goods more effectively by constructing and maintaining an efficient goods movement network; supporting the Bowmanville GO extension, Highway 2 Bus Rapid Transit and Simcoe Street Rapid Transit networks; and rationalizing the Region's building footprint through ongoing Master Accommodation Planning, centralizing Regional services at strategic facilities to reduce travelling time and increasing convenience for residents



Expedite the delivery of high-speed internet services to the rural and underserved communities across Durham Region by leveraging and expanding upon the existing Traffic Operations fibre network and supporting broadband construction being led by Durham OneNet Inc.

Social Investment



Support the revitalization of Durham Regional Local Housing Corporation sites, including advancing the redevelopment of underutilized Regional sites to facilitate modern, safe, mixed income communities while increasing the amount of affordable housing units. Engagement will commence in 2023 involving residents, the community, the City of Oshawa and all other interested parties to develop the vision and concepts for the redevelopment and revitalization work

Strategic Priorities Continued



Collaborate with departments and community organizations to advance housing supports across the Region, including the design and construction of modular supportive housing, microhomes and advancing land banking opportunities

Service Excellence



Optimize resources and partnerships to deliver exceptional quality services and value by continuing a “customer first” focus. Shifting more services to an omnichannel service delivery mode as part of the MyDurham311 project. Completion of the first phase of the Workplace Modernization and Optimization project at Regional Headquarters, and design finalization and tendering of Phase 2 which includes the consolidation of front counter space on the main level of the building to improve customer access and building security



Demonstrate commitment to continuous quality improvement and transparency through public engagement on all major public works initiatives in real time



Drive innovation through the continued evolution of the Region’s Enterprise Maintenance Management System to increase efficiency in maintenance operations while collecting accurate and timely life cycle costs for analysis and planning; continued expansion of the Region’s Traffic Watch map tool to incorporate other activities such as real time snowplow routes and water main break repair updates; and continuing to explore and expand the use of artificial intelligence to monitor and report road conditions to trigger maintenance activities

Key Targets for 2023

Regional Roads and Infrastructure

- Maintain 2,517 lane kilometres of paved road surface
- Maintain 244 bridges and culverts greater than 3 metres; 1% inventory growth over prior year
- Maintain 328 kilometres of Regional storm sewers which includes 5,154 maintenance holes and 484 outfalls
- Maintain and operate 447 traffic signals
- Rotate 6 mobile cameras through 23 Automated Speed Enforcement sites, and administer 12 Red Light Camera sites and operate 6 fixed location Automated Speed Enforcement Cameras; Vision Zero collision reduction goal is a 10% reduction in fatal injury collision over a 5-year period
- Apply 4,804 kilometres of line painting and pavement markings on Regional roads
- Maintain and operate over 440,000 square metres of facility space
- Construction funding for 19.5 centreline kilometres of new cycling facilities included with Region road projects

Solid Waste Management

- Serve 335,000 visitors at the Region's Waste Management facilities
- Collect 34,100 tonnes of material at the Region's Waste Management facilities
- Recycle, compost or re-use 6,600 tonnes of material collected at the Region's Waste Management facilities
- Process 40,700 tonnes of recyclable materials through the Region's Material Recovery Facility
- Generate 110,550 megawatts of energy at the Durham York Energy Centre
- Collect 45,600 tonnes of recyclable material through the curbside blue box recycling program

Key Targets for 2023 Continued

- Collect 62,300 tonnes of organic material through the curbside green bin and leaf and yard waste programs
- Collect 126,000 tonnes of garbage material through the curbside program
- Complete 90,000 public interactions through the Waste Management Centre
- Reach 1,500 students through school engagement activities
- Deliver communications regarding waste programs including:
 - 1,500 radio advertisements broadcast;
 - 120,000 waste collection calendars distributed;
 - 475 television advertisements broadcast; and
 - 125,000 waste collection reminders issued via the Durham Waste app


Financial Details: Summary by Account (\$,000's)

Provides the gross expenditures and revenues - including both operating and capital - and the resulting net property tax requirement

	2022 Estimated Actuals	2022 Approved Budget (Restated)	2023 Proposed Budget	Variance	
				\$	%
Expenses					
Operating Expenses					
Personnel Expenses	34,562	37,637	39,733		
Personnel Related	1,290	1,279	1,631		
Communications	1,540	1,680	1,541		
Supplies	2,226	1,824	1,939		
Utilities	674	656	740		
Computer Maintenance & Operations	196	322	364		
Materials & Services	13,819	11,730	13,010		
Buildings & Grounds Operations	1,827	1,825	1,838		
Equipment Maintenance & Repairs	575	531	525		
Vehicle Operations	10,133	7,472	9,006		
Professional Services	1,438	2,247	2,431		
Contracted Services	62,098	59,379	70,187		
Leased Facilities Expenses	194	193	193		
Financial Expenses	534	544	591		
Property Taxes	1,024	1,024	1,049		
Minor Assets & Equipment	127	127	100		
Major Repairs & Renovations	236	246	306		
Contribution to Reserves / Reserve Funds	6,652	6,627	6,628		
Headquarters Shared Costs	889	889	1,283		
Operating Expenses Subtotal	140,034	136,232	153,095	16,863	12.4%


Financial Details: Summary by Account (\$,000's)

Provides the gross expenditures and revenues - including both operating and capital - and the resulting net property tax requirement

	2022 Estimated Actuals	2022 Approved Budget (Restated)	2023 Proposed Budget	Variance	
				\$	%
Internal Transfers & Recoveries					
NextGen Charges	26	26	26		
Communication Charge	71	71	72		
Departmental Charges	1,460	1,460	1,544		
Corporate HR Charge	50	50	50		
Works - General Tax Charge	338	338	338		
Works - Ajax WSP	2	2	2		
Recovery - Social Housing	(133)	(133)	(134)		
Recovery - Regional Environmental Lab	(50)	(50)	(50)		
Recovery - Fleet	(12,867)	(12,867)	(14,474)		
Internal Transfers & Recoveries Subtotal	(11,103)	(11,103)	(12,626)	(1,523)	(13.7%)
Gross Operating Expenses	128,931	125,129	140,469	15,340	12.3%
Capital Expenses					
New	1,242	1,231	15,773		
Replacement	17,662	17,662	14,866		
Major Capital	157,960	399,960	184,278		
Capital Expenses Subtotal	176,864	418,853	214,917	(203,936)	(48.7%)
Total Expenses	305,795	543,982	355,386	(188,596)	(34.7%)
Operating Revenue					
Provincial Subsidy General	(8,402)	(8,397)	(8,267)		
Fees & Service Charges	(13,201)	(12,828)	(12,136)		
Sale of Publications	(892)	(605)	(1,081)		
Rents	(37)	(55)	(55)		
Sundry Revenue	(7,643)	(8,323)	(8,441)		
Revenue from Municipalities	(4,465)	(4,398)	(4,878)		
Investment & Interest Income	(110)	(110)	(110)		
Reserve Fund Financing for Operations	(9)	(9)	(9)		
Revenue from Related Entities	(39)	(160)	(320)		
Operating Revenue Subtotal	(34,798)	(34,885)	(35,297)	(412)	(1.2%)

Financial Details: Summary by Account (\$,000's)

Provides the gross expenditures and revenues - including both operating and capital - and the resulting net property tax requirement

	2022 Estimated Actuals	2022 Approved Budget (Restated)	2023 Proposed Budget	Variance	
				\$	%
Capital Financing					
ICIP Grant	(19,513)	(19,513)	(57,665)		
Federal Grant (Clean Fuels)	-	(70,000)	-		
Federal Grant (NRCan)	(58)	(58)	-		
Grant - Capital	(568)	(568)	-		
Roads - Residential DC	(51,633)	(51,633)	(41,108)		
Roads - Commercial DC	(5,855)	(5,855)	(4,698)		
Roads - Industrial DC	(10,000)	(10,000)	(5,000)		
Canada Community-Building Fund (Federal Gas Tax)	(15,117)	(25,117)	(18,275)		
Equipment Replacement Reserve	(5,185)	(5,185)	(7,679)		
Regional Roads Reserve	(10,260)	(10,260)	(8,892)		
Transit Capital Reserve Fund	(3,604)	(3,604)	(7,474)		
Waste Management Reserve Fund	-	(32,700)	(1,000)		
Roads Rehabilitation Reserve Fund	(27,210)	(27,210)	(27,710)		
Bridge Rehabilitation Reserve Fund	(5,525)	(5,525)	(5,525)		
Capital Impact Stabilization Reserve Fund	(12,196)	(12,196)	(5,847)		
Vision Zero Reserve Fund	(725)	(725)	(675)		
Recoveries from Others	(1,300)	(1,300)	(55)		
Region of Durham Debenture	-	(129,300)	(15,667)		
Capital Financing Subtotal	(168,749)	(410,749)	(207,270)	203,479	(49.5%)
Total Revenues and Financing	(203,547)	(445,634)	(242,567)	203,067	(45.6%)
Property Tax Requirement Works Department	102,248	98,348	112,819	14,471	14.7%

Financial Details: Summary by Program (\$,000's)

Provides the total operating expense, capital expense, subsidy, other revenue and the resulting property tax requirement for each major program and service

	2022 Estimated Actuals	2022 Approved Budgets (000)'s					2023 Proposed Budgets (000)'s					Variance	
		Operating Expenses	Gross Capital	Subsidy Funding	Other Funding	Approved Budget	Operating Expenses	Gross Capital	Subsidy Funding	Other Funding	Proposed Budget	\$	%
Regional Roads and Infrastructure													
1 Winter Control	15,435	11,326	-	-	-	11,326	11,803	-	-	-	11,803	477	
2 Roadside Maintenance	5,428	5,041	-	-	(75)	4,966	5,199	-	-	(85)	5,114	148	
3 Storm Sewers	125	163	-	-	(3)	160	198	-	-	(3)	195	35	
4 Traffic Signals and Systems	2,381	3,045	-	-	(800)	2,245	3,209	-	-	(999)	2,210	(35)	
5 Traffic Signs, Markings and Roadside Protection	3,817	3,788	-	-	(1,104)	2,685	3,856	-	-	(1,058)	2,798	113	
6 Traffic Engineering and Central Control System	3,749	5,418	-	-	(712)	4,706	6,026	-	-	(752)	5,274	568	
7 Engineering and Staff Support	5,299	7,515	382	-	(665)	7,231	8,806	381	-	(787)	8,400	1,169	
8 Facilities Management	4,543	4,810	12,651	(27)	(12,280)	5,154	5,197	21,672	-	(21,570)	5,299	145	
9 Regional Forest	-	240	-	-	(240)	-	237	-	-	(237)	-	-	
10 Depot Operations	5,099	5,143	331	-	(332)	5,142	5,907	21	-	(337)	5,591	449	
11 Fleet Operations	1	-	5,155	-	(5,155)	-	(6)	7,685	-	(7,679)	-	-	
12 Fleet Clearing	-	-	-	-	-	-	-	-	-	-	-	-	
13 Payroll Clearing	208	-	-	-	-	-	-	-	-	-	-	-	
14 Administration	414	464	-	-	-	464	505	-	-	-	505	41	
15 Headquarters Shared Cost - Regional Roads and Infrastructure Portion	667	667	-	-	-	667	767	-	-	-	767	100	
16 Construction of Municipal Services	6,200	-	157,510	(20,082)	(131,228)	6,200	-	183,278	-	(177,078)	6,200	-	
Regional Roads and Infrastructure Subtotal	53,366	47,620	176,029	(20,109)	(152,594)	50,946	51,704	213,037	-	(210,585)	54,156	3,210 6.3%	
Solid Waste Management													
1 Oshawa Waste Management Facility	385	3,322	107	(187)	(3,037)	205	3,383	257	(317)	(2,986)	337	132	
2 Scugog Waste Management Facility	38	947	-	(132)	(868)	(53)	998	-	(157)	(853)	(12)	41	
3 Brock Waste Management Facility	139	610	-	(116)	(351)	143	632	-	(119)	(369)	144	1	
4 Pickering Waste Management Facility	45	148	-	(119)	(12)	17	202	-	(112)	(11)	79	62	
5 Clarington Environmental Facility	122	239	-	(115)	(30)	94	255	-	(111)	(34)	110	16	
6 Durham Material Recovery Facility	-	369	-	-	(369)	-	369	-	-	(369)	-	-	
7 Durham York Energy Centre	9,813	21,755	20	(10)	(12,136)	9,629	24,148	-	-	(13,254)	10,894	1,265	

Financial Details: Summary by Program (\$,000's)

Provides the total operating expense, capital expense, subsidy, other revenue and the resulting property tax requirement for each major program and service

	2022 Estimated Actuals	2022 Approved Budgets (000)'s					2023 Proposed Budgets (000)'s					Variance	
		Operating Expenses	Gross Capital	Subsidy Funding	Other Funding	Approved Budget	Operating Expenses	Gross Capital	Subsidy Funding	Other Funding	Proposed Budget	\$	%
8 Collection Services													
(a) Garbage	5,600	5,408	-	-	-	5,408	6,841	-	-	-	6,841	1,433	
(b) Blue Box Curbside Recycle	12,261	11,775	-	-	-	11,775	13,859	-	-	-	13,859	2,084	
(c) Composting	3,900	3,708	-	-	-	3,708	5,049	-	-	-	5,049	1,341	
(d) Other Diversion	173	173	-	-	-	173	227	-	-	-	227	54	
9 Processing and Disposal Services													
(a) Garbage	2,218	2,090	-	-	-	2,090	2,866	-	-	-	2,866	776	
(b) Blue Box Curbside Recycle	4,775	4,775	-	-	-	4,775	6,179	-	-	-	6,179	1,404	
(c) Composting	8,400	7,834	-	-	-	7,834	8,986	-	-	-	8,986	1,152	
(d) Other Diversion	(4)	31	-	(10)	(26)	(4)	31	-	(21)	(27)	(17)	(13)	
(e) Diversion Promotional Items	381	381	-	-	-	381	477	-	-	-	477	96	
(f) Waste Composition Study	-	-	-	-	-	-	-	-	-	-	-	-	
10 Waste Administration	4,277	4,407	118	-	(21)	4,504	4,573	60	-	(22)	4,611	107	
11 Administration	463	473	-	-	-	473	503	-	-	-	503	30	
12 Facilities Management	2,370	2,357	129	(20)	-	2,465	2,458	563	-	-	3,021	556	
13 Headquarters Shared Cost - Solid Waste Management Portion	222	222	-	-	-	222	516	-	-	-	516	294	
14 Regional Corporate Costs	3,715	3,825	-	-	(110)	3,715	3,828	-	-	(110)	3,718	3	
15 Waste Management Centre	1,084	1,048	-	-	(89)	959	786	-	-	(114)	672	(287)	
16 Community Outreach	620	625	-	-	-	625	625	-	-	-	625	-	
17 Environmental Studies	350	394	-	-	-	394	395	-	-	-	395	1	
18 Blue Box Recoveries & Subsidies:													
(a) Industry Funding	(7,695)	-	-	(7,718)	-	(7,718)	-	-	(7,430)	-	(7,430)	288	
(b) Revenues - Diversion Materials	(5,220)	593	-	-	(5,455)	(4,862)	579	-	-	(4,566)	(3,987)	875	
19 Major Capital Projects	450	-	242,450	(70,000)	(172,000)	450	-	1,000	-	(1,000)	-	(450)	
Solid Waste Management Subtotal	48,882	77,509	242,824	(78,427)	(194,504)	47,402	88,765	1,880	(8,267)	(23,715)	58,663	11,261	23.8%
Works Department	102,248	125,129	418,853	(98,536)	(347,098)	98,348	140,469	214,917	(8,267)	(234,300)	112,819	14,471	14.7%

Financial Details: Summary of Capital (\$,000's)

Provides a summary of the current year capital budget, nine-year capital forecast and proposed financing summarized by asset type. See Appendices for specific capital projects

	2022 Approved Budget	2023 Proposed Budget	Forecast					Forecast Total
			2024	2025	2026	2027	2028-2032	
Regional Roads and Infrastructure								
Capital Expenditures								
Road / Structure Construction - Growth	61,260	39,570	60,058	89,863	81,800	89,450	402,221	723,392
Traffic Control & Other Programs - Growth	7,250	6,580	6,075	4,805	4,720	4,605	22,845	43,050
Transportation Plans & Studies - Growth	150	150	150	500	150	150	750	1,700
Investing in Canada Infrastructure Program (ICIP) Projects	32,310	78,638	50,422	5,455	-	-	-	55,877
Road Rehabilitation/Reconstruction Projects	38,660	38,660	47,000	47,000	47,000	47,000	235,000	423,000
Structure Rehabilitation / Replacement	12,760	13,725	25,555	16,660	14,510	14,435	53,485	124,645
Traffic Control & Other Programs - Non-Growth	3,435	3,740	3,648	3,539	3,487	3,460	18,855	32,989
Road & Traffic Safety Program (Vision Zero)	1,525	1,675	1,750	1,200	1,279	900	4,500	9,629
Cycling Infill Projects	160	540	900	900	1,000	1,000	7,500	11,300
Building & Structures	12,442	21,662	15,390	69,140	389	2,467	8,090	95,476
Machinery & Equipment	73	51	113	245	35	37	212	642
Information Technology Infrastructure	384	357	407	483	256	305	1,347	2,798
Vehicles	5,532	7,679	5,224	2,372	4,724	1,870	22,490	36,680
Furniture & Fixtures	88	10	136	10	11	10	20	187
Capital Expenditure Subtotal	176,029	213,037	216,828	242,172	159,361	165,689	777,315	1,561,365

Financial Details: Summary of Capital (\$,000's)

Provides a summary of the current year capital budget, nine-year capital forecast and proposed financing summarized by asset type. See Appendices for specific capital projects

	2022 Approved Budget	2023 Proposed Budget	Forecast					Forecast Total
			2024	2025	2026	2027	2028-2032	
Capital Financing								
General Levy	7,310	6,767	9,016	7,191	7,044	9,075	40,971	73,297
Equipment Replacement Reserve	5,185	7,679	3,787	2,259	4,571	1,814	22,188	34,619
Capital Impact Stabilization Reserve Fund	12,196	5,847	-	-	-	-	-	-
Roads Rehab Reserve Fund	27,210	27,710	44,914	39,474	37,672	36,570	173,215	331,845
Bridge Rehab Reserve Fund	5,525	5,525	6,964	5,525	5,525	5,525	27,625	51,164
Regional Roads Levy	10,260	8,892	11,122	22,830	17,185	26,993	112,527	190,657
Vision Zero Reserve Fund	725	675	650	500	379	-	-	1,529
Transit Capital Reserve Fund	3,604	7,474	5,700	400	-	-	-	6,100
Residential Development Charges	51,633	41,108	45,495	57,516	55,965	54,236	255,381	468,593
Commercial Development Charges	5,855	4,698	5,199	6,573	6,396	6,198	29,186	53,552
Institutional Development Charges	-	-	1,101	1,269	698	677	3,102	6,847
Industrial Development Charges	10,000	5,000	11,013	7,935	6,326	6,001	25,120	56,395
Canada Community-Building Fund (Federal Gas Tax)	15,117	18,275	17,600	17,600	17,600	17,600	88,000	158,400
Grant - Capital	568	-	-	-	-	-	-	-
Federal Grant (NRCan)	28	-	-	-	-	-	-	-
Investing in Canada Infrastructure Program (ICIP) Grant	19,513	57,665	36,975	4,000	-	-	-	40,975
Recoveries From Others ¹	1,300	55	2,625	100	-	1,000	-	3,725
Debentures - User Rate Funded	-	15,667	14,667	69,000	-	-	-	83,667
Capital Financing Subtotal	176,029	213,037	216,828	242,172	159,361	165,689	777,315	1,561,365
Total Capital Regional Roads and Infrastructure	176,029	213,037	216,828	242,172	159,361	165,689	777,315	1,561,365

¹ Recoveries from Others includes:
 2022 - \$1.3 million in contributions from CP Rail
 2023 - \$55 thousand in contributions from CN Rail
 2024 - \$2.625 million in contributions from CN Rail
 2025 - \$100 thousand in contributions from the County of Simcoe
 2027 - \$1.0 million in contributions from the County of Simcoe

Financial Details: Summary of Capital (\$,000's)

Provides a summary of the current year capital budget, nine-year capital forecast and proposed financing summarized by asset type. See Appendices for specific capital projects

Durham Budget	2023	2022 Approved Budget	2023 Proposed Budget	Forecast					Forecast Total
				2024	2025	2026	2027	2028-2032	
Solid Waste Management									
Capital Expenditures									
Building & Structures		242,260	1,510	7,701	21,125	4,500	2,450	365	36,141
Machinery & Equipment		143	310	707	257	257	107	535	1,863
Information Technology Infrastructure		100	60	67	74	68	57	341	607
Vehicles		20	-	300	-	-	-	-	300
Furniture & Fixtures		1	-	-	-	-	-	-	-
Studies		300	-	-	-	-	-	-	-
Landfill Remediation / Rehabilitation		-	-	-	1,000	6,448	125	3,650	11,223
Capital Expenditure Subtotal		242,824	1,880	8,775	22,456	11,273	2,739	4,891	50,134
Capital Financing									
General Levy		794	880	2,675	7,456	5,150	2,739	1,491	19,511
Climate Mitigation & Environment Reserve Fund		-	-	-	-	-	-	-	-
Waste Management Reserve Fund		32,700	1,000	6,100	15,000	6,123	-	3,400	30,623
Seaton Capital Reserve Fund		-	-	-	-	-	-	-	-
Canada Community-Building Fund (Federal Gas Tax)		10,000	-	-	-	-	-	-	-
Federal Grant (Clean Fuels)		70,000	-	-	-	-	-	-	-
Federal Grant (NRCan)		30	-	-	-	-	-	-	-
Debentures		129,300	-	-	-	-	-	-	-
Capital Financing Subtotal		242,824	1,880	8,775	22,456	11,273	2,739	4,891	50,134
Total Capital Solid Waste Management		242,824	1,880	8,775	22,456	11,273	2,739	4,891	50,134
Total Capital Works Department		418,853	214,917	225,603	264,628	170,634	168,428	782,206	1,611,499

Details of Budget Changes

Strategic Investments: Regional Roads and Infrastructure	2023 Impact (\$ 000's)
New positions – details of the 21.594 FTEs are provided in the Staffing Details section	1,024
Strategic Investments: Regional Roads and Infrastructure Subtotal	1,024
<hr/>	
Base Adjustments: Regional Roads and Infrastructure	2023 Impact (\$ 000's)
Economic increases	732
Annualization of 22.91 FTEs approved in the 2022 budget	880
Inflationary increases (fuel \$682k, utilities \$65k, materials and services \$437k)	1,184
Line-by-line savings	(710)
Increase in Works – Regional Roads and Infrastructure share of costs for the operation and maintenance of Regional Headquarters	100
Base Adjustments: Regional Roads and Infrastructure Subtotal	2,186
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Net Changes: Regional Roads and Infrastructure	3,210

Details of Budget Changes Continued

Strategic Investments: Solid Waste Management	2023 Impact (\$ 000's)
New positions – details of the 0.360 FTEs are provided in the Staffing Details section	31
Transfer of 3.0 FTEs to support Service Durham to centralize and improve the customer experience across all channels within the Region	(257)
Increase in operating costs at the DYEC (\$2,393k) which is partially offset by higher revenue from the sale of recovered materials (-\$164k), increase in projected power revenue (-\$478k) and a net increase in the recovery from York Region (-\$480k)	1,271
Increase in collection costs resulting from forecasted increase in stops based on Regional growth estimates	297
Decrease in processing costs due to revised tonnage estimates for blue box (-\$259k) and garbage (-\$78k)	(337)
Net decrease in the proceeds from the sale of cardboard, steel, aluminum, plastics and glass to end markets	911
Net decrease in Stewardship Ontario's Resource and Recovery Authority funding	130
Net increase in capital – see Appendix C for detailed project listing	86
Strategic Investments: Solid Waste Management Subtotal	2,132

Details of Budget Changes Continued

Base Adjustments: Solid Waste Management	2023 Impact (\$ 000's)
Economic increases	179
Annualization of 0.570 FTEs approved in the 2022 budget	26
Inflationary increases	8,699
Line-by-line saving	(69)
Increase in Works – Solid Waste Management share of costs for the operation and maintenance of Regional Headquarters	294
Base Adjustments: Solid Waste Management Subtotal	9,129
Net Changes: Regional Roads and Infrastructure	11,261
Net Changes: Works Department	14,471

Staffing Details

Regional Roads and Infrastructure	Full Time Equivalents (FTE's)
2022 Approved Complement	<u>433.214</u>
Positions Approved in Year	
Project Manager – this position is a conversion of a part-time position to support an increase in project delivery for depots, sewage treatment plants and water pumping stations, and major capital projects supporting corporate priorities (Note: this position is shared with Sanitary Sewerage, Water Supply and Waste Management) (as per Section 8.1 of the Budget Management Policy)	0.288
Total Positions Approved in Year	<u>0.288</u>
Proposed Position Transfers	
Project Manager - EMMS transferred from Financial Services to Systems Policies and Process. (Note: position is shared with Sanitary Sewerage and Water Supply)	0.160
Technical Assistant - EMMS transferred from Financial Services to Systems Policies and Process. (Note: position is shared with Sanitary Sewerage and Water Supply)	0.160
Works Technician 4 - Operations EMMS transferred from Financial Services to Systems Policies and Process. (Note: position is shared with Sanitary Sewerage and Water Supply)	0.160
Works Technician 3 - Operations EMMS transferred from Traffic Payroll Clearing to Systems Policies and Process. (Note: position is shared with Sanitary Sewerage and Water Supply)	(0.590)
Total Position Transfer	<u>(0.110)</u>

Staffing Details Continued

Proposed New Positions

Senior Project Coordinator – to provide business support for Fleet Services tenders, contracts, and specifications	1.000
Stockkeeper – to provide maintenance operations support at the Oshawa Depot to maintain current on-demand parts requests and to manage the onsite inventory of parts and supplies	1.000
Contract Coordinator DCAM – to provide administrative support and coordination for Housing and DRLHC projects	1.000
Supervisor DCAM - to support increase in project delivery for depots, sewage treatment plants and water pumping stations, and major capital projects supporting corporate priorities (Note: this position is shared with Sanitary Sewerage, Water Supply and Waste Management)	0.288
Emergency Management Coordinator – to support emergency management programs and initiatives corporately and departmentally as a dedicated liaison with Durham Emergency Management (Note: this position is shared with Sanitary Sewerage, Water Supply and Waste Management)	0.250
Business Analyst - to provide business support for the Enterprise Maintenance Management System (Note: this position is shared with Sanitary Sewerage and Water Supply)	0.410
Inspector 3 - to support the projects in the Construction Division and reduce reliance on consulting services and temporary staff (Note: this position is shared with Sanitary Sewerage and Water Supply)	0.358
Inspector 3 – to provide operational support to Bus Rapid Transit and ICIP funded projects in delivering transit infrastructure and transit expansion initiatives	1.000

Staffing Details Continued

Project Manager – to provide operational support to Bus Rapid Transit and ICIP funded projects in delivering transit infrastructure and transit expansion initiatives	1.000
Labourer – conversion of temporary labourer positions at the Orono, Oshawa/Whitby, and Sunderland Depots to support program operations	4.000
Medium Equipment Operator – required position to support the proposed purchase of Vactor 2100 combination sewer jet/vacuum at the Oshawa/Whitby Depot	1.000
Skilled Maintenance Worker – to provide support for the Ontario One Call locates requests and to ensure compliance with legislated requirements (Ontario Underground Infrastructure Notification System Act, 2012) and as recommended by the consultants from their review of the underground locates program	10.000

Total Proposed New Positions	<u>21.306</u>
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Regional Roads Infrastructure Subtotal	454.698
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Staffing Details Continued

Solid Waste Management	Full Time Equivalents (FTE's)
2022 Approved Complement	<u>76.765</u>
Positions Approved in Year	
Project Manager – this position is a conversion of a part-time position to support an increase in project delivery for depots, sewage treatment plants and water pumping stations, and major capital projects supporting corporate priorities (Note: this position is shared with Sanitary Sewerage, Water Supply and General Tax) (as per Section 8.1 of the Budget Management Policy)	0.055
Total Positions Approved in Year	<u>0.055</u>
Proposed Position Transfers	
Project Manager - EMMS transferred from Financial Services to Systems Policies and Process. (Note: position is shared with General Tax, Sanitary Sewerage and Water Supply)	(0.100)
Technical Assistant - EMMS transferred from Financial Services to Systems Policies and Process. (Note: position is shared with Sanitary Sewerage and Water Supply)	(0.100)
Works Technician 4 - Operations EMMS transferred from Financial Services to Systems Policies and Process. (Note: position is shared with General Tax, Sanitary Sewerage and Water Supply)	(0.100)
Waste Clerk 2 transferred from Waste Administration to support Service Durham to centralize and improve the customer experience across all channels within the Region	(3.000)
Total Position Transfer	<u>(3.300)</u>

Staffing Details Continued

Proposed New Positions

Supervisor DCAM - to support increase in project delivery for depots, sewage treatment plants and water pumping stations, and major capital projects supporting corporate priorities (Note: this position is shared with Sanitary Sewerage, Water Supply and General Tax)	0.055
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Emergency Management Coordinator – to support emergency management programs and initiatives corporately and departmentally as a dedicated liaison with Durham Emergency Management (Note: this position is shared with Sanitary Sewerage, Water Supply and General Tax)	0.250
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Total Proposed New Positions	<u>0.305</u>
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Solid Waste Management Subtotal	73.825
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Total Complement: Works Department	528.523
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Looking Forward

The Works Department provides public infrastructure and services including Regional roads, reliable solid waste services, and support for residents, businesses, and institutions so that healthy and sustainable communities thrive. To support these commitments the Region continues to modernize operations through a variety of initiatives including:


- ongoing implementation of Vision Zero safety plan initiatives;
- implementing climate mitigation and GHG reduction strategies and measures, including a proposed green roof at Regional Headquarters, piloting of low water/low mow and naturalized landscaping at Regional locations, conversion of the Region's fleet of vehicles and equipment to lower carbon options and pursuing deep energy retrofit projects;
- refinement of design standards for Regional construction projects to further protect the natural environment and incorporate compliance measures related to the Excess Soil Management Regulation;
- expansion and renewal of Regional infrastructure to ensure service levels keep pace with growth;
- continued delivery of projects supporting the Community Housing Portfolio Revitalization work, advancing the At Home In Durham goals and objectives, and implementing the facility recommendations for various master plans, including the Master Plan for Paramedic Services, the Transit Master Plan, and the Depot Modernization and Rationalization plan;
- the utilization of technology such as artificial intelligence, sensors, drones, sonar and submersible cameras for inspections and assessments; and innovative mapping technology;
- continued shift to digitized public facing services to enhance the experience of residents and business that access services provided by the Works Department, such as continued addition of permits to the system;
- utilizing asset lifecycle data to forecast state of good repair needs for Regional assets collected through the Enterprise Maintenance Management System;
- ongoing Workplace Modernization work, including construction of Phases 2 and 3 at Regional Headquarters, review and rationalization of the current building portfolio and implementation of Workplace Modernization principles;
- introduction and expansion of advanced technologies and countermeasures to relieve traffic congestion; and

Looking Forward Continued

- presentation and implementation of the Durham Building Standard, providing guidelines related to energy efficiency, greenhouse gas emissions and reductions, and incorporation of amenities that support diversity and inclusion in the workplace for all projects related to the construction or renovation/retrofit of Regional facilities.


Appendix A: 2023 Regional Roads and Infrastructure Capital Projects (\$,000's)

Provides financing details for capital projects proposed in 2023. See Appendix B for the comprehensive 2023 capital budget and 2024-2032 forecast

		Quantity	New / Replacement	2023 Proposed Financing								2023 Proposed Budget	Approved Funding Prior to 2023	Forecast 2024-2032	Total Project to 2032
Other	Reserve/ Reserve Funds			Industrial DCs	Institutional DCs	Commercial DCs	Residential DCs	Subsidy /Grant	Debenture	General Levy					
Regional Roads and Infrastructure															
Road / Structure Construction - Growth															
5	Reg. Rd. 1, Brock Rd. / 7th Concession Rd. Intersection, Intersection modifications, Pickering	-	-	19	26	-	11	95	-	-	-	151	350	5,600	6,101
8	Reg. Rd. 2, Simcoe St. / Shirley Rd. Intersection, Intersection modifications, Scugog	-	-	24	36	-	14	126	-	-	-	200	300	5,600	6,100
10	Reg. Rd. 3, Winchester Rd. from Baldwin St. to Anderson St., Widen from 2 to 3 / 4 lanes including structure widening, Whitby	-	-	108	202	-	81	708	-	-	-	1,099	15,935	-	17,034
16	Reg. Rd. 4, Taunton Rd. / Anderson St. Intersection, Intersection modifications at Taunton Rd. / Anderson St. including Taunton Rd. / DDSB and Taunton Rd. / DRPS entrances, Whitby	-	-	177	270	-	108	945	-	-	-	1,500	3,120	-	4,620
17	Reg. Rd. 4, Taunton Rd. / Courtice Rd. Intersection, Reconstruct and modify intersection to a roundabout, Clarington	-	-	30	45	-	17	158	-	-	-	250	1,050	12,000	13,300
18	Reg. Rd. 4, Taunton Rd. / Bowmanville Ave. Intersection, Reconstruct and modify intersection to roundabout and replace and widen bridge on west leg of intersection, Clarington	-	-	1,341	-	-	324	2,835	-	-	-	4,500	12,830	-	17,330
21	Reg. Rd. 14, Liberty St. from Baseline Rd. to King St., Widen road from 2 to 3 lanes. Associated water supply and sanitary sewer works, Clarington	-	-	300	122	-	49	428	-	-	-	899	1,301	7,400	9,600
22	Reg. Rd. 14, Liberty St. from Longworth Ave. to Concession Rd. 3, Road rehabilitation including roundabout at Concession Rd. 3 intersection and signalization and modifications at Liberty Street and Freeland Ave. - Bons Ave. (combined with item 110) Associated water supply works, Clarington	-	-	190	290	-	116	1,014	-	-	-	1,610	4,750	-	6,360

Appendix A: 2023 Regional Roads and Infrastructure Capital Projects (\$,000's)

Provides financing details for capital projects proposed in 2023. See Appendix B for the comprehensive 2023 capital budget and 2024-2032 forecast

		Quantity	New / Replacement	2023 Proposed Financing								2023 Proposed Budget	Approved Funding Prior to 2023	Forecast 2024-2032	Total Project to 2032	
				Other	Reserve/ Reserve Funds	Industrial DCs	Institutional DCs	Commercial DCs	Residential DCs	Subsidy /Grant	Debenture					General Levy
30	Reg. Rd. 22, Victoria St. / Brock St. Intersection, Intersection modifications, Whitby	-		-	9	14	-	6	50	-	-	-	79	220	4,500	4,799
31	Reg. Rd. 22, Victoria St. from South Blair St. to west of Thickson Rd., Construct new alignment and widen road to 5 lanes. Associated water supply - feedermain works, Whitby	-		-	283	432	-	173	1,512	-	-	-	2,400	17,011	-	19,411
34	Reg. Rd. 22, Bloor St. from east of Harmony Rd. to Grandview St., Realignment and widen existing road to 4 / 5 lanes with new CP Rail grade separation, Oshawa	-		-	6	29	-	12	103	-	-	-	150	5,152	18,000	23,302
36	Reg. Rd. 23, Lake Ridge Rd. from Bayly St. to Kingston Rd. - Dundas St., Widen from 2 to 4 / 5 lanes, Ajax / Whitby	-		-	213	110	-	44	383	-	-	-	750	2,660	12,700	16,110
37	Reg. Rd. 23, Lake Ridge Rd. from Kingston Rd. - Dundas St. to Rossland Rd., Widen from 2 to 4 / 5 lanes. 2026: Lake Ridge Road and Rossland Road Intersection 2031: Widen from north of Kingston Rd. / Dundas St. to south of Rossland Road, Ajax / Whitby	-		-	89	125	-	50	436	-	-	-	700	900	18,900	20,500
38	Reg. Rd. 26, Thickson Rd. from Wentworth St. to C.N. Rail Kingston, Reconstruct and widen road from 2 to 4 lanes, Whitby	-		-	138	258	-	102	902	-	-	-	1,400	5,900	-	7,300
41	Reg. Rd. 26, Thickson Rd. from Taunton Rd. to Hwy. 407, Widen road from 2 to 4 / 5 lanes, Whitby	-		-	108	182	-	73	637	-	-	-	1,000	1,000	28,000	30,000
47	Reg. Rd. 28, Rossland Rd. from Ritson Rd. to Harmony Rd., Widen road from 3 to 5 lanes, including structure widening. Associated water supply works, Oshawa	-		-	58	159	-	63	555	-	-	-	835	1,100	17,500	19,435
49	Reg. Rd. 29, Liverpool Rd. from Hwy. 401 to Kingston Rd., Widen from 5 to 6 / 7 lanes. Associated water supply works, Pickering	-		-	39	83	-	33	290	-	-	-	445	600	6,800	7,845


Appendix A: 2023 Regional Roads and Infrastructure Capital Projects (\$,000's)

Provides financing details for capital projects proposed in 2023. See Appendix B for the comprehensive 2023 capital budget and 2024-2032 forecast

		Quantity	New / Replacement	2023 Proposed Financing								2023 Proposed Budget	Approved Funding Prior to 2023	Forecast 2024-2032	Total Project to 2032	
Other	Reserve/ Reserve Funds			Industrial DCs	Institutional DCs	Commercial DCs	Residential DCs	Subsidy /Grant	Debenture	General Levy						
56	Reg. Rd. 36, Hopkins St. from Consumers Dr. to Dundas St., Widen from 2 to 3 lanes, with new CPR grade separation. Associated water supply and sanitary sewer works, Whitby	-		-	45	124	-	49	432	-	-	-	650	600	19,800	21,050
57	Reg. Rd. 37, Finch Ave. from Altona Rd. to Brock Rd., Widen from 2 to 3 lanes. Associated water supply and sanitary sewer works, Pickering	-		-	824	240	-	96	840	-	-	-	2,000	500	34,500	37,000
60	Reg. Rd. 38, Whites Rd. from Finch Ave. to approximately 0.3 km south of Third Concession Rd., Widen from 2 to 6 lanes to add HOV lanes, with new CPR grade separation. The Region's portion shown is for 75% of the project cost. Seaton Landowners responsible for 25% of the project cost, Pickering	-		-	224	199	-	80	697	-	-	-	1,200	-	49,700	50,900
63	Reg. Rd. 42, Darlington - Clark Townline Rd. / Reg. Hwy. 2 Intersection, Intersection modifications, Clarington	-		-	35	54	-	22	189	-	-	-	300	200	5,600	6,100
66	Reg. Rd. 53, Stevenson Rd. from CPR Belleville to Bond St., Widen road from 4 to 5 lanes. Associated water supply (Hwy. 401 - Bond St.) and sanitary sewer works, Oshawa	-		-	32	75	-	30	263	-	-	-	400	1,100	11,600	13,100
67	Reg. Rd. 53, Stevenson Rd. from Bond St. to Rossland Rd., Widen road from 3 / 4 to 5 lanes. Associated water supply works, Oshawa	-		-	180	45	-	18	157	-	-	-	400	800	19,100	20,300
68	Reg. Rd. 55, Townline Rd. from Beatrice St. to Taunton Rd., Widen and urbanize road from 2 to 3 lanes from Whitelaw Ave. to Taunton Rd. and storm sewer from Beatrice St. to Taunton Rd., Oshawa / Clarington	-		-	29	35	-	14	122	-	-	-	200	2,650	2,530	5,380


Appendix A: 2023 Regional Roads and Infrastructure Capital Projects (\$,000's)

Provides financing details for capital projects proposed in 2023. See Appendix B for the comprehensive 2023 capital budget and 2024-2032 forecast

		Quantity	New / Replacement	2023 Proposed Financing							2023 Proposed Budget	Approved Funding Prior to 2023	Forecast 2024-2032	Total Project to 2032		
				Other	Reserve/ Reserve Funds	Industrial DCs	Institutional DCs	Commercial DCs	Residential DCs	Subsidy /Grant					Debenture	General Levy
69	Reg. Rd. 57, Bowmanville Ave. from Baseline Rd. to south of Reg. Hwy. 2, Widen road from 2 to 4 lanes from Baseline Rd. to S. of Hwy. 2, including structure widening. Associated water supply and sanitary sewer works, Clarington	-		-	112	100	-	40	349	-	-	-	601	3,300	35,300	39,201
70	Reg. Rd. 57, Bowmanville Ave. from north of Stevens Rd. to Nash Rd., Widen road from 2 to 4 lanes from north of Stevens Rd. to Nash Rd. Associated sanitary sewer works, Clarington	-		-	89	186	-	74	651	-	-	-	1,000	-	12,600	13,600
72	Reg. Rd. 57, Bowmanville Ave. / Concession 7 Intersection, Intersection modifications, Clarington	-		-	6	9	-	4	32	-	-	-	51	450	5,600	6,101
73	Reg. Rd. 58, Manning Rd. / Adelaide Ave. Connection from Garrard Rd. to Thornton Rd., Construct new road to 3 lanes with new crossing of Corbett Creek. Associated water supply works, Whitby / Oshawa	-		-	30	198	-	79	693	-	-	-	1,000	11,360	17,200	29,560
74	Reg. Rd. 58, Adelaide Ave. from Townline Rd. to Trulls Rd., Construct new bridge crossing of Farewell Creek and construct new 3 lane road. Associated sanitary sewer works, Clarington	-		-	2,310	-	-	840	7,350	-	-	-	10,500	1,500	32,250	44,250
75	Reg. Rd. 59, Gibb St. from east of Stevenson Rd. to Simcoe St., Widen road from 3 to 4 lanes. Associated water supply and sanitary sewer works, Oshawa	-		-	913	426	-	170	1,491	-	-	-	3,000	23,630	21,500	48,130
78	Reg. Hwy. 2 / Lambs Rd. Intersection, Intersection modifications, Clarington	-		-	35	54	-	22	189	-	-	-	300	200	5,600	6,100
Road / Structure Construction - Growth Subtotal				-	7,996	4,128	-	2,814	24,632	-	-	-	39,570	120,469	409,880	569,919


Appendix A: 2023 Regional Roads and Infrastructure Capital Projects (\$,000's)

Provides financing details for capital projects proposed in 2023. See Appendix B for the comprehensive 2023 capital budget and 2024-2032 forecast

		Quantity	New / Replacement	2023 Proposed Financing								2023 Proposed Budget	Approved Funding Prior to 2023	Forecast 2024-2032	Total Project to 2032	
				Other	Reserve/ Reserve Funds	Industrial DCs	Institutional DCs	Commercial DCs	Residential DCs	Subsidy /Grant	Debenture					General Levy
Traffic Control & Other Programs - Growth																
82	Bridge and Pavement Management Program, Various	-		-	7	72	-	29	251	-	-	41	400	400	3,600	4,400
83	Signal Installation Program, Various	-		-	696	116	-	196	1,717	-	-	-	2,725	2,200	20,450	25,375
84	Intelligent Transportation System (ITS) Projects, Various	-		-	77	118	-	47	413	-	-	-	655	600	5,400	6,655
85	Engineering Activities, Various	-		-	8	81	-	32	284	-	-	45	450	450	4,050	4,950
86	Property Acquisition, Various	-		-	35	54	-	22	189	-	-	-	300	500	1,500	2,300
87	Roadside Landscaping Projects, Various	-		-	3	27	-	11	94	-	-	15	150	200	1,350	1,700
88	Contingencies Development Related, Various	-		-	35	54	-	22	189	-	-	-	300	300	2,700	3,300
89	Regional Share of Services for Residential Subdivision Development, Various	-		-	32	320	-	128	1,120	-	-	-	1,600	2,600	4,000	8,200
Traffic Control & Other Programs - Growth Subtotal				-	893	842	-	487	4,257	-	-	101	6,580	7,250	43,050	56,880
Transportation Plans & Studies - Growth																
90	Transportation Plans and Studies, Various	-		-	3	30	-	12	105	-	-	-	150	150	1,700	2,000
Transportation Plans & Studies - Growth Subtotal				-	3	30	-	12	105	-	-	-	150	150	1,700	2,000


Appendix A: 2023 Regional Roads and Infrastructure Capital Projects (\$,000's)

Provides financing details for capital projects proposed in 2023. See Appendix B for the comprehensive 2023 capital budget and 2024-2032 forecast

		Quantity	New / Replacement	2023 Proposed Financing							2023 Proposed Budget	Approved Funding Prior to 2023	Forecast 2024-2032	Total Project to 2032		
				Other	Reserve/ Reserve Funds	Industrial DCs	Institutional DCs	Commercial DCs	Residential DCs	Subsidy /Grant					Debenture	General Levy
Investing in Canada Infrastructure Program (ICIP) Projects																
91	Reg. Hwy. 2, Kingston Rd. from Altona Rd. to Notion Rd., Bus Rapid Transit Lanes, Pickering	-		-	4,355	-	-	1,180	10,324	43,606	-	-	59,465	17,710	34,955	112,130
92	Reg. Hwy. 2, Kingston Road - Dundas Street (Various Locations), Bus Rapid Transit Lanes (DC Elig), Ajax / Whitby / Oshawa	-		-	879	-	-	205	1,790	7,899	-	-	10,773	14,400	20,922	46,095
93	Reg. Hwy. 2, Kingston Road - Dundas Street (Various Locations), Bus Rapid Transit Lanes (DC Inelig), Ajax / Whitby / Oshawa	-		-	2,240	-	-	-	-	6,160	-	-	8,400	200	-	8,600
Investing in Canada Infrastructure Program (ICIP) Projects Subtotal				-	7,474	-	-	1,385	12,114	57,665	-	-	78,638	32,310	55,877	166,825
Road Rehabilitation / Reconstruction Projects																
94	Reg. Rd. 1, Brock Rd. from 0.2 km north of Uxbridge / Pickering Townline Rd to 1.2 km north of Webb Rd., Road rehabilitation, Uxbridge	-		3,500	-	-	-	-	-	-	-	-	3,500	-	-	3,500
95	Reg. Rd. 1, Conc. Rd. 7 from Reg. Rd. 11 to 0.4 km north of Ashworth Rd., Road rehabilitation / reconstruction, Uxbridge	-		-	3,100	-	-	-	-	-	-	-	3,100	9,560	-	12,660
96	Reg. Rd. 1, Conc. Rd. 7 from Foster Dr. to south limit of Leaskdale, Road rehabilitation / reconstruction, Uxbridge	-		-	1,250	-	-	-	-	-	-	-	1,250	7,980	-	9,230
97	Reg. Rd. 2, Simcoe St. from Olive Ave. to north of John St., Road rehabilitation / reconstruction in conjunction with water / sewer project, Oshawa	-		-	1,250	-	-	-	-	-	-	-	1,250	1,575	-	2,825
98	Reg. Rd. 3, Grandview St. N. from Hwy. 407 to Columbus Rd. E. and Columbus Rd. E. from Grandview St. N. to Townline Rd. N., Road rehabilitation / reconstruction, Oshawa	-		-	293	-	-	-	-	-	-	-	293	6,707	-	7,000


Appendix A: 2023 Regional Roads and Infrastructure Capital Projects (\$,000's)

Provides financing details for capital projects proposed in 2023. See Appendix B for the comprehensive 2023 capital budget and 2024-2032 forecast

		Quantity	New / Replacement	2023 Proposed Financing								2023 Proposed Budget	Approved Funding Prior to 2023	Forecast 2024-2032	Total Project to 2032	
				Other	Reserve/ Reserve Funds	Industrial DCs	Institutional DCs	Commercial DCs	Residential DCs	Subsidy /Grant	Debenture					General Levy
99	Reg. Rd. 3 from Townline Rd. N. to Enfield Rd., Road rehabilitation / reconstruction, Clarington	-		-	300	-	-	-	-	-	-	-	300	5,100	2,500	7,900
100	Reg. Rd. 4, Taunton Rd. from east of Townline Rd. to west of Enfield Rd., Road rehabilitation, Clarington	-		4,600	500	-	-	-	-	-	-	-	5,100	6,573	-	11,673
101	Reg. Rd. 4, Taunton Rd. from 0.4 km west of Solina Rd. to 0.2 km west of Bowmanville Ave., Road rehabilitation. 2023: West of Holt Rd. to Maple Grove Rd. 2024: West of Solina Rd. to Hwy. 418. 2025: Maple Grove Rd. to 0.2 km west of Bowmanville Ave. in conjunction with rehabilitation / replacing bridge 0.2 km west of Old Scugog Rd (Hampton Bridge), Clarington	-		-	750	-	-	-	-	-	-	-	750	1,170	22,050	23,970
102	Reg. Rd. 4, Taunton Rd. from Reg. Rd. 17 to 0.1 km west of Tamblin Rd., Road rehabilitation and intersection modifications at Reg. Rd. 17 - Best Rd., Clarington	-		-	200	-	-	-	-	-	-	-	200	300	3,000	3,500
106	Reg. Rd. 8, Reach St. from east of Old Simcoe St. to Bigelow St., Road rehabilitation / reconstruction, Scugog	-		-	350	-	-	-	-	-	-	-	350	200	3,100	3,650
107	Reg. Rd. 9, Ganaraska Rd. from 2.0 km east of Maynard Rd. to 0.4 km east of Newtonville Rd., Road rehabilitation / reconstruction in combination with Newtonville Rd., Clarington	-		-	250	-	-	-	-	-	-	-	250	450	4,000	4,700
108	Reg. Rd. 13, Zephyr Rd. from Conc. 3 (Reg. Rd. 39) to Conc. 4, Road rehabilitation / reconstruction, Uxbridge	-		-	1,700	-	-	-	-	-	-	-	1,700	7,350	-	9,050


Appendix A: 2023 Regional Roads and Infrastructure Capital Projects (\$,000's)

Provides financing details for capital projects proposed in 2023. See Appendix B for the comprehensive 2023 capital budget and 2024-2032 forecast

		Quantity	New / Replacement	2023 Proposed Financing								2023 Proposed Budget	Approved Funding Prior to 2023	Forecast 2024-2032	Total Project to 2032
				Other	Reserve/ Reserve Funds	Industrial DCs	Institutional DCs	Commercial DCs	Residential DCs	Subsidy /Grant	Debenture				
109	Reg. Rd. 13 from Lake Ridge Rd. to 1.5 km west of Hwy. 7 / 12, Road rehabilitation / reconstruction including modifications to the profile. 2023 road reconstruction from 0.85 km west of Sideroad 17 to 0.415 km east of Sideroad 17. 2024 road reconstruction from 0.415 km east of Sideroad 17 to 1.5 km west of Hwy. 7 / 12, Brock	-		-	2,810	-	-	-	-	-	-	2,810	20,970	5,530	29,310
110	Reg. Rd. 14, Liberty St. from Longworth Ave. to Concession Rd. 3, Road rehabilitation including roundabout at Concession Rd. 3 intersection and signalization and modifications at Liberty Street and Freeland Ave - Bons Ave. (combined with item 22) Associated water supply works, Clarington	-		-	4,910	-	-	-	-	-	-	4,910	50	-	4,960
111	Reg. Rd. 17, Main St. from Winter Rd. to Station St., Road rehabilitation / reconstruction. Associated water supply and sanitary sewer works, Clarington	-		-	500	-	-	-	-	-	-	500	300	8,400	9,200
112	Reg. Rd. 18, Newtonville Rd. from Kendal Bridge to Ganaraska Rd., Road rehabilitation / reconstruction in combination with Ganaraska Rd., Clarington	-		-	470	-	-	-	-	-	-	470	30	3,000	3,500
115	Reg. Rd. 23, Lake Ridge Rd. from 0.1 km south of Vallentyne to 0.25 km north of Ravenshoe Rd., Road rehabilitation and curve reconfiguration, Brock / Uxbridge	-		-	150	-	-	-	-	-	-	150	300	2,650	3,100
118	Reg. Rd. 28, Rossland Rd. from Park Rd. to Simcoe St., Road rehabilitation / reconstruction in conjunction with bridge rehabilitation. Associated water supply works, Oshawa	-		-	150	-	-	-	-	-	-	150	350	5,650	6,150
121	Reg. Rd. 56, Farewell St. from Harbour Rd. to Bloor St., Road rehabilitation / reconstruction. Associated water supply works, Oshawa	-		-	2,000	-	-	-	-	-	-	2,000	6,350	-	8,350


Appendix A: 2023 Regional Roads and Infrastructure Capital Projects (\$,000's)

Provides financing details for capital projects proposed in 2023. See Appendix B for the comprehensive 2023 capital budget and 2024-2032 forecast

		Quantity	New / Replacement	2023 Proposed Financing								2023 Proposed Budget	Approved Funding Prior to 2023	Forecast 2024-2032	Total Project to 2032	
				Other	Reserve/ Reserve Funds	Industrial DCs	Institutional DCs	Commercial DCs	Residential DCs	Subsidy /Grant	Debenture					General Levy
122	Reg. Rd. 59, Olive Ave. from Simcoe St. to Drew St., Road rehabilitation / reconstruction in conjunction with water / sewer project, Oshawa	-		-	125	-	-	-	-	-	-	125	700	-	825	
123	Reg. Rd. 60, Wentworth St. from Park Rd. to 0.125 km east of Cedar St., Road rehabilitation / reconstruction, Oshawa	-		-	300	-	-	-	-	-	-	300	-	1,500	1,800	
124	Reg. Rd. 60, Wentworth St. from Oshawa Creek Bridge to Farewell St., Road rehabilitation / reconstruction, Oshawa	-		-	2,150	-	-	-	-	-	-	2,150	4,000	13,000	19,150	
125	Reg. Hwy. 2 / Newtonville Rd. Intersection, Road rehabilitation / reconstruction, Clarington	-		-	450	-	-	-	-	-	-	450	-	-	450	
126	Road Resurfacing and Rehabilitation Preparatory Activities Allowance, Various	-		-	-	-	-	-	-	-	350	350	350	3,150	3,850	
127	Road and Structures Rehabilitation Program, Various	-		-	-	-	-	-	-	-	500	500	1,000	26,000	27,500	
128	Road Resurfacing / Rehabilitation Other Locations, Various	-		2,000	3,752	-	-	-	-	-	-	5,752	5,163	276,998	287,913	
Road Rehabilitation / Reconstruction Projects Subtotal					10,100	27,710	-	-	-	-	-	850	38,660	86,528	380,528	505,716


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		Quantity	New / Replacement	2023 Proposed Financing								2023 Proposed Budget	Approved Funding Prior to 2023	Forecast 2024-2032	Total Project to 2032	
				Other	Reserve/ Reserve Funds	Industrial DCs	Institutional DCs	Commercial DCs	Residential DCs	Subsidy /Grant	Debenture					General Levy
Structure Rehabilitation / Replacement																
129	Structure Investigation Program, Various	-	-	-	-	-	-	-	-	-	-	100	100	100	900	1,100
130	Bridge Maintenance and Repairs Program, Various	-	-	-	-	-	-	-	-	-	-	200	200	200	1,800	2,200
131	Expansion Joint Repairs Program, Various	-	-	-	-	-	-	-	-	-	-	60	60	60	540	660
132	Culvert Maintenance and Repairs Program, Various	-	-	-	-	-	-	-	-	-	-	150	150	150	1,350	1,650
134	Reg. Rd. 2, Simcoe St. Over Oshawa Creek Bridge, 0.7 km north of Taunton Rd., Bridge rehabilitation, Oshawa	-	-	2,050	-	-	-	-	-	-	-	-	2,050	-	-	2,050
136	Reg. Rd. 2, Seagrave Bridge, 0.55 km south of Saintfield Rd., Bridge rehabilitation, Scugog	-	-	-	50	-	-	-	-	-	-	-	50	150	2,950	3,150
140	Reg. Rd. 4, W.A. Twelvetrees Bridge, 0.3 km east of Whites Rd., Bridge rehabilitation of existing 4 lane structure, Pickering	-	-	-	230	-	-	-	-	-	-	-	230	220	5,400	5,850
143	Reg. Rd. 4, Hampton Bridge, 1.0 km west of Bowmanville Ave., Bridge rehabilitation / replacement in conjunction with road rehabilitation, Clarington	-	-	-	150	-	-	-	-	-	-	-	150	200	3,100	3,450
148	Reg. Rd. 5, Ninth Concession Rd. Over Duffins Creek Tributary Culvert, 0.05 km west of Sideline 12, Culvert rehabilitation, Pickering	-	-	-	100	-	-	-	-	-	-	-	100	-	1,000	1,100
151	Reg. Rd. 8 Over Pepperlaw Brook Bridge, 0.75 km west of Concession 3, Bridge replacement, Uxbridge	-	-	10	1,590	-	-	-	-	-	-	-	1,600	1,800	-	3,400
155	Reg. Rd. 8, Nonquon Bridge, 0.45km west of Hwy. 12, Bridge replacement, Scugog	-	-	-	150	-	-	-	-	-	-	-	150	3,050	-	3,200
156	Reg. Rd. 11, Sandford Rd. Bridge, 1.1 km west of Uxbridge Township Concession Road 3, Bridge replacement, Uxbridge	-	-	-	1,500	-	-	-	-	-	-	-	1,500	2,200	-	3,700


Appendix A: 2023 Regional Roads and Infrastructure Capital Projects (\$,000's)

Provides financing details for capital projects proposed in 2023. See Appendix B for the comprehensive 2023 capital budget and 2024-2032 forecast

		Quantity	New / Replacement	2023 Proposed Financing								2023 Proposed Budget	Approved Funding Prior to 2023	Forecast 2024-2032	Total Project to 2032	
				Other	Reserve/ Reserve Funds	Industrial DCs	Institutional DCs	Commercial DCs	Residential DCs	Subsidy /Grant	Debenture					General Levy
159	Reg. Rd. 13, Zephyr Rd. Bridge, 0.95 km west of Concession Road VI, Bridge replacement, Uxbridge	-		3,000	-	-	-	-	-	-	-	-	3,000	1,975	-	4,975
163	Reg. Rd. 16, Ritson Rd. Over CNR Bridge, 0.2 km south of Bloor St., Bridge rehabilitation. 50% of costs to be recovered from CNR as per Board Order No. 98034, Oshawa	-		55	55	-	-	-	-	-	-	-	110	240	5,250	5,600
171	Reg. Rd. 23, Lake Ridge Rd. Culvert 0.3 km north of Conc. Rd. 2, Culvert rehabilitation, Brock	-		-	100	-	-	-	-	-	-	-	100	-	1,200	1,300
172	Reg. Rd. 23, Beaverton Bridge, 50 m north of Simcoe St., Bridge rehabilitation, Brock	-		-	600	-	-	-	-	-	-	-	600	3,500	-	4,100
177	Reg. Rd. 28, Rossland Rd. Over Oshawa Creek, 0.45 km east of Park Rd., Bridge rehabilitation in conjunction with road rehabilitation / reconstruction, Oshawa	-		-	100	-	-	-	-	-	-	-	100	250	5,100	5,450
184	Reg. Rd. 33, Harmony Rd. Over CPR Bridge, 0.2 km south of Olive Ave., Bridge rehabilitation / replacement. Coordinate with Metrolinx extension to Bowmanville, Oshawa	-		-	200	-	-	-	-	-	-	-	200	-	3,300	3,500
186	Reg. Rd. 34, Courtice Road Over CPR Bridge, 0.3 km north of Baseline Rd., Bridge rehabilitation. Coordinate with Metrolinx extension to Bowmanville, Clarington	-		-	200	-	-	-	-	-	-	-	200	-	220	420
191	Reg. Rd. 53, Stevenson Rd. Over CPR Bridge, 0.4 km north of Laval Dr., Bridge rehabilitation / replacement. Coordinate with Metrolinx extension to Bowmanville, Oshawa	-		-	200	-	-	-	-	-	-	-	200	-	1,800	2,000
192	Reg. Rd. 54, Park Rd. Over CPR Bridge, 0.48 km south of Gibb St., Bridge rehabilitation. Coordinate with Metrolinx extension to Bowmanville, Oshawa	-		-	200	-	-	-	-	-	-	-	200	-	1,850	2,050

Appendix A: 2023 Regional Roads and Infrastructure Capital Projects (\$,000's)

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		Quantity	New / Replacement	2023 Proposed Financing								2023 Proposed Budget	Approved Funding Prior to 2023	Forecast 2024-2032	Total Project to 2032
				Other	Reserve/ Reserve Funds	Industrial DCs	Institutional DCs	Commercial DCs	Residential DCs	Subsidy /Grant	Debenture				
194	Reg. Rd. 57, Burketon CPR Bridge, 3.3 km south of Shirley Rd., Bridge Replacement, Clarington	-		2,575	-	-	-	-	-	-	-	2,575	5,000	-	7,575
197	Reg. Rd. 58, Adelaide Ave. Culvert, 0.05 km west of Wilson Rd., Culvert rehabilitation, Oshawa	-		-	100	-	-	-	-	-	-	100	-	1,300	1,400
Structure Rehabilitation / Replacement Subtotal				7,690	5,525	-	-	-	-	-	510	13,725	19,095	37,060	69,880
Traffic Control & Other Programs - Non-Growth															
200	Miscellaneous Road and Storm Sewer Reconstruction Projects, Various	-		-	-	-	-	-	-	-	-	400	400	400	4,400
201	Signal Modernization Program, Various	-		-	-	-	-	-	-	-	-	1,640	1,640	1,405	17,379
202	Accessible Pedestrian Signal (APS) Installation Program, Various	-		-	-	-	-	-	-	-	-	1,000	1,000	930	9,880
203	Advance Traffic Management Systems (ATMS) Upgrades, Various	-		-	-	-	-	-	-	-	-	100	100	100	1,905
204	Uninterruptible Power Supply (UPS) Installation Program, Various	-		-	-	-	-	-	-	-	-	500	500	500	5,500
205	Contingencies Non-Development Related, Various	-		-	-	-	-	-	-	-	-	100	100	100	1,100
Traffic Control & Other Programs - Non-Growth Subtotal				-	-	-	-	-	-	-	-	3,740	3,740	3,435	32,989
Road & Traffic Safety Program (Vision Zero)															
206	Roadside Safety Program, Various	-		-	-	-	-	-	-	-	-	1,000	1,000	800	9,900
207	Durham Vision Zero Program, Various	-		-	675	-	-	-	-	-	-	675	725	1,529	2,929
Road & Traffic Safety Program (Vision Zero) Subtotal				-	675	-	-	-	-	-	-	1,000	1,675	1,525	9,629
Cycling Infill Projects															
208	Cycling Infill Projects, Various	-		540	-	-	-	-	-	-	-	540	160	11,300	12,000
Cycling Infill Projects Subtotal				540	-	-	-	-	-	-	-	540	160	11,300	12,000

Appendix A: 2023 Regional Roads and Infrastructure Capital Projects (\$,000's)

Provides financing details for capital projects proposed in 2023. See Appendix B for the comprehensive 2023 capital budget and 2024-2032 forecast

		Quantity	New / Replacement	2023 Proposed Financing									2023 Proposed Budget	Approved Funding Prior to 2023	Forecast 2024-2032	Total Project to 2032
				Other	Reserve/ Reserve Funds	Industrial DCs	Institutional DCs	Commercial DCs	Residential DCs	Subsidy /Grant	Debenture	General Levy				
Building & Structures																
212	Depot Rationalization - Ajax Depot Expansion (Works General Tax Portion)	2	New	-	-	-	-	-	-	-	1,667	-	1,667	-	11,667	13,334
213	Depot Rationalization - New Oshawa/Whitby Depot (Works General Tax Portion)	3	New	-	-	-	-	-	-	-	12,667	-	12,667	-	56,667	69,334
214	Depot Rationalization - New Sunderland Depot (Works General Tax Portion)	3	New	-	-	-	-	-	-	-	1,333	-	1,333	-	15,333	16,666
217	Repairs and Epoxy Coat Fleet Bay Concrete Floors & Repairs to Floor Drains in Fleet Bays - Scugog Depot	1	Replacement	-	-	-	-	-	-	-	-	13	13	-	-	13
219	Roof Replacement on Vehicle Storage Bays - Orono Depot	1	Replacement	-	-	-	-	-	-	-	-	27	27	-	-	27
220	Thermal Glass Panels for Rollup Doors and Door operators - Orono Depot	1	Replacement	-	-	-	-	-	-	-	-	18	18	-	-	18
221	Widening of Existing Canopy Entrance - Sunderland Depot	1	Replacement	-	-	-	-	-	-	-	-	8	8	-	-	8
224	Access Ladder Repair/Replacement Project - Various Locations	2	Replacement	-	-	-	-	-	-	-	-	15	15	-	-	15
229	Renovation & Optimization - 101 Consumers (Traffic Portion)	2	Replacement	-	5,847	-	-	-	-	-	-	-	5,847	13,696	-	19,543
230	Replacement of Fire System - Oshawa/Whitby Depot	1	Replacement	-	-	-	-	-	-	-	-	67	67	-	-	67
Building & Structures Subtotal				-	5,847	-	-	-	-	-	15,667	148	21,662	13,696	83,667	119,025
Machinery & Equipment																
235	Bar Pullout Tester - Construction	1	New	-	-	-	-	-	-	-	-	4	4	-	-	4
236	Bench Oven - Construction	1	Replacement	-	-	-	-	-	-	-	-	5	5	-	-	5
237	Concrete End Grinder - Construction	1	New	-	-	-	-	-	-	-	-	8	8	-	-	8
240	Gyratory Compactor/Molds/Equipment - Construction	1	New	-	-	-	-	-	-	-	-	23	23	-	-	23

Appendix A: 2023 Regional Roads and Infrastructure Capital Projects (\$,000's)

Provides financing details for capital projects proposed in 2023. See Appendix B for the comprehensive 2023 capital budget and 2024-2032 forecast

Durham Budget 2023		Quantity	New / Replacement	2023 Proposed Financing									2023 Proposed Budget	Approved Funding Prior to 2023	Forecast 2024-2032	Total Project to 2032
				Other	Reserve/ Reserve Funds	Industrial DCs	Institutional DCs	Commercial DCs	Residential DCs	Subsidy /Grant	Debenture	General Levy				
241	Integrated Control Technology - Security Project - Various Locations	6	New	-	-	-	-	-	-	-	-	7	7	-	-	7
245	Nuclear Densometer - Construction	1	Replacement	-	-	-	-	-	-	-	-	4	4	-	-	4
Machinery & Equipment Subtotal				-	-	-	-	-	-	-	-	51	51	-	-	51
Information Technology Infrastructure																
256	Computers & Monitors Refresh - Financial Services	-	Replacement	-	-	-	-	-	-	-	-	208	208	-	-	208
257	dTIMS Software Upgrades - Transportation-Infrastructure	-	Replacement	-	-	-	-	-	-	-	-	120	120	-	-	120
261	Standard Laptops	16	New	-	-	-	-	-	-	-	-	27	27	-	-	27
262	Power Laptops	2	New	-	-	-	-	-	-	-	-	2	2	-	-	2
Information Technology Infrastructure Subtotal				-	-	-	-	-	-	-	-	357	357	-	-	357
Vehicles																
265	1 Ton Van - 289 Water St.	2	Replacement	-	300	-	-	-	-	-	-	-	300	-	-	300
266	1/2 Ton Pick-up Truck - Various Locations	9	Replacement	-	765	-	-	-	-	-	-	-	765	-	-	765
267	3 Ton Crew Cab - Various Locations	3	Replacement	-	570	-	-	-	-	-	-	-	570	-	-	570
269	3/4 Ton Van - Various Locations	6	Replacement	-	900	-	-	-	-	-	-	-	900	-	-	900
271	6 Ton Tandem - Various Locations	5	Replacement	-	3,000	-	-	-	-	-	-	-	3,000	-	-	3,000
273	Asphalt Hot Box - Oshawa/Whitby Depot	1	Replacement	-	65	-	-	-	-	-	-	-	65	-	-	65
275	Chain Saw - Various Locations	17	Replacement	-	34	-	-	-	-	-	-	-	34	-	-	34
276	Concrete Saw - Various Locations	31	Replacement	-	74	-	-	-	-	-	-	-	74	-	-	74
277	Cube Van - Various Locations	2	Replacement	-	350	-	-	-	-	-	-	-	350	-	-	350
278	Econo Van - Various Locations	7	Replacement	-	525	-	-	-	-	-	-	-	525	-	-	525


Appendix A: 2023 Regional Roads and Infrastructure Capital Projects (\$,000's)

Provides financing details for capital projects proposed in 2023. See Appendix B for the comprehensive 2023 capital budget and 2024-2032 forecast

	Quantity	New / Replacement	2023 Proposed Financing									2023 Proposed Budget	Approved Funding Prior to 2023	Forecast 2024-2032	Total Project to 2032
			Other	Reserve/ Reserve Funds	Industrial DCs	Institutional DCs	Commercial DCs	Residential DCs	Subsidy /Grant	Debenture	General Levy				
279 Emergency Fleet Equipment Replacement - Fleet	1	Replacement	-	151	-	-	-	-	-	-	-	151	-	-	151
282 Geodimeter - Construction	1	Replacement	-	125	-	-	-	-	-	-	-	125	-	-	125
284 Miscellaneous Trailer - Various Locations	3	Replacement	-	135	-	-	-	-	-	-	-	135	-	-	135
285 Pole Saw - Various Locations	5	Replacement	-	10	-	-	-	-	-	-	-	10	-	-	10
286 Portable Generator - Ajax Depot	1	Replacement	-	6	-	-	-	-	-	-	-	6	-	-	6
289 Signal Board - Sunderland Depot	1	Replacement	-	18	-	-	-	-	-	-	-	18	-	-	18
293 Tamper - Scugog Depot	1	Replacement	-	7	-	-	-	-	-	-	-	7	-	-	7
295 Tandem Trailer - Oshawa/Whitby Depot	1	Replacement	-	45	-	-	-	-	-	-	-	45	-	-	45
296 Tow Motor - Waste Facilities	1	Replacement	-	150	-	-	-	-	-	-	-	150	-	-	150
298 Water Pump - Various Locations	2	Replacement	-	15	-	-	-	-	-	-	-	15	-	-	15
299 Weed Eater Combo Unit - Various Locations	28	Replacement	-	84	-	-	-	-	-	-	-	84	-	-	84
300 Medium Articulated Loader - Waste Facilities	1	Replacement	-	350	-	-	-	-	-	-	-	350	-	-	350
Vehicles Subtotal			-	7,679	-	-	-	-	-	-	-	7,679	-	-	7,679

Appendix A: 2023 Regional Roads and Infrastructure Capital Projects (\$,000's)

Provides financing details for capital projects proposed in 2023. See Appendix B for the comprehensive 2023 capital budget and 2024-2032 forecast

		Quantity	New / Replacement	2023 Proposed Financing								2023 Proposed Budget	Approved Funding Prior to 2023	Forecast 2024-2032	Total Project to 2032	
				Other	Reserve/Reserve Funds	Industrial DCs	Institutional DCs	Commercial DCs	Residential DCs	Subsidy /Grant	Debenture					General Levy
Furniture & Fixtures																
301	A/V Equipment and Technology Upgrades - Various Locations	1	New	-	-	-	-	-	-	-	-	10	10	-	-	10
Furniture & Fixtures Subtotal				-	-	-	-	-	-	-	-	10	10	-	-	10
Total Capital Regional Roads and Infrastructure				18,330	63,802	5,000	-	4,698	41,108	57,665	15,667	6,767	213,037	284,618	1,065,680	1,563,335

* Rows and columns may not add due to rounding

** Appendix A includes Other financing of \$18.275 million from the Canada-Community Building Fund (Federal Gas Tax) and \$55 thousand in contributions from CN Rail

*** Appendix A includes Reserve/Reserve Fund financing as follows:

	2023
Reserve Fund	
Equipment Replacement Reserve	7,679
Capital Impact Stabilization Reserve Fund	5,847
Roads Rehab Reserve Fund	27,710
Bridge Rehab Reserve Fund	5,525
Regional Roads Levy	8,892
Vision Zero Reserve Fund	675
Transit Capital Reserve Fund	7,474
Total Reserve/Reserve Fund Financing	63,802

**** Appendix A includes financing of the following development charge shortfalls as follows:

	2023
DC Shortfall	
Residential DC Shortfall	-
Commercial DC Shortfall	-
Institutional DC Shortfall	3,284
Industrial DC Shortfall	828
Total DC Shortfall	4,112
Shortfall Financing Source	
Regional Roads Levy	4,112
Total Funding	4,112

***** Project Notes:

¹ Project 229 Renovations and Optimization-101 Consumers - The budget of \$5.847 million included in this schedule is for the 2023 Traffic portion. The estimated total cost of this project is \$22.843 million. \$13.696 million has been approved in previous budgets and \$3.300 million is proposed in the 2023 Health Capital Budget.

² Project 212 Depot Rationalization-Ajax Depot Expansion - The budget of \$1.667 million is the 2023 general tax portion. The estimated total cost is \$40.000 million with \$13.333 million funded from the General Tax Fund, \$13.333 million funded from the Water Supply Fund, and \$13.334 million funded from the Sanitary Sewerage Fund.

³ Project 213 Depot Rationalization-New Oshawa/Whitby Depot Expansion - The budget of \$12.667 million is the 2023 general tax portion. The estimated total cost is \$208.000 million with \$69.334 million funded from the General Tax Fund, \$69.333 million funded from the Water Supply Fund, and \$69.333 million funded from the Sanitary Sewerage Fund.

⁴ Project 214 Depot Rationalization-New Sunderland Depot - The budget of \$1,333 million is the 2023 general tax portion. The estimated total cost is \$50.000 million with \$16.666 million funded from the General Tax Fund, \$16.667 million funded from the Water Supply Fund, and \$16.667 million funded from the Sanitary Sewerage Fund.

Appendix B: 2023-2032 Regional Roads and Infrastructure Capital Forecast (\$,000's)

Provides a listing for all projects within the 2023 budget and nine-year capital forecast. See Appendix A for financing details for capital projects proposed in 2023

		Expenditure Category	2023 Proposed Budget	Forecast					Forecast Total
				2024	2025	2026	2027	2028-2032	
Regional Roads and Infrastructure									
Road / Structure Construction - Growth									
1	Reg. Rd. 1, Brock Rd. / Hwy. 401 eastbound On Ramp, Intersection modifications. Add northbound right turn lane, including structure widening with MTO contract, Pickering	Pre-Construction	-	150	-	-	-	-	150
		Construction	-	750	-	-	-	-	750
		Total	-	900	-	-	-	-	900
2	Reg. Rd. 1, Brock Rd. from Finch Ave. to Taunton Rd., Beyond forecast widen road from 5 to 7 lanes to add HOV lanes, including structure widening, Pickering	Pre-Construction	-	-	-	-	-	6,500	6,500
		Construction	-	-	-	-	-	-	-
		Total	-	-	-	-	-	6,500	6,500
3	Reg. Rd. 1, Brock Rd. from Taunton Rd. to Alexander Knox Rd. - 5th Concession Rd., Widen road from 2 to 4 lanes including intersection modifications at Brock Rd. and Taunton Rd. The Region's portion shown is for 10% of the intersection project cost. Seaton Landowners responsible for 90% of the Intersection cost, Pickering	Pre-Construction	-	250	-	-	-	-	250
		Construction	-	1,187	-	-	-	-	1,187
		Total	-	1,437	-	-	-	-	1,437
4	Reg. Rd. 1, Brock Rd. from Taunton Rd. to Alexander Knox Rd. - 5th Concession Rd., Beyond forecast widen road from 4 to 6 lanes to add HOV lanes. The Region's portion shown is for 87% of the project cost. Seaton Landowners responsible for 13% of the project cost, Pickering	Pre-Construction	-	-	-	-	-	1,500	1,500
		Construction	-	-	-	-	-	-	-
		Total	-	-	-	-	-	1,500	1,500
5	Reg. Rd. 1, Brock Rd. / 7th Concession Rd. Intersection, Intersection modifications, Pickering	Pre-Construction	150	-	300	-	300	-	600
		Construction	-	-	-	-	-	5,000	5,000
		Total	150	-	300	-	300	5,000	5,600

Appendix B: 2023-2032 Regional Roads and Infrastructure Capital Forecast (\$,000's)

Provides a listing for all projects within the 2023 budget and nine-year capital forecast. See Appendix A for financing details for capital projects proposed in 2023

		Expenditure Category	2023 Proposed Budget	Forecast					Forecast Total
				2024	2025	2026	2027	2028-2032	
6	Reg. Rd. 1, Brock Rd. / Goodwood Rd. Intersection, Reconstruct to a roundabout, Uxbridge	Pre-Construction	-	-	350	350	-	-	700
		Construction	-	-	-	-	7,000	-	7,000
		Total	-	-	350	350	7,000	-	7,700
7	Reg. Rd. 2, Simcoe St. / Howden Rd. Intersection, Beyond forecast intersection modifications, Oshawa	Pre-Construction	-	-	-	-	-	400	400
		Construction	-	-	-	-	-	-	-
		Total	-	-	-	-	-	400	400
8	Reg. Rd. 2, Simcoe St. / Shirley Rd. Intersection, Intersection modifications, Scugog	Pre-Construction	200	-	300	300	-	-	600
		Construction	-	-	-	-	-	5,000	5,000
		Total	200	-	300	300	-	5,000	5,600
9	Reg. Rd. 2, Simcoe St. from south of King St. to south of Greenway Blvd., Beyond forecast widen from 2 to 3 lanes including intersection modifications at King St - Oylar St., Scugog	Pre-Construction	-	-	-	300	-	1,500	1,800
		Construction	-	-	-	-	-	-	-
		Total	-	-	-	300	-	1,500	1,800
10	Reg. Rd. 3, Winchester Rd. from Baldwin St. to Anderson St., Widen from 2 to 3 / 4 lanes including structure widening, Whitby	Pre-Construction	-	-	-	-	-	-	-
		Construction	1,100	-	-	-	-	-	-
		Total	1,100	-	-	-	-	-	-
11	Reg. Rd. 3 / Enfield Rd., Intersection modifications, Clarington	Pre-Construction	-	200	300	300	-	-	800
		Construction	-	-	-	-	-	5,000	5,000
		Total	-	200	300	300	-	5,000	5,800
12	Reg. Rd. 4, Taunton Rd. from Toronto / Pickering Townline to west of Twelvetrees Bridge, Beyond forecast widen from 4 to 6 lanes to add HOV lanes, Pickering	Pre-Construction	-	-	-	-	-	3,500	3,500
		Construction	-	-	-	-	-	-	-
		Total	-	-	-	-	-	3,500	3,500

Appendix B: 2023-2032 Regional Roads and Infrastructure Capital Forecast (\$,000's)

Provides a listing for all projects within the 2023 budget and nine-year capital forecast. See Appendix A for financing details for capital projects proposed in 2023

		Expenditure Category	2023 Proposed Budget	Forecast					Forecast Total
				2024	2025	2026	2027	2028-2032	
13	Reg. Rd. 4, Taunton Rd. from Twelvetrees Bridge to east limit of Phase 1 / Peter Matthews Dr., Widen from 4 to 6 lanes, including structure widening. The Region's portion shown is for 14% of the project cost. Seaton Landowners responsible for 86% of the project cost, Pickering	Pre-Construction	-	-	-	-	-	-	-
		Construction	-	-	-	-	-	5,166	5,166
		Total	-	-	-	-	-	5,166	5,166
14	Reg. Rd. 4, Taunton Rd. from Peter Matthews Dr. to Brock Rd., Beyond forecast widen from 4 to 6 / 7 lanes to add HOV lanes including structure widening, Pickering	Pre-Construction	-	-	-	-	-	2,500	2,500
		Construction	-	-	-	-	-	-	-
		Total	-	-	-	-	-	2,500	2,500
15	Reg. Rd. 4, Taunton Rd. from Brock Rd. to Brock St. / Baldwin St., Beyond forecast widen from 5 to 7 lanes to add HOV lanes including structure widening, Pickering / Ajax / Whitby	Pre-Construction	-	-	-	-	-	4,000	4,000
		Construction	-	-	-	-	-	-	-
		Total	-	-	-	-	-	4,000	4,000
16	Reg. Rd. 4, Taunton Rd. / Anderson St. Intersection, Intersection modifications at Taunton Rd. / Anderson St. including Taunton Rd. / DDSB and Taunton Rd. / DRPS entrances, Whitby	Pre-Construction	-	-	-	-	-	-	-
		Construction	1,500	-	-	-	-	-	-
		Total	1,500	-	-	-	-	-	-
17	Reg. Rd. 4, Taunton Rd. / Courtice Rd. Intersection, Reconstruct and modify intersection to a roundabout, Clarington	Pre-Construction	250	500	-	-	-	-	500
		Construction	-	-	-	11,500	-	-	11,500
		Total	250	500	-	11,500	-	-	12,000
18	Reg. Rd. 4, Taunton Rd. / Bowmanville Ave. Intersection, Reconstruct and modify intersection to roundabout and replace and widen bridge on west leg of intersection, Clarington	Pre-Construction	-	-	-	-	-	-	-
		Construction	4,500	-	-	-	-	-	-
		Total	4,500	-	-	-	-	-	-
19	Reg. Rd. 4, Taunton Rd. / Reg. Rd. 42 Darlington - Clarke Townline Intersection, Reconstruct and modify intersection to a roundabout, Clarington	Pre-Construction	-	100	100	300	-	-	500
		Construction	-	-	-	-	5,000	-	5,000
		Total	-	100	100	300	5,000	-	5,500

Appendix B: 2023-2032 Regional Roads and Infrastructure Capital Forecast (\$,000's)

Provides a listing for all projects within the 2023 budget and nine-year capital forecast. See Appendix A for financing details for capital projects proposed in 2023

		Expenditure Category	2023 Proposed Budget	Forecast					Forecast Total
				2024	2025	2026	2027	2028-2032	
20	Reg. Rd. 5, Central St. from 0.15 km west of Canso Dr. to Brock Rd., Urbanize road and modify corridor through village of Claremont, including streetscape modifications, Pickering	Pre-Construction	-	-	350	300	200	200	1,050
		Construction	-	-	-	-	-	5,000	5,000
		Total	-	-	350	300	200	5,200	6,050
21	Reg. Rd. 14, Liberty St. from Baseline Rd. to King St., Widen road from 2 to 3 lanes. Associated water supply and sanitary sewer works, Clarington	Pre-Construction	900	-	400	-	-	-	400
		Construction	-	-	-	-	7,000	-	7,000
		Total	900	-	400	-	7,000	-	7,400
22	Reg. Rd. 14, Liberty St. from Longworth Ave. to Concession Rd. 3, Road rehabilitation including roundabout at Concession Rd. 3 intersection and signalization and modifications at Liberty Street and Freeland Ave. - Bons Ave. (combined with item 110) Associated water supply works, Clarington	Pre-Construction	-	-	-	-	-	-	-
		Construction	1,610	-	-	-	-	-	-
		Total	1,610	-	-	-	-	-	-
23	Reg. Rd. 16, Ritson Rd. / Beatrice St. Intersection, Intersection modifications, Oshawa	Pre-Construction	-	-	250	50	-	-	300
		Construction	-	-	-	-	-	2,500	2,500
		Total	-	-	250	50	-	2,500	2,800
24	Reg. Rd. 16, Ritson Rd. from north of Taunton Rd. to Conlin Rd., Widen road from 2 / 3 to 5 lanes, Oshawa	Pre-Construction	-	-	500	650	700	800	2,650
		Construction	-	-	-	-	-	16,000	16,000
		Total	-	-	500	650	700	16,800	18,650
25	Reg. Rd. 22, Bayly St. from Liverpool Rd. to Brock Rd., Beyond forecast widen road from 5 to 6 / 7 lanes to add HOV lanes, Pickering	Pre-Construction	-	-	-	-	-	1,000	1,000
		Construction	-	-	-	-	-	-	-
		Total	-	-	-	-	-	1,000	1,000
26	Reg. Rd. 22, Bayly St. / Sandy Beach Rd. Intersection, Intersection modifications, Pickering	Pre-Construction	-	-	-	-	-	500	500
		Construction	-	-	-	-	-	3,000	3,000
		Total	-	-	-	-	-	3,500	3,500

Appendix B: 2023-2032 Regional Roads and Infrastructure Capital Forecast (\$,000's)

Provides a listing for all projects within the 2023 budget and nine-year capital forecast. See Appendix A for financing details for capital projects proposed in 2023

		Expenditure Category	2023 Proposed Budget	Forecast					Forecast Total
				2024	2025	2026	2027	2028-2032	
27	Reg. Rd. 22, Bayly St. from Brock Rd. to Westney Rd.,	Pre-Construction	-	-	-	1,500	-	4,000	5,500
	Beyond forecast widen from 5 to 7 lanes to add HOV lanes including structure widening, Pickering / Ajax	Construction	-	-	-	-	-	-	-
		Total	-	-	-	1,500	-	4,000	5,500
28	Reg. Rd. 22, Bayly St. from Westney Rd. to Harwood Ave.,	Pre-Construction	-	-	300	500	400	500	1,700
	Widen road from 5 to 7 lanes to add HOV lanes. Associated water supply and sanitary sewer works, Ajax	Construction	-	-	-	-	-	15,000	15,000
		Total	-	-	300	500	400	15,500	16,700
29	Reg. Rd. 22, Bayly St. from Harwood Ave. to Salem Rd.,	Pre-Construction	-	-	-	-	-	750	750
	Beyond forecast widen road from 4 to 6 lanes to add HOV lanes, Ajax	Construction	-	-	-	-	-	-	-
		Total	-	-	-	-	-	750	750
30	Reg. Rd. 22, Victoria St. / Brock St. Intersection,	Pre-Construction	80	-	300	200	-	-	500
	Intersection modifications, Whitby	Construction	-	-	-	-	-	4,000	4,000
		Total	80	-	300	200	-	4,000	4,500
31	Reg. Rd. 22, Victoria St. from South Blair St. to west of Thickson Rd.,	Pre-Construction	-	-	-	-	-	-	-
	Construct new alignment and widen road to 5 lanes. Associated water supply - feedermain works, Whitby	Construction	2,400	-	-	-	-	-	-
		Total	2,400	-	-	-	-	-	-
32	Reg. Rd. 22, Victoria St. / Bloor St. from east of Thickson Rd. to west of Stevenson Rd.,	Pre-Construction	-	-	-	-	-	-	-
	Widen road from 2 / 3 to 4 / 5 lanes. Associated water supply works, Whitby / Oshawa	Construction	-	1,000	13,000	-	-	-	14,000
		Total	-	1,000	13,000	-	-	-	14,000
33	Reg. Rd. 22, Bloor St. from Ritson Rd. to Farewell St.,	Pre-Construction	-	-	-	-	750	1,750	2,500
	Beyond forecast widen road from 3 to 5 lanes including intersection modifications at Bloor St. and Ritson Rd., Oshawa	Construction	-	-	-	-	-	-	-
		Total	-	-	-	-	750	1,750	2,500

Appendix B: 2023-2032 Regional Roads and Infrastructure Capital Forecast (\$,000's)

Provides a listing for all projects within the 2023 budget and nine-year capital forecast. See Appendix A for financing details for capital projects proposed in 2023

		Expenditure Category	2023 Proposed Budget	Forecast					Forecast Total
				2024	2025	2026	2027	2028-2032	
34	Reg. Rd. 22, Bloor St. from east of Harmony Rd. to Grandview St., Realignment and widen existing road to 4 / 5 lanes with new CP Rail grade separation, Oshawa	Pre-Construction	150	-	-	-	-	-	-
		Construction	-	-	18,000	-	-	-	18,000
		Total	150	-	18,000	-	-	-	18,000
35	Reg. Rd. 22, Bloor St. from Prestonvale Rd. to Courtice Rd., Beyond forecast widen road from 2 to 3 lanes and modify profile. Associated water supply - feedermain (Townline Rd. to Trulls Rd.) and sanitary sewer - Trunk Sewer, Clarington	Pre-Construction	-	-	700	-	1,000	900	2,600
		Construction	-	-	-	-	-	-	-
		Total	-	-	700	-	1,000	900	2,600
36	Reg. Rd. 23, Lake Ridge Rd. from Bayly St. to Kingston Rd. - Dundas St., Widen from 2 to 4 / 5 lanes, Ajax / Whitby	Pre-Construction	750	-	-	-	-	-	-
		Construction	-	7,700	5,000	-	-	-	12,700
		Total	750	7,700	5,000	-	-	-	12,700
37	Reg. Rd. 23, Lake Ridge Rd. from Kingston Rd. - Dundas St. to Rossland Rd., Widen from 2 to 4 / 5 lanes. 2026: Lake Ridge Road and Rossland Road Intersection 2031: Widen from north of Kingston Rd. / Dundas St. to south of Rossland Road, Ajax / Whitby	Pre-Construction	700	-	700	1,000	-	200	1,900
		Construction	-	-	-	7,000	-	10,000	17,000
		Total	700	-	700	8,000	-	10,200	18,900
38	Reg. Rd. 26, Thickson Rd. from Wentworth St. to C.N. Rail Kingston, Reconstruct and widen road from 2 to 4 lanes, Whitby	Pre-Construction	-	-	-	-	-	-	-
		Construction	1,400	-	-	-	-	-	-
		Total	1,400	-	-	-	-	-	-
39	Reg. Rd. 26, Thickson Rd. from Consumers Dr. to Dundas St., Beyond forecast widen from 5 to 7 lanes, including new structure. Associated water supply works, Whitby	Pre-Construction	-	-	-	1,250	-	5,500	6,750
		Construction	-	-	-	-	-	-	-
		Total	-	-	-	1,250	-	5,500	6,750

Appendix B: 2023-2032 Regional Roads and Infrastructure Capital Forecast (\$,000's)

Provides a listing for all projects within the 2023 budget and nine-year capital forecast. See Appendix A for financing details for capital projects proposed in 2023

		Expenditure Category	2023 Proposed Budget	Forecast					Forecast Total
				2024	2025	2026	2027	2028-2032	
40	Reg. Rd. 26, Thicksn Rd. / Rossland Rd. Intersection, Reconstruct and modify intersection, Whitby	Pre-Construction	-	-	-	-	-	-	-
		Construction	-	4,800	-	-	-	-	4,800
		Total	-	4,800	-	-	-	-	4,800
41	Reg. Rd. 26, Thicksn Rd. from Taunton Rd. to Hwy. 407, Widen road from 2 to 4 / 5 lanes, Whitby	Pre-Construction	1,000	-	1,500	500	-	1,000	3,000
		Construction	-	-	-	-	25,000	25,000	
		Total	1,000	-	1,500	500	-	26,000	28,000
42	Reg. Rd. 26, Thicksn Rd. from Winchester Rd. to Baldwin St., Beyond forecast widen from 2 to 5 lanes, Whitby	Pre-Construction	-	-	-	-	-	4,750	4,750
		Construction	-	-	-	-	-	-	-
		Total	-	-	-	-	-	4,750	4,750
43	Reg. Rd. 27, Altona Rd. from north of Strouds Ln. to Finch Ave., Beyond forecast widen road from 2 to 3 lanes, Pickering	Pre-Construction	-	-	-	-	-	1,750	1,750
		Construction	-	-	-	-	-	-	-
		Total	-	-	-	-	-	1,750	1,750
44	Reg. Rd. 28, Peter Matthews Dr. from Alexander Knox Rd. to Hwy. 7, Construct new alignment to 2 lanes. The Region's portion shown is for 26% of the project cost. Seaton Landowners responsible for 74% of the project cost, Pickering	Pre-Construction	-	-	-	-	-	-	-
		Construction	-	-	-	-	-	12,000	12,000
		Total	-	-	-	-	-	12,000	12,000
45	Reg. Rd. 28, Rossland Rd. / Cochrane St. Intersection, Intersection modifications, Whitby	Pre-Construction	-	150	-	-	-	-	150
		Construction	-	-	-	-	6,000	-	6,000
		Total	-	150	-	-	6,000	-	6,150
46	Reg. Rd. 28, Rossland Rd. / Garden St. Intersection, Intersection modifications, Whitby	Pre-Construction	-	-	-	-	-	-	-
		Construction	-	-	4,000	-	-	-	4,000
		Total	-	-	4,000	-	-	-	4,000
47	Reg. Rd. 28, Rossland Rd. from Ritson Rd. to Harmony Rd., Widen road from 3 to 5 lanes, including structure widening. Associated water supply works, Oshawa	Pre-Construction	835	-	1,000	-	1,000	-	2,000
		Construction	-	-	-	-	-	15,500	15,500
		Total	835	-	1,000	-	1,000	15,500	17,500

Appendix B: 2023-2032 Regional Roads and Infrastructure Capital Forecast (\$,000's)

Provides a listing for all projects within the 2023 budget and nine-year capital forecast. See Appendix A for financing details for capital projects proposed in 2023

		Expenditure Category	2023 Proposed Budget	Forecast					Forecast Total
				2024	2025	2026	2027	2028-2032	
48	Reg. Rd. 28, Rossland Rd. from Harmony Rd. to east of Townline Rd., Beyond forecast construct new alignment to 3 lanes, including new bridge crossing of Harmony Creek tributary, Oshawa	Pre-Construction	-	-	-	750	-	5,500	6,250
		Construction	-	-	-	-	-	-	-
		Total	-	-	-	750	-	5,500	6,250
49	Reg. Rd. 29, Liverpool Rd. from Hwy. 401 to Kingston Rd., Widen from 5 to 6 / 7 lanes. Associated water supply works, Pickering	Pre-Construction	445	-	400	400	-	-	800
		Construction	-	-	-	-	-	6,000	6,000
		Total	445	-	400	400	-	6,000	6,800
50	Reg. Rd. 31, Westney Rd. from Finley Ave. to Harwood Ave., Road rehabilitation including intersection modifications at Finley Ave., Monarch Ave., and Harwood Ave. (combined with item 119) Associated water supply works., Ajax	Pre-Construction	-	71	133	-	-	-	204
		Construction	-	-	-	-	-	2,905	2,905
		Total	-	71	133	-	-	2,905	3,109
51	Reg. Rd. 31, Westney Rd. from Bayly St. to Hwy. 401., Widen from 5 to 7 lanes, Ajax	Pre-Construction	-	-	300	-	300	-	600
		Construction	-	-	-	-	-	9,000	9,000
		Total	-	-	300	-	300	9,000	9,600
52	Reg. Rd. 31, Westney Rd. from Hwy. 401 to south of Kingston Rd., Widen from 5 to 7 lanes, including structure widening and intersection modifications at Ritchie Ave., Ajax	Pre-Construction	-	-	500	350	-	-	850
		Construction	-	-	-	-	-	7,000	7,000
		Total	-	-	500	350	-	7,000	7,850
53	Reg. Rd. 31, Westney Rd. from south of Greenwood to Hwy. 407, Beyond forecast construct new 2 lane Greenwood by-pass, Pickering	Pre-Construction	-	-	-	-	-	3,900	3,900
		Construction	-	-	-	-	-	-	-
		Total	-	-	-	-	-	3,900	3,900
54	Reg. Rd. 33, Harmony Rd. from Conlin Rd. to Britannia Ave., Beyond forecast widen road from 2 to 4 lanes, Oshawa	Pre-Construction	-	-	-	-	-	1,500	1,500
		Construction	-	-	-	-	-	-	-
		Total	-	-	-	-	-	1,500	1,500

Appendix B: 2023-2032 Regional Roads and Infrastructure Capital Forecast (\$,000's)

Provides a listing for all projects within the 2023 budget and nine-year capital forecast. See Appendix A for financing details for capital projects proposed in 2023

		Expenditure Category	2023 Proposed Budget	Forecast					Forecast Total
				2024	2025	2026	2027	2028-2032	
55	Reg. Rd. 36, Hopkins St. Overpass, Beyond forecast	Pre-Construction	-	-	-	-	-	5,400	5,400
	construct new 4 lane Hopkins St. overpass of Hwy. 401.	Construction	-	-	-	-	-	-	-
	Associated water supply works, Whitby	Total	-	-	-	-	-	5,400	5,400
56	Reg. Rd. 36, Hopkins St. from Consumers Dr. to Dundas	Pre-Construction	650	-	-	2,000	300	500	2,800
	St., Widen from 2 to 3 lanes, with new CPR grade	Construction	-	-	-	-	-	17,000	17,000
	separation. Associated water supply and sanitary sewer	Total	650	-	-	2,000	300	17,500	19,800
57	Reg. Rd. 37, Finch Ave. from Altona Rd. to Brock Rd.,	Pre-Construction	2,000	-	-	3,000	500	1,000	4,500
	Widen from 2 to 3 lanes. Associated water supply and	Construction	-	-	-	-	-	30,000	30,000
	sanitary sewer works, Pickering	Total	2,000	-	-	3,000	500	31,000	34,500
58	Reg. Rd. 38, Whites Rd. from Bayly St. to Kingston Rd.,	Pre-Construction	-	-	-	-	-	2,100	2,100
	Beyond forecast widen road from 5 to 7 lanes to add	Construction	-	-	-	-	-	-	-
	HOV lanes, including structure widening, Pickering	Total	-	-	-	-	-	2,100	2,100
59	Reg. Rd. 38, Whites Rd. from north of Kingston Rd. to	Pre-Construction	-	-	1,500	-	2,500	600	4,600
	Finch Ave., Beyond forecast widen road from 5 to 7	Construction	-	-	-	-	-	-	-
	lanes to add HOV lanes, including structure	Total	-	-	1,500	-	2,500	600	4,600
60	Reg. Rd. 38, Whites Rd. from Finch Ave. to	Pre-Construction	1,200	2,700	20,000	1,000	-	-	23,700
	approximately 0.3 km south of Third Concession Rd.,	Construction	-	-	-	-	26,000	-	26,000
	Widen from 2 to 6 lanes to add HOV lanes, with new	Total	1,200	2,700	20,000	1,000	26,000	-	49,700
	CPR grade separation. The Region's portion shown is								
	for 75% of the project cost. Seaton Landowners								
	responsible for 25% of the project cost, Pickering								


Appendix B: 2023-2032 Regional Roads and Infrastructure Capital Forecast (\$,000's)

Provides a listing for all projects within the 2023 budget and nine-year capital forecast. See Appendix A for financing details for capital projects proposed in 2023

		Expenditure Category	2023 Proposed Budget	Forecast					Forecast Total
				2024	2025	2026	2027	2028-2032	
61	Reg. Rd. 38, Whites Rd. from south of Third Concession Rd. to Taunton Rd., Construct new alignment to 6 lanes to add through lanes and HOV lanes, with new bridge crossing of West Duffins Creek. The Region's portion shown is for 1% of the project cost. Seaton Landowners responsible for 99% of the project cost, Pickering	Pre-Construction	-	-	-	-	-	-	-
		Construction	-	1,050	-	-	-	-	1,050
		Total	-	1,050	-	-	-	-	1,050
62	Reg. Rd. 41, Salem Rd. / Rossland Rd. Intersection, Intersection modifications, Ajax	Pre-Construction	-	-	100	-	-	-	100
		Construction	-	-	-	1,600	-	-	1,600
		Total	-	-	100	1,600	-	-	1,700
63	Reg. Rd. 42, Darlington - Clark Townline Rd. / Reg. Hwy. 2 Intersection, Intersection modifications, Clarington	Pre-Construction	300	-	300	300	-	-	600
		Construction	-	-	-	-	-	5,000	5,000
		Total	300	-	300	300	-	5,000	5,600
64	Reg. Rd. 52, Thornton Rd. from north of Stellar Dr. to King St., Widen from 2 to 4 / 5 lanes, with new CPR grade separation. Associated water supply and sanitary sewer works, Oshawa	Pre-Construction	-	-	800	300	500	-	1,600
		Construction	-	-	-	-	-	17,000	17,000
		Total	-	-	800	300	500	17,000	18,600
65	Reg. Rd. 53, Stevenson Rd. / Phillip Murray Ave. Intersection, Intersection modifications, Oshawa	Pre-Construction	-	150	50	-	-	-	200
		Construction	-	-	-	-	2,000	-	2,000
		Total	-	150	50	-	2,000	-	2,200
66	Reg. Rd. 53, Stevenson Rd. from CPR Belleville to Bond St., Widen road from 4 to 5 lanes. Associated water supply (Hwy. 401 - Bond St.) and sanitary sewer works, Oshawa	Pre-Construction	400	-	1,000	600	-	-	1,600
		Construction	-	-	-	-	10,000	-	10,000
		Total	400	-	1,000	600	10,000	-	11,600

Appendix B: 2023-2032 Regional Roads and Infrastructure Capital Forecast (\$,000's)

Provides a listing for all projects within the 2023 budget and nine-year capital forecast. See Appendix A for financing details for capital projects proposed in 2023

			Expenditure Category	2023 Proposed Budget	Forecast					Forecast Total
		2024			2025	2026	2027	2028-2032		
67	Reg. Rd. 53, Stevenson Rd. from Bond St. to Rossland Rd., Widen road from 3 / 4 to 5 lanes. Associated water supply works, Oshawa	Pre-Construction	400	-	1,000	600	-	-	1,600	
		Construction	-	-	-	-	17,500	17,500		
		Total	400	-	1,000	600	-	17,500	19,100	
68	Reg. Rd. 55, Townline Rd. from Beatrice St. to Taunton Rd., Widen and urbanize road from 2 to 3 lanes from Whitelaw Ave. to Taunton Rd. and storm sewer from Beatrice St. to Taunton Rd., Oshawa / Clarington	Pre-Construction	200	-	530	-	-	-	530	
		Construction	-	-	2,000	-	-	-	2,000	
		Total	200	-	2,530	-	-	-	2,530	
69	Reg. Rd. 57, Bowmanville Ave. from Baseline Rd. to south of Reg. Hwy. 2, Widen road from 2 to 4 lanes from Baseline Rd. to S. of Hwy. 2, including structure widening. Associated water supply and sanitary sewer works, Clarington	Pre-Construction	600	-	-	-	-	-	-	
		Construction	-	35,300	-	-	-	-	35,300	
		Total	600	35,300	-	-	-	-	35,300	
70	Reg. Rd. 57, Bowmanville Ave. from north of Stevens Rd. to Nash Rd., Widen road from 2 to 4 lanes from north of Stevens Rd. to Nash Rd. Associated sanitary sewer works, Clarington	Pre-Construction	1,000	-	100	-	500	-	600	
		Construction	-	-	-	-	-	12,000	12,000	
		Total	1,000	-	100	-	500	12,000	12,600	
71	Reg. Rd. 57, Bowmanville Ave. / Concession Road 6 Intersection, Intersection modifications, Clarington	Pre-Construction	-	-	-	500	-	600	1,100	
		Construction	-	-	-	-	-	5,000	5,000	
		Total	-	-	-	500	-	5,600	6,100	
72	Reg. Rd. 57, Bowmanville Ave. / Concession 7 Intersection, Intersection modifications, Clarington	Pre-Construction	50	-	300	300	-	-	600	
		Construction	-	-	-	-	5,000	-	5,000	
		Total	50	-	300	300	5,000	-	5,600	
73	Reg. Rd. 58, Manning Rd. / Adelaide Ave. Connection from Garrard Rd. to Thornton Rd., Construct new road to 3 lanes with new crossing of Corbett Creek. Associated water supply works, Whitby / Oshawa	Pre-Construction	1,000	-	200	-	-	-	200	
		Construction	-	-	-	17,000	-	-	17,000	
		Total	1,000	-	200	17,000	-	-	17,200	

Appendix B: 2023-2032 Regional Roads and Infrastructure Capital Forecast (\$,000's)

Provides a listing for all projects within the 2023 budget and nine-year capital forecast. See Appendix A for financing details for capital projects proposed in 2023

		Expenditure Category	2023 Proposed Budget	Forecast					Forecast Total
				2024	2025	2026	2027	2028-2032	
74	Reg. Rd. 58, Adelaide Ave. from Townline Rd. to Trulls Rd., Construct new bridge crossing of Farewell Creek and construct new 3 lane road. Associated sanitary sewer works, Clarington	Pre-Construction	10,500	-	6,000	4,000	-	250	10,250
	Construction	-	-	-	-	22,000	-	22,000	
	Total	10,500	-	6,000	4,000	-	22,250	32,250	
75	Reg. Rd. 59, Gibb St. from east of Stevenson Rd. to Simcoe St., Widen road from 3 to 4 lanes. Associated water supply and sanitary sewer works, Oshawa	Pre-Construction	3,000	4,000	5,500	-	-	-	9,500
	Construction	-	-	-	-	12,000	-	12,000	
	Total	3,000	4,000	5,500	-	12,000	-	21,500	
76	Reg. Rd. 59, Gibb St. / Olive Ave. Connection from Simcoe St. to Ritson Rd., Construct new road and widen existing from 2 / 3 to 4 / 5 lanes. Associated water supply and sanitary sewer works, Oshawa	Pre-Construction	-	-	-	20,950	-	-	20,950
	Construction	-	-	-	-	-	12,000	12,000	
	Total	-	-	-	20,950	-	12,000	32,950	
77	Reg. Hwy. 2 from Townline Rd. to Courtice Rd., Modify corridor, Clarington	Pre-Construction	-	-	-	500	-	1,000	1,500
	Construction	-	-	-	-	-	5,000	5,000	
	Total	-	-	-	500	-	6,000	6,500	
78	Reg. Hwy. 2 / Lambs Rd. Intersection, Intersection modifications, Clarington	Pre-Construction	300	-	300	-	-	300	600
	Construction	-	-	-	-	-	5,000	5,000	
	Total	300	-	300	-	-	5,300	5,600	
79	Reg. Hwy. 12, Baldwin St. from north of Taunton Rd. to north of Garden St., Widen road from 2 to 4 / 5 lanes, Whitby	Pre-Construction	-	-	1,500	-	500	1,400	3,400
	Construction	-	-	-	-	-	25,000	25,000	
	Total	-	-	1,500	-	500	26,400	28,400	
80	Reg. Hwy. 47 from York Durham Line to Goodwood Rd., Beyond forecast widen from 2 to 4 lanes with intersection modifications at Goodwood Rd., Uxbridge	Pre-Construction	-	-	-	1,500	-	3,500	5,000
	Construction	-	-	-	-	-	-	-	
	Total	-	-	-	1,500	-	3,500	5,000	
81	Reg. Hwy. 47 / Concession 6 Intersection, Reconstruct and modify intersection to a roundabout, Uxbridge	Pre-Construction	-	-	-	150	-	600	750
	Construction	-	-	-	-	-	5,000	5,000	
	Total	-	-	-	150	-	5,600	5,750	
Road / Structure Construction - Growth Subtotal			39,570	60,058	89,863	81,800	89,450	402,221	723,392

Appendix B: 2023-2032 Regional Roads and Infrastructure Capital Forecast (\$,000's)

Provides a listing for all projects within the 2023 budget and nine-year capital forecast. See Appendix A for financing details for capital projects proposed in 2023

		Expenditure Category	2023 Proposed Budget	Forecast					Forecast Total
				2024	2025	2026	2027	2028-2032	
Traffic Control & Other Programs - Growth									
82	Bridge and Pavement Management Program, Various	Pre-Construction	400	400	400	400	400	2,000	3,600
		Construction	-	-	-	-	-	-	-
		Total	400	400	400	400	400	2,000	3,600
83	Signal Installation Program, Various	Pre-Construction	-	-	-	-	-	-	-
		Construction	2,725	2,225	2,225	2,225	2,225	11,550	20,450
		Total	2,725	2,225	2,225	2,225	2,225	11,550	20,450
84	Intelligent Transportation System (ITS) Projects, Various	Pre-Construction	-	-	-	-	-	-	-
		Construction	655	650	680	595	680	2,795	5,400
		Total	655	650	680	595	680	2,795	5,400
85	Engineering Activities, Various	Pre-Construction	450	450	450	450	450	2,250	4,050
		Construction	-	-	-	-	-	-	-
		Total	450	450	450	450	450	2,250	4,050
86	Property Acquisition, Various	Pre-Construction	300	300	300	300	100	500	1,500
		Construction	-	-	-	-	-	-	-
		Total	300	300	300	300	100	500	1,500
87	Roadside Landscaping Projects, Various	Pre-Construction	-	-	-	-	-	-	-
		Construction	150	150	150	150	150	750	1,350
		Total	150	150	150	150	150	750	1,350
88	Contingencies Development Related, Various	Pre-Construction	-	-	-	-	-	-	-
		Construction	300	300	300	300	300	1,500	2,700
		Total	300	300	300	300	300	1,500	2,700
89	Regional Share of Services for Residential Subdivision Development, Various	Pre-Construction	-	-	-	-	-	-	-
		Construction	1,600	1,600	300	300	300	1,500	4,000
		Total	1,600	1,600	300	300	300	1,500	4,000
Traffic Control & Other Programs - Growth Subtotal			6,580	6,075	4,805	4,720	4,605	22,845	43,050

Appendix B: 2023-2032 Regional Roads and Infrastructure Capital Forecast (\$,000's)

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		Expenditure Category	2023 Proposed Budget	Forecast					Forecast Total
				2024	2025	2026	2027	2028-2032	
Transportation Plans & Studies - Growth									
90	Transportation Plans and Studies, Various	Pre-Construction	150	150	500	150	150	750	1,700
		Construction	-	-	-	-	-	-	-
		Total	150	150	500	150	150	750	1,700
Transportation Plans & Studies - Growth Subtotal			150	150	500	150	150	750	1,700
Investing in Canada Infrastructure Program (ICIP) Projects									
91	Reg. Hwy. 2, Kingston Rd. from Altona Rd. to Notion Rd., Bus Rapid Transit Lanes, Pickering	Pre-Construction	5,025	-	-	-	-	-	-
		Construction	54,440	29,500	5,455	-	-	-	34,955
		Total	59,465	29,500	5,455	-	-	-	34,955
92	Reg. Hwy. 2, Kingston Road - Dundas Street (Various Locations), Bus Rapid Transit Lanes (DC Elig), Ajax / Whitby / Oshawa	Pre-Construction	1,375	-	-	-	-	-	-
		Construction	9,398	20,922	-	-	-	-	20,922
		Total	10,773	20,922	-	-	-	-	20,922
93	Reg. Hwy. 2, Kingston Road - Dundas Street (Various Locations), Bus Rapid Transit Lanes (DC Inelig), Ajax / Whitby / Oshawa	Pre-Construction	200	-	-	-	-	-	-
		Construction	8,200	-	-	-	-	-	-
		Total	8,400	-	-	-	-	-	-
Investing in Canada Infrastructure Program (ICIP) Projects Subtotal			78,638	50,422	5,455	-	-	-	55,877
Road Rehabilitation / Reconstruction Projects									
94	Reg. Rd. 1, Brock Rd. from 0.2 km north of Uxbridge / Pickering Townline Rd to 1.2 km north of Webb Rd., Road rehabilitation, Uxbridge	Pre-Construction	-	-	-	-	-	-	-
		Construction	3,500	-	-	-	-	-	-
		Total	3,500	-	-	-	-	-	-
95	Reg. Rd. 1, Conc. Rd. 7 from Reg. Rd. 11 to 0.4 km north of Ashworth Rd., Road rehabilitation / reconstruction, Uxbridge	Pre-Construction	-	-	-	-	-	-	-
		Construction	3,100	-	-	-	-	-	-
		Total	3,100	-	-	-	-	-	-

Appendix B: 2023-2032 Regional Roads and Infrastructure Capital Forecast (\$,000's)

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		Expenditure Category	2023 Proposed Budget	Forecast					Forecast Total
				2024	2025	2026	2027	2028-2032	
96	Reg. Rd. 1, Conc. Rd. 7 from Foster Dr. to south limit of Leaskdale, Road rehabilitation / reconstruction, Uxbridge	Pre-Construction	-	-	-	-	-	-	-
		Construction	1,250	-	-	-	-	-	-
		Total	1,250	-	-	-	-	-	-
97	Reg. Rd. 2, Simcoe St. from Olive Ave. to north of John St., Road rehabilitation / reconstruction in conjunction with water / sewer project, Oshawa	Pre-Construction	-	-	-	-	-	-	-
		Construction	1,250	-	-	-	-	-	-
		Total	1,250	-	-	-	-	-	-
98	Reg. Rd. 3, Grandview St. N. from Hwy. 407 to Columbus Rd. E. and Columbus Rd. E. from Grandview St. N. to Townline Rd. N., Road rehabilitation / reconstruction, Oshawa	Pre-Construction	-	-	-	-	-	-	-
		Construction	293	-	-	-	-	-	-
		Total	293	-	-	-	-	-	-
99	Reg. Rd. 3 from Townline Rd. N. to Enfield Rd., Road rehabilitation / reconstruction, Clarington	Pre-Construction	300	-	-	-	-	-	-
		Construction	-	2,500	-	-	-	-	2,500
		Total	300	2,500	-	-	-	-	2,500
100	Reg. Rd. 4, Taunton Rd. from east of Townline Rd. to west of Enfield Rd., Road rehabilitation, Clarington	Pre-Construction	-	-	-	-	-	-	-
		Construction	5,100	-	-	-	-	-	-
		Total	5,100	-	-	-	-	-	-
101	Reg. Rd. 4, Taunton Rd. from 0.4 km west of Solina Rd. to 0.2 km west of Bowmanville Ave., Road rehabilitation. 2023: West of Holt Rd. to Maple Grove Rd. 2024: West of Solina Rd. to Hwy. 418. 2025: Maple Grove Rd. to 0.2 km west of Bowmanville Ave. in conjunction with rehabilitation / replacing bridge 0.2 km west of Old Scugog Rd (Hampton Bridge), Clarington	Pre-Construction	750	750	-	-	-	-	750
		Construction	-	6,700	14,600	-	-	-	21,300
		Total	750	7,450	14,600	-	-	-	22,050
102	Reg. Rd. 4, Taunton Rd. from Reg. Rd. 17 to 0.1 km west of Tamblyn Rd., Road rehabilitation and intersection modifications at Reg. Rd. 17 - Best Rd., Clarington	Pre-Construction	200	-	-	-	-	-	-
		Construction	-	-	3,000	-	-	-	3,000
		Total	200	-	3,000	-	-	-	3,000

Appendix B: 2023-2032 Regional Roads and Infrastructure Capital Forecast (\$,000's)

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		Expenditure Category	2023 Proposed Budget	Forecast					Forecast Total
				2024	2025	2026	2027	2028-2032	
103	Reg. Rd. 7, Island Rd. from Hwy. 7A to Gerrow Rd., Road rehabilitation, Scugog	Pre-Construction	-	100	-	-	-	-	100
		Construction	-	-	2,500	-	-	-	2,500
		Total	-	100	2,500	-	-	-	2,600
104	Reg. Rd. 7, Island Rd. from Gerrow Rd. to north side of Demara Rd., Road rehabilitation, Scugog	Pre-Construction	-	-	300	-	250	-	550
		Construction	-	-	-	-	-	7,500	7,500
		Total	-	-	300	-	250	7,500	8,050
105	Reg. Rd. 7, Island Rd. from north side of Demara Rd. to Fralicks Beach Rd., Road rehabilitation, Scugog	Pre-Construction	-	-	-	-	250	200	450
		Construction	-	-	-	-	-	5,000	5,000
		Total	-	-	-	-	250	5,200	5,450
106	Reg. Rd. 8, Reach St. from east of Old Simcoe St. to Bigelow St., Road rehabilitation / reconstruction, Scugog	Pre-Construction	350	-	-	-	-	-	-
		Construction	-	3,100	-	-	-	-	3,100
		Total	350	3,100	-	-	-	-	3,100
107	Reg. Rd. 9, Ganaraska Rd. from 2.0 km east of Maynard Rd. to 0.4 km east of Newtonville Rd., Road rehabilitation / reconstruction in combination with Newtonville Rd., Clarington	Pre-Construction	250	-	-	-	-	-	-
		Construction	-	4,000	-	-	-	-	4,000
		Total	250	4,000	-	-	-	-	4,000
108	Reg. Rd. 13, Zephyr Rd. from Conc. 3 (Reg. Rd. 39) to Conc. 4, Road rehabilitation / reconstruction, Uxbridge	Pre-Construction	350	-	-	-	-	-	-
		Construction	1,350	-	-	-	-	-	-
		Total	1,700	-	-	-	-	-	-

Appendix B: 2023-2032 Regional Roads and Infrastructure Capital Forecast (\$,000's)

Provides a listing for all projects within the 2023 budget and nine-year capital forecast. See Appendix A for financing details for capital projects proposed in 2023

		Expenditure Category	2023 Proposed Budget	Forecast					Forecast Total
				2024	2025	2026	2027	2028-2032	
109	Reg. Rd. 13 from Lake Ridge Rd. to 1.5 km west of Hwy. 7 / 12, Road rehabilitation / reconstruction including modifications to the profile. 2023 road reconstruction from 0.85 km west of Sideroad 17 to 0.415 km east of Sideroad 17. 2024 road reconstruction from 0.415 km east of Sideroad 17 to 1.5 km west of Hwy. 7 / 12, Brock	Pre-Construction	-	-	-	-	-	-	-
		Construction	2,810	5,530	-	-	-	-	5,530
		Total	2,810	5,530	-	-	-	-	5,530
110	Reg. Rd. 14, Liberty St. from Longworth Ave. to Concession Rd. 3, Road rehabilitation including roundabout at Concession Rd. 3 intersection and signalization and modifications at Liberty Street and Freeland Ave - Bons Ave. (combined with item 22) Associated water supply works, Clarington	Pre-Construction	-	-	-	-	-	-	-
		Construction	4,910	-	-	-	-	-	-
		Total	4,910	-	-	-	-	-	-
111	Reg. Rd. 17, Main St. from Winter Rd. to Station St., Road rehabilitation / reconstruction. Associated water supply and sanitary sewer works, Clarington	Pre-Construction	500	100	300	-	-	-	400
		Construction	-	-	-	8,000	-	-	8,000
		Total	500	100	300	8,000	-	-	8,400
112	Reg. Rd. 18, Newtonville Rd. from Kendal Bridge to Ganaraska Rd., Road rehabilitation / reconstruction in combination with Ganaraska Rd., Clarington	Pre-Construction	470	-	-	-	-	-	-
		Construction	-	3,000	-	-	-	-	3,000
		Total	470	3,000	-	-	-	-	3,000
113	Reg. Rd. 19, Shirley Rd. from 0.5 km east of Graham Rd. to Old Scugog Rd., Road reconstruction, Scugog	Pre-Construction	-	1,000	600	200	-	-	1,800
		Construction	-	-	-	-	9,000	-	9,000
		Total	-	1,000	600	200	9,000	-	10,800

Appendix B: 2023-2032 Regional Roads and Infrastructure Capital Forecast (\$,000's)

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		Expenditure Category	2023 Proposed Budget	Forecast					Forecast Total
				2024	2025	2026	2027	2028-2032	
114	Reg. Rd. 21, Goodwood Rd. from Reg. Hwy. 47 to Ridge Rd., Urbanize road and modify corridor through hamlet of Goodwood, including streetscape modifications, Uxbridge	Pre-Construction	-	250	-	100	-	-	350
		Construction	-	-	-	5,000	-	5,000	
		Total	-	250	-	100	5,000	-	5,350
115	Reg. Rd. 23, Lake Ridge Rd. from 0.1 km south of Vallentyne to 0.25 km north of Ravenshoe Rd., Road rehabilitation and curve reconfiguration, Brock / Uxbridge	Pre-Construction	150	150	-	-	-	-	150
		Construction	-	-	2,500	-	-	-	2,500
		Total	150	150	2,500	-	-	-	2,650
116	Reg. Rd. 23, Beach Rd. / Commodore Rd. Intersection, Curve Reconfiguration, Brock	Pre-Construction	-	-	-	-	250	100	350
		Construction	-	-	-	-	-	1,250	1,250
		Total	-	-	-	-	250	1,350	1,600
117	Reg. Rd. 23, Mara Rd. / Shore Line Rd. Intersection, Curve Reconfiguration, Brock	Pre-Construction	-	-	-	-	250	100	350
		Construction	-	-	-	-	-	1,800	1,800
		Total	-	-	-	-	250	1,900	2,150
118	Reg. Rd. 28, Rossland Rd. from Park Rd. to Simcoe St., Road rehabilitation / reconstruction in conjunction with bridge rehabilitation. Associated water supply works, Oshawa	Pre-Construction	150	250	400	-	-	-	650
		Construction	-	-	-	5,000	-	-	5,000
		Total	150	250	400	5,000	-	-	5,650
119	Reg. Rd. 31, Westney Rd. from Finley Ave. to Harwood Ave., Road rehabilitation including intersection modifications at Finley Ave., Monarch Ave., and Harwood Ave. (combined with item 50) Associated water supply works., Ajax	Pre-Construction	-	80	118	-	-	-	198
		Construction	-	-	-	-	-	3,275	3,275
		Total	-	80	118	-	-	3,275	3,473
120	Reg. Rd. 42, Darlington - Clark Townline Rd. from 50 m north of Reg. Hwy. 2 to Concession St., Road rehabilitation / reconstruction, Clarington	Pre-Construction	-	-	-	-	-	-	-
		Construction	-	3,000	-	-	-	-	3,000
		Total	-	3,000	-	-	-	-	3,000

Appendix B: 2023-2032 Regional Roads and Infrastructure Capital Forecast (\$,000's)

Provides a listing for all projects within the 2023 budget and nine-year capital forecast. See Appendix A for financing details for capital projects proposed in 2023

		Expenditure Category	2023 Proposed Budget	Forecast					Forecast Total
				2024	2025	2026	2027	2028-2032	
121	Reg. Rd. 56, Farewell St. from Harbour Rd. to Bloor St., Road rehabilitation / reconstruction. Associated water supply works, Oshawa	Pre-Construction	-	-	-	-	-	-	-
		Construction	2,000	-	-	-	-	-	-
		Total	2,000	-	-	-	-	-	-
122	Reg. Rd. 59, Olive Ave. from Simcoe St. to Drew St., Road rehabilitation / reconstruction in conjunction with water / sewer project, Oshawa	Pre-Construction	-	-	-	-	-	-	-
		Construction	125	-	-	-	-	-	-
		Total	125	-	-	-	-	-	-
123	Reg. Rd. 60, Wentworth St. from Park Rd. to 0.125 km east of Cedar St., Road rehabilitation / reconstruction, Oshawa	Pre-Construction	300	-	-	-	-	-	-
		Construction	-	-	1,500	-	-	-	1,500
		Total	300	-	1,500	-	-	-	1,500
124	Reg. Rd. 60, Wentworth St. from Oshawa Creek Bridge to Farewell St., Road rehabilitation / reconstruction, Oshawa	Pre-Construction	2,150	-	1,000	-	-	-	1,000
		Construction	-	3,000	-	9,000	-	-	12,000
		Total	2,150	3,000	1,000	9,000	-	-	13,000
125	Reg. Hwy. 2 / Newtonville Rd. Intersection, Road rehabilitation / reconstruction, Clarington	Pre-Construction	-	-	-	-	-	-	-
		Construction	450	-	-	-	-	-	-
		Total	450	-	-	-	-	-	-
126	Road Resurfacing and Rehabilitation Preparatory Activities Allowance, Various	Pre-Construction	350	350	350	350	350	1,750	3,150
		Construction	-	-	-	-	-	-	-
		Total	350	350	350	350	350	1,750	3,150
127	Road and Structures Rehabilitation Program, Various	Pre-Construction	-	-	-	-	-	-	-
		Construction	500	2,600	2,700	2,800	2,900	15,000	26,000
		Total	500	2,600	2,700	2,800	2,900	15,000	26,000
128	Road Resurfacing / Rehabilitation Other Locations, Various	Pre-Construction	-	-	-	-	-	-	-
		Construction	5,752	10,541	17,133	21,550	28,750	199,025	276,999
		Total	5,752	10,541	17,133	21,550	28,750	199,025	276,999
Road Rehabilitation / Reconstruction Projects Subtotal			38,660	47,000	47,000	47,000	47,000	235,000	423,000

Appendix B: 2023-2032 Regional Roads and Infrastructure Capital Forecast (\$,000's)

Provides a listing for all projects within the 2023 budget and nine-year capital forecast. See Appendix A for financing details for capital projects proposed in 2023

		Expenditure Category	2023 Proposed Budget	Forecast					Forecast Total
				2024	2025	2026	2027	2028-2032	
Structure Rehabilitation / Replacement									
129	Structure Investigation Program, Various	Pre-Construction	100	100	100	100	100	500	900
		Construction	-	-	-	-	-	-	-
		Total	100	100	100	100	100	500	900
130	Bridge Maintenance and Repairs Program, Various	Pre-Construction	-	-	-	-	-	-	-
		Construction	200	200	200	200	200	1,000	1,800
		Total	200	200	200	200	200	1,000	1,800
131	Expansion Joint Repairs Program, Various	Pre-Construction	-	-	-	-	-	-	-
		Construction	60	60	60	60	60	300	540
		Total	60	60	60	60	60	300	540
132	Culvert Maintenance and Repairs Program, Various	Pre-Construction	-	-	-	-	-	-	-
		Construction	150	150	150	150	150	750	1,350
		Total	150	150	150	150	150	750	1,350
133	Reg. Rd. 1, Main St. Over Uxbridge Brook Culvert, 0.3 km north of Brock St., Culvert rehabilitation, Uxbridge	Pre-Construction	-	-	-	-	-	150	150
		Construction	-	-	-	-	-	1,800	1,800
		Total	-	-	-	-	-	1,950	1,950
134	Reg. Rd. 2, Simcoe St. Over Oshawa Creek Bridge, 0.7 km north of Taunton Rd., Bridge rehabilitation, Oshawa	Pre-Construction	-	-	-	-	-	-	-
		Construction	2,050	-	-	-	-	-	-
		Total	2,050	-	-	-	-	-	-
135	Reg. Rd. 2, Simcoe St. Culvert, 0.5 km north of Scugog Line 3, Culvert rehabilitation, Scugog	Pre-Construction	-	-	-	-	-	50	50
		Construction	-	-	-	-	-	350	350
		Total	-	-	-	-	-	400	400
136	Reg. Rd. 2, Seagrave Bridge, 0.55 km south of Saintfield Rd., Bridge rehabilitation, Scugog	Pre-Construction	50	-	-	-	-	-	-
		Construction	-	-	2,950	-	-	-	2,950
		Total	50	-	2,950	-	-	-	2,950

Appendix B: 2023-2032 Regional Roads and Infrastructure Capital Forecast (\$,000's)

Provides a listing for all projects within the 2023 budget and nine-year capital forecast. See Appendix A for financing details for capital projects proposed in 2023

		Expenditure Category	2023 Proposed Budget	Forecast					Forecast Total
				2024	2025	2026	2027	2028-2032	
137	Reg. Rd. 3, Bickle Bridge, 1.1 km east of Thickson Rd., Bridge rehabilitation, Whitby	Pre-Construction	-	-	-	-	-	125	125
		Construction	-	-	-	-	2,000	2,000	
		Total	-	-	-	-	2,125	2,125	
138	Reg. Rd. 3, Winchester Rd. Culvert, 0.3 km west of Given Rd., Culvert rehabilitation, Oshawa	Pre-Construction	-	-	75	-	-	-	75
		Construction	-	-	-	-	1,300	-	1,300
		Total	-	-	75	-	1,300	-	1,375
139	Reg. Rd. 3, Enniskillen Bridge, 2.1 km west of Scugog Rd., Bridge rehabilitation, Clarington	Pre-Construction	-	-	-	-	200	-	200
		Construction	-	-	-	-	-	2,400	2,400
		Total	-	-	-	-	200	2,400	2,600
140	Reg. Rd. 4, W.A. Twelvetees Bridge, 0.3 km east of Whites Rd., Bridge rehabilitation of existing 4 lane structure, Pickering	Pre-Construction	230	-	-	-	-	-	-
		Construction	-	-	-	5,400	-	-	5,400
		Total	230	-	-	5,400	-	-	5,400
141	Reg. Rd. 4, Taunton Road West Over CPR Bridge, 0.8 km east of Brock Rd., Bridge rehabilitation, Pickering	Pre-Construction	-	-	-	-	-	75	75
		Construction	-	-	-	-	-	500	500
		Total	-	-	-	-	-	575	575
142	Reg. Rd. 4, Taunton Rd. Culvert, 0.9 km east of Courtice Rd., Culvert Replacement in conjunction with road rehabilitation, Clarington	Pre-Construction	-	-	-	-	-	-	-
		Construction	-	-	1,950	-	-	-	1,950
		Total	-	-	1,950	-	-	-	1,950
143	Reg. Rd. 4, Hampton Bridge, 1.0 km west of Bowmanville Ave., Bridge rehabilitation / replacement in conjunction with road rehabilitation, Clarington	Pre-Construction	150	-	-	-	-	-	-
		Construction	-	-	3,100	-	-	-	3,100
		Total	150	-	3,100	-	-	-	3,100
144	Reg. Rd. 4, Taunton Rd. Culvert, 0.7 km east of Bethesda Rd., Culvert rehabilitation, Clarington	Pre-Construction	-	-	-	-	-	-	-
		Construction	-	550	-	-	-	-	550
		Total	-	550	-	-	-	-	550
145	Reg. Rd. 4, Soper Creek Bridge, 2.97 km east of Liberty St., Bridge rehabilitation, Clarington	Pre-Construction	-	-	-	-	-	-	-
		Construction	-	-	-	1,500	-	-	1,500
		Total	-	-	-	1,500	-	-	1,500

Appendix B: 2023-2032 Regional Roads and Infrastructure Capital Forecast (\$,000's)

Provides a listing for all projects within the 2023 budget and nine-year capital forecast. See Appendix A for financing details for capital projects proposed in 2023

		Expenditure Category	2023 Proposed Budget	Forecast					Forecast Total
				2024	2025	2026	2027	2028-2032	
146	Reg. Rd. 4, Wilmot Creek Bridge, 1.3 km east of Reg. Rd. 42, Bridge rehabilitation, Clarington	Pre-Construction	-	-	-	-	-	125	125
		Construction	-	-	-	-	-	2,000	2,000
		Total	-	-	-	-	-	2,125	2,125
147	Reg. Rd. 5, Ninth Concession Rd. Bridge, 0.35 km west of Sideline 20, Bridge rehabilitation, Scugog	Pre-Construction	-	-	-	-	-	50	50
		Construction	-	-	-	-	-	300	300
		Total	-	-	-	-	-	350	350
148	Reg. Rd. 5, Ninth Concession Rd. Over Duffins Creek Tributary Culvert, 0.05 km west of Sideline 12, Culvert rehabilitation, Pickering	Pre-Construction	100	-	-	-	-	-	-
		Construction	-	-	1,000	-	-	-	1,000
		Total	100	-	1,000	-	-	-	1,000
149	Reg. Rd. 6, Saintfield Rd. Bridge, 4 km east of Hwy. 12, Bridge replacement, Scugog	Pre-Construction	-	-	-	-	-	-	-
		Construction	-	3,750	-	-	-	-	3,750
		Total	-	3,750	-	-	-	-	3,750
150	Reg. Rd. 6 Over Nonquon River Tributary Culvert, 1.1 km west of Simcoe St., Culvert rehabilitation, Scugog	Pre-Construction	-	-	-	-	-	50	50
		Construction	-	-	-	-	-	300	300
		Total	-	-	-	-	-	350	350
151	Reg. Rd. 8 Over Pepperlaw Brook Bridge, 0.75 km west of Concession 3, Bridge replacement, Uxbridge	Pre-Construction	-	-	-	-	-	-	-
		Construction	1,600	-	-	-	-	-	-
		Total	1,600	-	-	-	-	-	-
152	Reg. Rd. 8 Over Pepperlaw Brook Tributary Culvert, 0.3 km west of Concession 4, Culvert rehabilitation, Uxbridge	Pre-Construction	-	100	-	-	-	-	100
		Construction	-	-	-	-	1,000	-	1,000
		Total	-	100	-	-	1,000	-	1,100
153	Reg. Rd. 8, Brock St. W Culvert, 0.05 km west of Victoria St., Beyond forecast culvert replacement, Uxbridge	Pre-Construction	-	-	-	-	-	200	200
		Construction	-	-	-	-	-	-	-
		Total	-	-	-	-	-	200	200
154	Reg. Rd. 8, Reach St. Culvert, 0.4 km east of Lake Ridge Rd., Culvert rehabilitation, Scugog	Pre-Construction	-	-	-	-	75	-	75
		Construction	-	-	-	-	-	1,000	1,000
		Total	-	-	-	-	75	1,000	1,075

Appendix B: 2023-2032 Regional Roads and Infrastructure Capital Forecast (\$,000's)

Provides a listing for all projects within the 2023 budget and nine-year capital forecast. See Appendix A for financing details for capital projects proposed in 2023

		Expenditure Category	2023 Proposed Budget	Forecast					Forecast Total
				2024	2025	2026	2027	2028-2032	
155	Reg. Rd. 8, Nonquon Bridge, 0.45km west of Hwy. 12, Bridge replacement, Scugog	Pre-Construction	-	-	-	-	-	-	-
		Construction	150	-	-	-	-	-	-
		Total	150	-	-	-	-	-	-
156	Reg. Rd. 11, Sandford Rd. Bridge, 1.1 km west of Uxbridge Township Concession Road 3, Bridge replacement, Uxbridge	Pre-Construction	-	-	-	-	-	-	-
		Construction	1,500	-	-	-	-	-	-
		Total	1,500	-	-	-	-	-	-
157	Reg. Rd. 11, Sandford Rd Over Uxbridge Brook Tributary Culvert, 0.1 km west of Concession 5, Culvert rehabilitation, Uxbridge	Pre-Construction	-	-	-	-	-	50	50
		Construction	-	-	-	-	-	300	300
		Total	-	-	-	-	-	350	350
158	Reg. Rd. 12, Dobson Bridge, 0.2 km east of McRae St., Bridge rehabilitation, Brock	Pre-Construction	-	-	-	-	125	-	125
		Construction	-	-	-	-	-	1,500	1,500
		Total	-	-	-	-	125	1,500	1,625
159	Reg. Rd. 13, Zephyr Rd. Bridge, 0.95 km west of Concession Road VI, Bridge replacement, Uxbridge	Pre-Construction	-	-	-	-	-	-	-
		Construction	3,000	-	-	-	-	-	-
		Total	3,000	-	-	-	-	-	-
160	Reg. Rd. 13 Retaining Wall, 0.2 km east of Hwy. 7 / 12, north side, Retaining wall replacement, Brock	Pre-Construction	-	-	-	-	-	30	30
		Construction	-	-	-	-	-	300	300
		Total	-	-	-	-	-	330	330
161	Reg. Rd. 15, Beaver River Bridge, 0.1 km west of Hwy. 12, Bridge replacement, Brock	Pre-Construction	-	-	-	-	-	-	-
		Construction	-	7,000	-	-	-	-	7,000
		Total	-	7,000	-	-	-	-	7,000
162	Reg. Rd. 15, McRae Bridge, 1.0 km west of Thorah Sideroad, Bridge rehabilitation, Brock	Pre-Construction	-	-	-	125	-	-	125
		Construction	-	-	-	-	-	2,000	2,000
		Total	-	-	-	125	-	2,000	2,125

Appendix B: 2023-2032 Regional Roads and Infrastructure Capital Forecast (\$,000's)

Provides a listing for all projects within the 2023 budget and nine-year capital forecast. See Appendix A for financing details for capital projects proposed in 2023

		Expenditure Category	2023 Proposed Budget	Forecast					Forecast Total
				2024	2025	2026	2027	2028-2032	
163	Reg. Rd. 16, Ritson Rd. Over CNR Bridge, 0.2 km south of Bloor St., Bridge rehabilitation. 50% of costs to be recovered from CNR as per Board Order No. 98034, Oshawa	Pre-Construction	110	-	-	-	-	-	-
		Construction	-	5,250	-	-	-	-	5,250
		Total	110	5,250	-	-	-	-	5,250
164	Reg. Rd. 16, Ritson Rd. Lot 8 / 9 Concession 4 Culvert, 0.01 km North of Given Rd., Culvert rehabilitation, Oshawa	Pre-Construction	-	-	-	-	-	-	-
		Construction	-	-	-	-	1,300	-	1,300
		Total	-	-	-	-	1,300	-	1,300
165	Reg. Rd. 17, Main St. Over Orono Creek Culvert, 0.8 km south of Station St., Culvert rehabilitation, Clarington	Pre-Construction	-	-	-	-	-	50	50
		Construction	-	-	-	-	-	300	300
		Total	-	-	-	-	-	350	350
166	Reg. Rd. 18, Newtonville Rd. Culvert, 0.37 km south of Concession Rd. 3, Culvert rehabilitation, Clarington	Pre-Construction	-	-	-	100	-	-	100
		Construction	-	-	-	-	-	1,500	1,500
		Total	-	-	-	100	-	1,500	1,600
167	Reg. Rd. 18, Newtonville Rd. Culvert, 0.1 km north of Concession Rd. 4, Culvert rehabilitation, Clarington	Pre-Construction	-	-	-	75	-	-	75
		Construction	-	-	-	-	-	1,300	1,300
		Total	-	-	-	75	-	1,300	1,375
168	Reg. Rd. 18, Kendal Bridge, 1.18 km south of Ganaraska Rd., Bridge rehabilitation, Clarington	Pre-Construction	-	-	-	-	-	125	125
		Construction	-	-	-	-	-	2,000	2,000
		Total	-	-	-	-	-	2,125	2,125
169	Reg. Rd. 22, Bayly St. at Westshore Blvd. Culvert, Culvert rehabilitation, Pickering	Pre-Construction	-	125	-	-	-	-	125
		Construction	-	-	-	1,500	-	-	1,500
		Total	-	125	-	1,500	-	-	1,625
170	Reg. Rd. 22, Bloor St. W. Over Oshawa Creek, 0.2 km west of Simcoe St. S., Bridge rehabilitation, Oshawa	Pre-Construction	-	-	-	-	-	200	200
		Construction	-	-	-	-	-	2,500	2,500
		Total	-	-	-	-	-	2,700	2,700

Appendix B: 2023-2032 Regional Roads and Infrastructure Capital Forecast (\$,000's)

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		Expenditure Category	2023 Proposed Budget	Forecast					Forecast Total
				2024	2025	2026	2027	2028-2032	
171	Reg. Rd. 23, Lake Ridge Rd. Culvert 0.3 km north of Conc. Rd. 2, Culvert rehabilitation, Brock	Pre-Construction	100	-	-	-	-	-	-
		Construction	-	-	1,200	-	-	-	1,200
		Total	100	-	1,200	-	-	-	1,200
172	Reg. Rd. 23, Beaverton Bridge, 50 m north of Simcoe St., Bridge rehabilitation, Brock	Pre-Construction	-	-	-	-	-	-	-
		Construction	600	-	-	-	-	-	-
		Total	600	-	-	-	-	-	-
173	Reg. Rd. 23 Culvert, 1.0 km north of Thorah Concession Rd 7, Culvert rehabilitation, Brock	Pre-Construction	-	-	-	-	-	50	50
		Construction	-	-	-	-	-	300	300
		Total	-	-	-	-	-	350	350
174	Reg. Rd. 26, Thickson Rd. Culvert at Wentworth St., Culvert rehabilitation, Whitby	Pre-Construction	-	-	-	-	-	-	-
		Construction	-	800	-	-	-	-	800
		Total	-	800	-	-	-	-	800
175	Reg. Rd. 27, Altona Rd. Over Petticoat Creek Tributary Culvert, Culvert rehabilitation, Pickering	Pre-Construction	-	-	-	-	-	100	100
		Construction	-	-	-	-	-	650	650
		Total	-	-	-	-	-	750	750
176	Reg. Rd. 27, Altona Rd Over Petticoat Creek Tributary Culvert, 0.4 km north of Strouds Ln., Culvert replacement , Pickering	Pre-Construction	-	-	-	-	-	200	200
		Construction	-	-	-	-	-	2,900	2,900
		Total	-	-	-	-	-	3,100	3,100
177	Reg. Rd. 28, Rossland Rd. Over Oshawa Creek, 0.45 km east of Park Rd., Bridge rehabilitation in conjunction with road rehabilitation / reconstruction, Oshawa	Pre-Construction	100	-	-	-	-	-	-
		Construction	-	-	-	5,100	-	-	5,100
		Total	100	-	-	5,100	-	-	5,100
178	Reg. Rd. 29, Liverpool Rd. Over CNR Bridge, 0.1 km north of Bayly St., Bridge rehabilitation, Pickering	Pre-Construction	-	-	-	-	-	150	150
		Construction	-	-	-	-	-	2,500	2,500
		Total	-	-	-	-	-	2,650	2,650

Appendix B: 2023-2032 Regional Roads and Infrastructure Capital Forecast (\$,000's)

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		Expenditure Category	2023 Proposed Budget	Forecast					Forecast Total
				2024	2025	2026	2027	2028-2032	
179	Reg. Rd. 31, Westney Rd. Over Miller Creek West Bridge, 0.1 km north of Ritchie Ave., Bridge rehabilitation, Pickering	Pre-Construction	-	-	80	-	-	-	80
	Construction	-	-	-	-	1,100	-	1,100	
	Total	-	-	80	-	1,100	-	1,180	
180	Reg. Rd. 31, Westney Rd. Over Miller Creek East Bridge, 0.1 km north of Ritchie Ave., Bridge rehabilitation, Pickering	Pre-Construction	-	-	60	-	-	-	60
	Construction	-	-	-	-	750	-	750	
	Total	-	-	60	-	750	-	810	
181	Reg. Rd. 31, Westney Rd. Over CPR Bridge, 0.4 km north of Taunton Rd., Bridge rehabilitation, Ajax	Pre-Construction	-	300	-	-	-	-	300
	Construction	-	-	-	-	4,200	-	4,200	
	Total	-	300	-	-	4,200	-	4,500	
182	Reg. Rd. 31, Bayles Bridge, 2.8 km east of Brock Rd., Bridge rehabilitation, Pickering	Pre-Construction	-	-	-	-	175	-	175
	Construction	-	-	-	-	-	2,000	2,000	
	Total	-	-	-	-	175	2,000	2,175	
183	Reg. Rd. 31, Seventh Concession Rd. Over Brougham Creek Tributary Culvert, 0.34 km west of Paddock Rd., Culvert rehabilitation, Pickering	Pre-Construction	-	-	35	-	-	-	35
	Construction	-	-	-	-	300	-	300	
	Total	-	-	35	-	300	-	335	
184	Reg. Rd. 33, Harmony Rd. Over CPR Bridge, 0.2 km south of Olive Ave., Bridge rehabilitation / replacement. Coordinate with Metrolinx extension to Bowmanville, Oshawa	Pre-Construction	-	-	-	-	-	-	-
	Construction	200	3,300	-	-	-	-	3,300	
	Total	200	3,300	-	-	-	-	3,300	
185	Reg. Rd. 33, Hoskin Bridge, 0.55 km north of Rossland Rd. East, Bridge rehabilitation, Oshawa	Pre-Construction	-	-	-	-	-	125	125
	Construction	-	-	-	-	-	2,000	2,000	
	Total	-	-	-	-	-	2,125	2,125	
186	Reg. Rd. 34, Courtice Road Over CPR Bridge, 0.3 km north of Baseline Rd., Bridge rehabilitation. Coordinate with Metrolinx extension to Bowmanville, Clarington	Pre-Construction	-	-	-	-	-	-	-
	Construction	200	220	-	-	-	-	220	
	Total	200	220	-	-	-	-	220	

Appendix B: 2023-2032 Regional Roads and Infrastructure Capital Forecast (\$,000's)

Provides a listing for all projects within the 2023 budget and nine-year capital forecast. See Appendix A for financing details for capital projects proposed in 2023

		Expenditure Category	2023 Proposed Budget	Forecast					Forecast Total
				2024	2025	2026	2027	2028-2032	
187	Reg. Rd. 35, Wilson Rd. North Pedestrian Underpass, 0.69 km north of Rossland Rd. East, Bridge rehabilitation, Oshawa	Pre-Construction	-	-	-	-	100	-	100
		Construction	-	-	-	-	-	1,500	1,500
		Total	-	-	-	-	100	1,500	1,600
188	Reg. Rd. 46, Brock St. Over CNR Bridge, 0.1 km south of Hwy. 401, Bridge rehabilitation, Whitby	Pre-Construction	-	-	-	-	-	-	-
		Construction	-	-	-	-	-	1,750	1,750
		Total	-	-	-	-	-	1,750	1,750
189	Reg. Rd. 50, Morgan Bridge, 3.1 km east of Reg. Rd. 51, Bridge rehabilitation. This boundary bridge is a partnership project with Simcoe County. 50% of costs to be recovered by Simcoe County, Brock	Pre-Construction	-	-	200	-	-	-	200
		Construction	-	-	-	-	2,000	-	2,000
		Total	-	-	200	-	2,000	-	2,200
190	Reg. Rd. 53, Stevenson Rd. Over CNR Bridge, 0.9 km north of Wentworth St., Bridge rehabilitation, Oshawa	Pre-Construction	-	-	-	200	-	-	200
		Construction	-	-	-	-	-	2,500	2,500
		Total	-	-	-	200	-	2,500	2,700
191	Reg. Rd. 53, Stevenson Rd. Over CPR Bridge, 0.4 km north of Laval Dr., Bridge rehabilitation / replacement. Coordinate with Metrolinx extension to Bowmanville, Oshawa	Pre-Construction	-	-	-	-	-	-	-
		Construction	200	1,800	-	-	-	-	1,800
		Total	200	1,800	-	-	-	-	1,800
192	Reg. Rd. 54, Park Rd. Over CPR Bridge, 0.48 km south of Gibb St., Bridge rehabilitation. Coordinate with Metrolinx extension to Bowmanville, Oshawa	Pre-Construction	-	-	-	-	-	-	-
		Construction	200	1,850	-	-	-	-	1,850
		Total	200	1,850	-	-	-	-	1,850
193	Reg. Rd. 57, Bowmanville Creek Bridge, 1.9 km north of Reg. Hwy. 2, Bridge rehabilitation, Clarington	Pre-Construction	-	-	100	-	-	-	100
		Construction	-	-	-	-	-	3,500	3,500
		Total	-	-	100	-	-	3,500	3,600
194	Reg. Rd. 57, Burketon CPR Bridge, 3.3 km south of Shirley Rd., Bridge Replacement, Clarington	Pre-Construction	-	-	-	-	-	-	-
		Construction	2,575	-	-	-	-	-	-
		Total	2,575	-	-	-	-	-	-

Appendix B: 2023-2032 Regional Roads and Infrastructure Capital Forecast (\$,000's)

Provides a listing for all projects within the 2023 budget and nine-year capital forecast. See Appendix A for financing details for capital projects proposed in 2023

		Expenditure Category	2023 Proposed Budget	Forecast					Forecast Total
				2024	2025	2026	2027	2028-2032	
195	Reg. Rd. 58, Manning Rd. Culvert, 0.3 km east of Thickson Rd., Culvert rehabilitation, Whitby	Pre-Construction	-	-	-	-	-	-	-
		Construction	-	-	-	-	1,300	-	1,300
		Total	-	-	-	-	1,300	-	1,300
196	Reg. Rd. 58, Adelaide Ave. W. Over Oshawa Creek Bridge, 0.6 km west of Simcoe St., Bridge rehabilitation, Oshawa	Pre-Construction	-	-	-	-	-	180	180
		Construction	-	-	-	-	-	2,500	2,500
		Total	-	-	-	-	-	2,680	2,680
197	Reg. Rd. 58, Adelaide Ave. Culvert, 0.05 km west of Wilson Rd., Culvert rehabilitation, Oshawa	Pre-Construction	100	-	-	-	-	-	-
		Construction	-	-	1,300	-	-	-	1,300
		Total	100	-	1,300	-	-	-	1,300
198	Reg. Rd. 59, Gibb St. Over Oshawa Creek Bridge, 0.4 km east of Park Rd., Bridge rehabilitation in conjunction with road rehabilitation, Oshawa	Pre-Construction	-	-	-	-	-	-	-
		Construction	-	-	4,100	-	-	-	4,100
		Total	-	-	4,100	-	-	-	4,100
199	Reg. Hwy. 2, Kingston Rd. Over Duffins Creek Bridge, 0.6 km west of Church St., Bridge rehabilitation, Ajax	Pre-Construction	-	-	-	-	-	100	100
		Construction	-	-	-	-	-	4,300	4,300
		Total	-	-	-	-	-	4,400	4,400
Structure Rehabilitation / Replacement Subtotal			13,725	25,555	16,660	14,510	14,435	53,485	124,645
Traffic Control & Other Programs - Non-Growth									
200	Miscellaneous Road and Storm Sewer Reconstruction Projects, Various	Pre-Construction	-	-	-	-	-	-	-
		Construction	400	400	400	400	400	2,000	3,600
		Total	400	400	400	400	400	2,000	3,600
201	Signal Modernization Program, Various	Pre-Construction	-	-	-	-	-	-	-
		Construction	1,640	1,548	1,394	1,487	1,460	8,445	14,334
		Total	1,640	1,548	1,394	1,487	1,460	8,445	14,334
202	Accessible Pedestrian Signal (APS) Installation Program, Various	Pre-Construction	-	-	-	-	-	-	-
		Construction	1,000	1,000	1,000	850	850	4,250	7,950
		Total	1,000	1,000	1,000	850	850	4,250	7,950

Appendix B: 2023-2032 Regional Roads and Infrastructure Capital Forecast (\$,000's)

Provides a listing for all projects within the 2023 budget and nine-year capital forecast. See Appendix A for financing details for capital projects proposed in 2023

		Expenditure Category	2023 Proposed Budget	Forecast					Forecast Total
				2024	2025	2026	2027	2028-2032	
203	Advance Traffic Management Systems (ATMS) Upgrades, Various	Pre-Construction	-	-	-	-	-	-	-
		Construction	100	100	145	150	150	1,160	1,705
		Total	100	100	145	150	150	1,160	1,705
204	Uninterruptible Power Supply (UPS) Installation Program, Various	Pre-Construction	-	-	-	-	-	-	-
		Construction	500	500	500	500	500	2,500	4,500
		Total	500	500	500	500	500	2,500	4,500
205	Contingencies Non-Development Related, Various	Pre-Construction	-	-	-	-	-	-	-
		Construction	100	100	100	100	100	500	900
		Total	100	100	100	100	100	500	900
Traffic Control & Other Programs - Non-Growth Subtotal			3,740	3,648	3,539	3,487	3,460	18,855	32,989
Road & Traffic Safety Program (Vision Zero)									
206	Roadside Safety Program, Various	Pre-Construction	-	-	-	-	-	-	-
		Construction	1,000	1,100	700	900	900	4,500	8,100
		Total	1,000	1,100	700	900	900	4,500	8,100
207	Durham Vision Zero Program, Various	Pre-Construction	-	-	-	-	-	-	-
		Construction	675	650	500	379	-	-	1,529
		Total	675	650	500	379	-	-	1,529
Road & Traffic Safety Program (Vision Zero) Subtotal			1,675	1,750	1,200	1,279	900	4,500	9,629
Cycling Infill Projects									
208	Cycling Infill Projects, Various	Pre-Construction	540	-	-	-	-	-	-
		Construction	-	900	900	1,000	1,000	7,500	11,300
		Total	540	900	900	1,000	1,000	7,500	11,300
Cycling Infill Projects Subtotal			540	900	900	1,000	1,000	7,500	11,300

Appendix B: 2023-2032 Regional Roads and Infrastructure Capital Forecast (\$,000's)

Provides a listing for all projects within the 2023 budget and nine-year capital forecast. See Appendix A for financing details for capital projects proposed in 2023

		Expenditure Category	2023 Proposed Budget	Forecast					Forecast Total
				2024	2025	2026	2027	2028-2032	
Building & Structures									
209	Additional Office Space - Scugog Depot	Pre-Construction	-	-	-	93	-	-	93
		Construction	-	-	-	-	407	-	407
		Total	-	-	-	93	407	-	500
210	Construction of Mezzanine in Fleet Area - Scugog Depot	Pre-Construction	-	30	-	-	-	-	30
		Construction	-	-	130	-	-	-	130
		Total	-	30	130	-	-	-	160
211	Construction of Mezzanine in Fleet Bay 1 - Orono Depot	Pre-Construction	-	-	-	-	-	-	-
		Construction	-	67	-	-	-	-	67
		Total	-	67	-	-	-	-	67
212	Depot Rationalization - Ajax Depot Expansion (Works General Tax Portion)	Pre-Construction	1,667	-	-	-	-	-	-
		Construction	-	11,667	-	-	-	-	11,667
		Total	1,667	11,667	-	-	-	-	11,667
213	Depot Rationalization - New Oshawa/Whitby Depot (Works General Tax Portion)	Pre-Construction	12,667	1,667	-	-	-	-	1,667
		Construction	-	-	55,000	-	-	-	55,000
		Total	12,667	1,667	55,000	-	-	-	56,667
214	Depot Rationalization - New Sunderland Depot (Works General Tax Portion)	Pre-Construction	1,333	1,333	-	-	-	-	1,333
		Construction	-	-	14,000	-	-	-	14,000
		Total	1,333	1,333	14,000	-	-	-	15,333
215	New 16 Bay Cold Vehicle Storage - Scugog Depot Expansion	Pre-Construction	-	-	-	73	-	-	73
		Construction	-	-	-	-	993	-	993
		Total	-	-	-	73	993	-	1,066
216	New Salt and Brine Storage Facility - Scugog Depot Expansion	Pre-Construction	-	-	-	100	-	-	100
		Construction	-	-	-	-	1,067	-	1,067
		Total	-	-	-	100	1,067	-	1,167

Appendix B: 2023-2032 Regional Roads and Infrastructure Capital Forecast (\$,000's)

Provides a listing for all projects within the 2023 budget and nine-year capital forecast. See Appendix A for financing details for capital projects proposed in 2023

		Expenditure Category	2023 Proposed Budget	Forecast					Forecast Total
				2024	2025	2026	2027	2028-2032	
217	Repairs and Epoxy Coat Fleet Bay Concrete Floors & Repairs to Floor Drains in Fleet Bays - Scugog Depot	Pre-Construction	13	-	-	-	-	-	-
		Construction	-	57	-	-	-	-	57
		Total	13	57	-	-	-	-	57
218	Replace Existing Asphalt in Various Location - Scugog Depot	Pre-Construction	-	-	10	-	-	-	10
		Construction	-	-	-	123	-	-	123
		Total	-	-	10	123	-	-	133
219	Roof Replacement on Vehicle Storage Bays - Orono Depot	Pre-Construction	27	-	-	-	-	-	-
		Construction	-	173	-	-	-	-	173
		Total	27	173	-	-	-	-	173
220	Thermal Glass Panels for Rollup Doors and Door operators - Orono Depot	Pre-Construction	18	-	-	-	-	-	-
		Construction	-	66	-	-	-	-	66
		Total	18	66	-	-	-	-	66
221	Widening of Existing Canopy Entrance - Sunderland Depot	Pre-Construction	8	-	-	-	-	-	-
		Construction	-	42	-	-	-	-	42
		Total	8	42	-	-	-	-	42
222	20 Bay Cold Vehicle Storage - Orono Depot Expansion		-	-	-	-	-	1,266	1,266
223	4 Bay Garage Expansion - 101 Consumers		-	-	-	-	-	5,000	5,000
224	Access Ladder Repair/Replacement Project - Various Locations		15	-	-	-	-	-	-
225	Full UPS replacement - 101 Consumers		-	-	-	-	-	40	40
226	Improve turning radius of ramp - 101 Consumers		-	240	-	-	-	-	240
227	New Concrete Floor in Sign Shed - Ajax Depot		-	48	-	-	-	-	48
228	Paving of Rear Yard and Site Repairs - Orono Depot		-	-	-	-	-	122	122


Appendix B: 2023-2032 Regional Roads and Infrastructure Capital Forecast (\$,000's)

Provides a listing for all projects within the 2023 budget and nine-year capital forecast. See Appendix A for financing details for capital projects proposed in 2023

		Expenditure Category	2023 Proposed Budget	Forecast					Forecast Total
				2024	2025	2026	2027	2028-2032	
229	Renovation & Optimization - 101 Consumers (Traffic Portion)		5,847	-	-	-	-	-	-
230	Replacement of Fire System - Oshawa/Whitby Depot		67	-	-	-	-	-	-
231	Roof Replacement for Administration section - 101 Consumers		-	-	-	-	-	495	495
232	Salt and Brine Storage Building - Orono Depot Expansion		-	-	-	-	-	1,167	1,167
Building & Structures Subtotal			21,662	15,390	69,140	389	2,467	8,090	95,476
Machinery & Equipment									
233	48" Round Shoring - Sunderland Depot		-	3	-	-	-	3	6
234	Asphalt Content Ignition Furnace - Construction		-	-	-	-	-	7	7
235	Bar Pullout Tester - Construction		4	-	-	-	-	-	-
236	Bench Oven - Construction		5	-	-	-	-	-	-
237	Concrete End Grinder - Construction		8	-	-	-	-	-	-
238	Concrete Testing Equipment - Construction		-	-	-	-	-	9	9
239	Electronic Scale - Construction		-	-	-	-	-	3	3
240	Gyratory Compactor/Molds/Equipment - Construction		23	-	-	-	-	-	-
241	Integrated Control Technology - Security Project - Various Locations		7	-	-	-	-	-	-
242	Lab Oven - Construction		-	-	-	-	-	4	4
243	Latex Printer/Cutter - Traffic Engineering & Operations		-	35	-	-	-	-	35
244	Metal Detector - Sunderland Depot		-	-	-	-	-	-	-
245	Nuclear Densometer - Construction		4	-	5	-	-	-	5

Appendix B: 2023-2032 Regional Roads and Infrastructure Capital Forecast (\$,000's)

Provides a listing for all projects within the 2023 budget and nine-year capital forecast. See Appendix A for financing details for capital projects proposed in 2023

		Expenditure Category	2023 Proposed Budget	Forecast					Forecast Total
				2024	2025	2026	2027	2028-2032	
246	Pipe Locator - Sunderland Depot	-	3	-	-	-	-	3	6
247	Portable Traffic Safety Devices - Traffic Engineering & Operations	-	25	25	25	25	25	75	175
248	Portable Variable Message Signs - Traffic Engineering & Operations	-	-	200	-	-	-	-	200
249	Pressure Washer - Sunderland Depot	-	3	3	-	-	-	-	6
250	Rollover flat bed applicator - Traffic Engineering & Operations	-	32	-	-	-	-	-	32
251	Snow Fence Replacement - Sunderland Depot	-	-	-	-	-	-	6	6
252	Survey GPS Instrument - Construction	-	10	10	10	10	10	54	94
253	Survey Total Station Replacement - Construction	-	-	-	-	-	-	39	39
254	Temporary Traffic Control Sign replacement - Sunderland Depot	-	2	2	-	-	2	4	10
255	Trench box replacement - Sunderland Depot	-	-	-	-	-	-	5	5
Machinery & Equipment Subtotal			51	113	245	35	37	212	642
Information Technology Infrastructure									
256	Computers & Monitors Refresh - Financial Services	208	299	226	206	286	1,210	2,227	
257	dTIMS Software Upgrades - Transportation-Infrastructure	120	-	-	-	-	50	50	
258	Fuel Management System & Infrastructure Replacement - Various Locations	-	-	217	-	-	-	217	
259	Large Format Colour Plotter - Traffic Engineering & Operations	-	15	-	-	-	25	40	
260	Scanner and Wide Format Black & White Printer - Construction	-	-	-	22	-	-	22	

Appendix B: 2023-2032 Regional Roads and Infrastructure Capital Forecast (\$,000's)

Provides a listing for all projects within the 2023 budget and nine-year capital forecast. See Appendix A for financing details for capital projects proposed in 2023

		Expenditure Category	2023 Proposed Budget	Forecast					Forecast Total
				2024	2025	2026	2027	2028-2032	
261	Standard Laptops		2	5	-	-	-	-	5
262	Power Laptops		27	66	32	20	11	38	167
263	Power Laptops (with Monitors)		-	22	8	8	8	24	70
Information Technology Infrastructure Subtotal			357	407	483	256	305	1,347	2,798
Vehicles									
264	1 Ton High Roof Van - Ajax Depot		-	42	-	-	-	-	42
265	1 Ton Van - 289 Water St.		300	-	-	-	-	-	-
266	1/2 Ton Pick-up Truck - Various Locations		765	662	113	28	56	169	1,028
267	3 Ton Crew Cab - Various Locations		570	-	-	-	-	-	-
268	3/4 Ton Pick Up - Scugog Depot		-	28	-	-	-	-	28
269	3/4 Ton Van - Various Locations		900	-	-	-	-	-	-
270	5 Ton Flatbed - Traffic Engineering & Operations		-	400	-	-	-	-	400
271	6 Ton Tandem - Various Locations		3,000	-	-	-	-	-	-
272	Asphalt Grinder Attachment (Skid Steer Loader) - Oshawa/Whitby Depot		-	-	-	8	-	-	8
273	Asphalt Hot Box - Oshawa/Whitby Depot		65	-	-	-	-	-	-
274	Backhoe with Breaker Attachment - Sunderland Depot		-	125	-	-	-	-	125
275	Chain Saw - Various Locations		34	-	-	-	-	-	-
276	Concrete Saw - Various Locations		74	-	-	-	-	-	-
277	Cube Van - Various Locations		350	-	-	-	-	-	-
278	Econo Van - Various Locations		525	-	-	-	-	-	-
279	Emergency Fleet Equipment Replacement - Fleet		151	-	-	-	-	-	-


Appendix B: 2023-2032 Regional Roads and Infrastructure Capital Forecast (\$,000's)

Provides a listing for all projects within the 2023 budget and nine-year capital forecast. See Appendix A for financing details for capital projects proposed in 2023

		Expenditure Category	2023 Proposed Budget	Forecast					Forecast Total
				2024	2025	2026	2027	2028-2032	
280	Fleet Replacement Program Based on Useful Life - Fleet		-	3,787	2,259	4,571	1,814	22,188	34,619
281	Forklift - Various Locations		-	25	-	-	-	-	25
282	Geodimeter - Construction		125	-	-	-	-	-	-
283	Hybrid Van - Oshawa/Whitby Depot		-	17	-	-	-	-	17
284	Miscellaneous Trailer - Various Locations		135	-	-	-	-	-	-
285	Pole Saw - Various Locations		10	-	-	-	-	-	-
286	Portable Generator - Ajax Depot		6	-	-	-	-	-	-
287	Rubber Tire Roller Compaction Unit - Orono Depot		-	20	-	-	-	-	20
288	Sidewalk Plow/Snowblower - Oshawa/Whitby Depot		-	-	-	-	-	50	50
289	Signal Board - Sunderland Depot		18	-	-	-	-	-	-
290	Snow Blower for skid steer loader - Oshawa/Whitby Depot		-	10	-	-	-	-	10
291	Street Flusher - Oshawa/Whitby Depot		-	-	-	117	-	-	117
292	Street Sweeper attachment for Roadside Mower/Tractor - Oshawa/Whitby Depot		-	8	-	-	-	-	8
293	Tamper - Scugog Depot		7	-	-	-	-	-	-
294	Tandem Axle Truck - Oshawa/Whitby Depot		-	-	-	-	-	83	83
295	Tandem Trailer - Oshawa/Whitby Depot		45	-	-	-	-	-	-
296	Tow Motor - Waste Facilities		150	-	-	-	-	-	-
297	Tractor - Ajax Depot		-	100	-	-	-	-	100
298	Water Pump - Various Locations		15	-	-	-	-	-	-

Appendix B: 2023-2032 Regional Roads and Infrastructure Capital Forecast (\$,000's)

Provides a listing for all projects within the 2023 budget and nine-year capital forecast. See Appendix A for financing details for capital projects proposed in 2023

		Expenditure Category	2023 Proposed Budget	Forecast					Forecast Total
				2024	2025	2026	2027	2028-2032	
299	Weed Eater Combo Unit - Various Locations		84	-	-	-	-	-	-
300	Medium Articulated Loader - Waste Facilities		350	-	-	-	-	-	-
Vehicles Subtotal			7,679	5,224	2,372	4,724	1,870	22,490	36,680
Furniture and Fixtures									
301	A/V Equipment and Technology Upgrades - Various Locations		10	10	10	10	10	20	60
302	Office Furniture - Various Locations		-	1	-	1	-	-	2
303	Parts Cabinets - Ajax Depot		-	16	-	-	-	-	16
304	Parts Cabinets - Oshawa/Whitby Depot		-	109	-	-	-	-	109
Furniture and Fixtures Subtotal			10	136	10	11	10	20	187
Total Capital Regional Roads and Infrastructure			213,037	216,828	242,172	159,361	165,689	777,315	1,561,365

* Rows and columns may not add due to rounding

** Pre-construction includes expenditures for land purchases, utility relocates, preliminary studies, design, etc.

*** Projects with regularly recurring expenditures include allowances, machinery and equipment, information technology, vehicles and furniture and fixtures, etc. do not include separate pre-construction and construction capital financing

**** Appendix B includes financing of the following development charge shortfalls as follows:

	2023	2024	2025	2026	2027	2028 - 2032	Grand Total
DC Shortfall							
Residential DC Shortfall	-	-	-	-	-	-	-
Commercial DC Shortfall	-	-	-	-	-	-	-
Institutional DC Shortfall	3,284	-	8,227	9,664	9,495	47,845	78,515
Industrial DC Shortfall	828	-	347	901	873	4,195	7,144
Total DC Shortfall	4,112	-	8,574	10,565	10,368	52,040	85,659
Shortfall Financing Source							
Regional Roads Levy	4,112	-	8,575	10,564	10,368	52,040	85,659
Total Funding	4,112	-	8,575	10,564	10,368	52,040	85,659

Appendix C: 2023 Solid Waste Management Capital Projects (\$,000's)

Provides financing details for capital projects proposed in 2023. See Appendix D for the comprehensive 2023 capital budget and 2024-2032 forecast

Durham Region Budget 2023		Quantity	New / Replacement	2023 Proposed Financing								2023 Proposed Budget	Approved Funding Prior to 2023	Forecast 2024-2032	Total Project to 2032
				Other	Reserve/ Reserve Funds	Industrial DCs	Institutional DCs	Commercial DCs	Residential DCs	Subsidy /Grant	Debenture				
Solid Waste Management															
Building and Structures															
4	Modifications and/or new waste management facilities - Optimization of older WMF sites and/or new sites for efficiencies/growth - Oshawa WMF	-		-	1,000	-	-	-	-	-	-	1,000	-	8,000	9,000
8	Scale House - Various Locations	1	Replacement	-	-	-	-	-	-	-	510	510	-	-	510
Building and Structures Subtotal		1		-	1,000	-	-	-	-	-	510	1,510	-	8,000	9,510
Machinery & Equipment															
15	Integrated Control Technology - Security Project - Various Locations	7	New	-	-	-	-	-	-	-	25	25	-	-	25
16	Replace Weigh Scale - Various Locations	1	Replacement	-	-	-	-	-	-	-	150	150	-	-	150
17	Waste Oil Storage Tank Replacement - Brock WMF	1	Replacement	-	-	-	-	-	-	-	28	28	-	-	28
18	Roll-off Bin Replacement Program - Waste Facilities	17	Replacement	-	-	-	-	-	-	-	107	107	-	-	107
Machinery & Equipment Subtotal		26		-	-	-	-	-	-	-	310	310	-	-	310
Information Technology Infrastructure															
19	Computers & Monitors Refresh - Financial Services	1	Replacement	-	-	-	-	-	-	-	60	60	-	-	60
Information Technology Infrastructure Subtotal		1		-	-	-	-	-	-	-	60	60	-	-	60
Total Capital Solid Waste Management				-	1,000	-	-	-	-	-	880	1,880	-	8,000	9,880

Appendix D: 2023 - 2032 Solid Waste Management Capital Forecast (\$,000's)

Provides a listing for all projects within the 2023 budget and nine-year capital forecast. See Appendix C for financing details for capital projects proposed in 2023

		Expenditure Category	2023 Proposed Budget	Forecast					Forecast Total
				2024	2025	2026	2027	2028-2032	
Solid Waste Management									
Building & Structures									
1	Durham York Energy Centre - Expansion environmental assessment (EA) and consulting (could take 4 to 10 years to complete)	Pre-Construction	-	-	10,000	-	-	-	10,000
		Construction	-	-	-	-	-	-	-
		Total	-	-	10,000	-	-	-	10,000
2	Durham York Energy Centre - Consultant investigation - additional waste heat utilization / project construction	Pre-Construction	-	100	900	-	-	-	1,000
		Construction	-	-	-	-	-	-	-
		Total	-	100	900	-	-	-	1,000
3	Modifications and/or new waste management facilities - Optimization of older WMF sites and/or new sites for efficiencies/growth - Brock WMF	Pre-Construction	-	-	-	-	-	-	-
		Construction	-	2,100	-	-	-	-	2,100
		Total	-	2,100	-	-	-	-	2,100
4	Modifications and/or new waste management facilities - Optimization of older WMF sites and/or new sites for efficiencies/growth - Oshawa WMF	Pre-Construction	-	-	-	-	-	-	-
		Construction	1,000	4,000	4,000	-	-	-	8,000
		Total	1,000	4,000	4,000	-	-	-	8,000
5	Modifications and/or new waste management facilities - Optimization of older WMF sites and/or new sites for efficiencies/growth - Scugog WMF	Pre-Construction	-	-	-	-	-	-	-
		Construction	-	-	150	-	2,100	-	2,250
		Total	-	-	150	-	2,100	-	2,250
6	Modifications and/or new waste management facilities - Optimization of older WMF sites and/or new sites for efficiencies/growth - North/West Facility	Pre-Construction	-	-	-	-	-	-	-
		Construction	-	100	4,500	4,500	-	-	9,100
		Total	-	100	4,500	4,500	-	-	9,100
7	Extension of Concrete Retaining Wall - Brock WMF	Pre-Construction	-	-	-	-	-	-	-
		Construction	-	99	-	-	-	-	99
		Total	-	99	-	-	-	-	99
8	Scale House - Various Locations	Pre-Construction	-	-	-	-	-	-	-
		Construction	510	-	-	-	-	95	95
		Total	510	-	-	-	-	95	95


Appendix D: 2023 - 2032 Solid Waste Management Capital Forecast (\$,000's)

Provides a listing for all projects within the 2023 budget and nine-year capital forecast. See Appendix C for financing details for capital projects proposed in 2023

		Expenditure Category	2023 Proposed Budget	Forecast					Forecast Total
				2024	2025	2026	2027	2028-2032	
9	Equipment Storage Building - Oshawa WMF	Pre-Construction	-	-	-	-	-	-	-
		Construction	-	540	-	-	-	-	540
		Total	-	540	-	-	-	-	540
10	Perimeter Chain Link Fence Replacement - Oshawa WMF	Pre-Construction	-	-	-	-	-	-	-
		Construction	-	172	-	-	-	-	172
		Total	-	172	-	-	-	-	172
11	Replace Inbound Scale House #2 - Oshawa WMF	Pre-Construction	-	-	-	-	-	-	-
		Construction	-	100	-	-	-	-	100
		Total	-	100	-	-	-	-	100
12	Resurfacing Asphalt Paving - Oshawa WMF	Pre-Construction	-	-	-	-	-	-	-
		Construction	-	-	-	-	350	270	620
		Total	-	-	-	-	350	270	620
13	South Customer Disposal Area Enlargement - Oshawa WMF	Pre-Construction	-	275	-	-	-	-	275
		Construction	-	-	1,575	-	-	-	1,575
		Total	-	275	1,575	-	-	-	1,850
14	Pave Area to North and East of Site - Scugog WMF	Pre-Construction	-	-	-	-	-	-	-
		Construction	-	215	-	-	-	-	215
		Total	-	215	-	-	-	-	215
Building & Structures Subtotal			1,510	7,701	21,125	4,500	2,450	365	36,141
Machinery & Equipment									
15	Integrated Control Technology - Security Project - Various Locations		25	-	-	-	-	-	-
16	Replace Weigh Scale - Various Locations		150	600	150	150	-	-	900
17	Waste Oil Storage Tank Replacement - Brock WMF		28	-	-	-	-	-	-

Appendix D: 2023 - 2032 Solid Waste Management Capital Forecast (\$,000's)

Provides a listing for all projects within the 2023 budget and nine-year capital forecast. See Appendix C for financing details for capital projects proposed in 2023

		Expenditure Category	2023 Proposed Budget	Forecast					Forecast Total
				2024	2025	2026	2027	2028-2032	
18	Roll-off Bin Replacement Program - Waste Facilities		107	107	107	107	107	535	963
Machinery & Equipment Subtotal			310	707	257	257	107	535	1,863
Information Technology Infrastructure									
19	Computers & Monitors Refresh - Financial Services		60	54	71	65	54	326	570
20	Power Laptop		-	3	-	-	-	-	3
21	Tablet		-	7	-	-	-	-	7
22	Computer Printer - Waste Facilities		-	3	3	3	3	15	27
Information Technology Infrastructure Subtotal			60	67	74	68	57	341	607
Vehicles									
23	1/2 Ton Pick-up Truck - Various Locations		-	5	-	-	-	-	5
24	Forklift - Various Locations		-	125	-	-	-	-	125
25	Vehicles for By-Law officers - Waste Admin - By-Law		-	170	-	-	-	-	170
Vehicles Subtotal			-	300	-	-	-	-	300
Landfill Remediation / Rehabilitation									
26	Oshawa Landfill - Remediation - Erosion and leachate control		-	-	500	325	125	3,650	4,600
27	Scott Landfill - Landfill Reclamation (Mining)		-	-	400	4,723	-	-	5,123
28	Scugog Landfill - Remediation - Purchase Contaminant Attenuation Zone		-	-	100	1,400	-	-	1,500
Landfill Remediation / Rehabilitation Subtotal			-	-	1,000	6,448	125	3,650	11,223
Total Capital Solid Waste Management			1,880	8,775	22,456	11,273	2,739	4,891	50,134